

The Flexible Workplace

An exploration into the value
of co-working spaces as an
accommodation strategy for
corporations



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Abstract

The highly competitive and dynamic business environment of today has resulted in an increasing pressure for efficiency of the main resources. As corporations seek to quickly respond and adapt to the changes in the environment, strategic decisions about the workplace become fundamental as it entails the two most expensive resources of any organization: human capital and real estate. Within the wide range of flexible workplace options now available in the market, co-working is of particular interest due to its exponential growth in the last years; as this trend continues to grow and companies start considering it as part of their accommodation strategy, understanding the value of co-working in corporate real estate becomes essential. The aim of this research is to understand how co-working as a real estate strategy can contribute to the performance of a corporation, while meeting the flexibility demands of the organization and its knowledge workers. By means of a qualitative methodology, the research involves five case studies of front-runner organizations, and semi-structured interviews with co-working providers and workplace experts. The study results in the identification of six strategies that organizations, in different stages of maturity, can pursue to incorporate co-working as part of their real estate portfolio. The strategies include temporary space solutions, such as Swing Space or for Temporary Projects and Staff, and complementary space solutions, such as Core and Flex, Expansion Space, Testing Market and Touchdown Space alternatives, that corporations can implement, according to their requirements, to drive business performance.

Keywords: co-working, flexible workplace, corporate real estate management, flexibility, knowledge workers

Preface

This master's thesis presents a one year research project that is part of the Real Estate Management Graduation Lab of the MSc program track Management in the Built Environment, at the Delft University of Technology. The analysis and ideas collected in this research are intended to provide knowledge about co-working as a corporate real estate accommodation strategy and shed light on the growing need for flexibility in the workplace.

Throughout the process many people have contributed to this research in different ways. I would especially like to thank my supervisors, Tuuli and Philip, for their feedback, guidance and support; you have challenged me and motivated me in this process, and I have truly enjoyed sharing this time with you.

I would like to extend my gratitude to Monique Arkesteijn for her support during the empirical part of my study; and to all the interviewees for the valuable insights which have been fundamental in this research. I would also like to thank my friends, especially Fede for supporting me, Shrey for all the help and feedback, and Yiannos, Ana and Martina for sharing this time with me. And above all, I would like to thank my parents for their unconditional support and for always encouraging me to pursue my goals.

Natalia,
Delft, June 2020

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Executive Summary

1. Introduction

Changes in society, technology, and economy have resulted in a dynamic and fast-paced evolving business environment in which organizations operate. The increased competition and uncertainty in business operations have derived in an increasing demand for greater effectiveness and efficiency in the use of resources to support the overall business competitive strategy (Gibler & Lindholm, 2012). In the face of these volatile conditions, organizations are adopting different practices that overturn the rigidity of previous production systems to become more responsive and agile to change (Cole, Oliver, & Blaviesciunaite, 2014). In this line, the increasing demand for flexibility in real estate has been seen as a means to embrace change and support the evolving needs of the organization under conditions of uncertainty while remaining responsive and competitive (Harris, 2015). As seen in theory, the flexibility requirements in corporate real estate pertain to three dimensions: physical, that refers to the building adaptability and internal configuration of space; functional, that relates to alternative workplace solutions and the space's functional possibilities; and financial, in terms of contracts and commitments (Blakstad, 2001; Gibson, 2000).

Coupled with this, and with the development of mobile technologies and improved network connections, not only organizations are demanding flexibility; today's knowledge workers are increasingly preferring flexibility to choose when and where to work (Harris, 2015; Kojo & Nenonen, 2015; Ojala & Pyöriä, 2017), this has been recognized, for some years now, as essential to support their work-life balance, and increase their job satisfaction and engagement (Duffy, Laing, Crisp, DEGW London Limited, & Building Research Establishment, 1993; Harris, 2015).

As a result of these changing preferences, the property market has responded with a growing array of property products that provide choice and flexibility to organizations and workers. Within this wide range of options, co-working spaces are of particular interest due to its exponential growth in the last years. Co-working has been defined in literature as a type of multi-tenant office, with a high level of service, where a diverse group of individuals with more or less heterogeneous backgrounds share a 'community work environment' on the basis of a membership

that grants access to multiple services and facilities (Garrett, Spreitzer, & Bacevice, 2017; Sankari, 2019; Spinuzzi, 2012; Yu, Burke, & Raad, 2019). Since its emergence in 2005, co-working has been typically associated with freelancers, self-employed workers and entrepreneurs, but this is changing as corporate occupiers have started to consider the possibilities offered by this service as part of a range of solutions for their accommodation strategy.

Co-working has particularly been contemplated by corporations as a complementary strategy to their property portfolio. This perspective is in line with what authors, as Gibson and Lizieri (1999b), have categorized in their approach to corporate office portfolio as "core" and "peripheral" property. Within this approach, the core portfolio is defined as facilities that require a high degree of control by the organization—due to their strategic location or because they represent the strong historical and cultural values of the organization. While peripheral portfolio is defined as supporting space with shorter contractual arrangements that adapt to fluctuations in demand over the business cycle.

Problem Statement

Despite the rapid growth and increased popularity of co-working spaces, little research has been done concerning the value of this office model in corporate real estate. As this trend continues to grow in the market and companies adopt it as part of their workplace strategy, understanding what co-working provides in terms of flexibility and how it can be adopted to align with the requirements of the organization and the employees to contribute to the competitive advantage of the organization becomes essential.

Research aims and objectives

This research builds on the existing knowledge and has a twofold aim: first, understanding the ways in which co-working spaces support the flexibility requirements of organizations and its knowledge workers; and second, suggest alternatives to facilitate the adoption of this workplace model to contribute to the organization's performance in face of the challenges of today's competitive business environment.

Research Questions

Based on a first literature review, the definition of the problem statement and the aims of this study, the main question of this research is:

“How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?”

In order to provide an answer to this question, two sub-questions have been formulated:

- Q1) How does the co-working space concept meet the flexibility needs of corporations and users?
- Q2) How can co-working be adopted by corporations to achieve competitive advantage?

2. Methodology

This study is based on a qualitative empirical research methodology focused on generating knowledge and understanding the relationship between the concepts of co-working, organizations, performance and flexibility, to propose alternatives that corporations can pursue to implement a co-working strategy in their portfolio. Accordingly, this research is designed based on three components. First, literature review; second, empirical research; third, conclusions (Fig. 1).

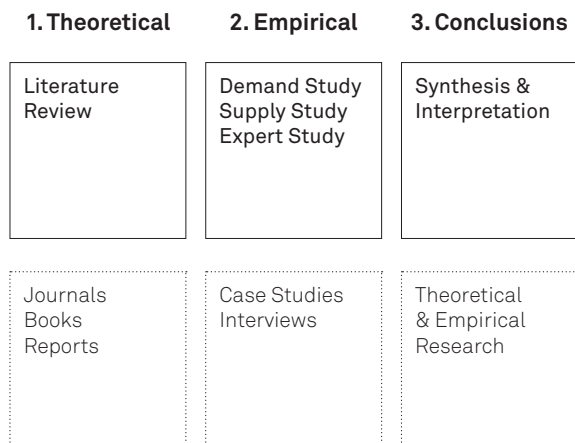


Fig. 1
Research design;
own figure

Theoretical Research

The objective of the first part is to generate a theoretical framework by means of a narrative literature review, based on four main themes: knowledge workers and flexibility in the workplace, corporations and flexibility in the property portfolio, co-working and flexibility, and corporate real estate and competitive advantage. The information gathered in this section is essential to create a comprehensive understanding of what is already known about the key concepts of the research and to develop a standpoint for further developing the empirical research. The data for the literature review is collected via academic search engines such as Scopus, Google Scholar, and the digital platform of the TU Delft Library, as well as books and commercial publications.

Empirical Research

The second part, empirical research, aims at adjusting and complementing the theoretical framework developed in the first part of the study. The empirical research is based on a qualitative study with three units of analysis: demand, supply and experts.

Demand Study

The demand study is based on a multiple-case analysis of five front-runner organizations using co-working spaces as part of their accommodation strategy (Cases A to E); the data is collected through case material publicly available, and interviews with corporate real estate managers of the organization.

Case A: Innovative tech company from the transportation industry with an exponential growth over the last years. Since establishing its operations in the Netherlands, the organization has been using co-working spaces in different ways to support the development of the company.

Case B: Expanding creative firm from the P.R. and communications industry. The company started operations in 2009, and for 10 years was headquartered at a co-working space in Amsterdam.

Case C: Multinational company from the fast-moving consumer goods industry. The company, regarded as one of the top employers across the world, has taken an important move towards incorporating co-working as a complementary accommodation strategy in one of its locations, wherein about 30% of the workforce will be located at a co-working space.

Case D: Multinational company from the energy industry. The company, listed as one of the top corporations in the Fortune Global 500 (Fortune, 2019), has adopted co-working in some locations across the EMEA region to diversify the real estate portfolio and provide versatility to cope with the business needs.

Case E: Multinational media-services and production company, leader in the entertainment industry. The company, listed as one of the top regarded companies across the globe (Forbes, 2019a), is a dynamic organization that has been expanding its operations in the EMEA region. In this process, the company has used co-working as a temporary solution to start operations in some of the new markets.

Supply Study

The supply study is based on semi-structured interviews with four local and international co-working operators based in Amsterdam (Providers W to Z).

Provider W: Collab, the co-working branch of The Student Hotel, with seven locations in the Netherlands, Germany and Italy, and expansion plans to start operations in over 36 new locations around Europe.

Provider X: Co-working space founded in 2013, around the concept of providing workplaces for growers, with over five locations in the Netherlands, distributed in Amsterdam, Schiphol and Utrecht.

Provider Y: Multinational co-working provider founded in the Netherlands, with about 350 locations in more than 20 countries worldwide.

Provider Z: The Treehouse Tribe, a local co-working provider with one location in Amsterdam-Noord. The company was founded in 2017 based on the idea of creating a community with kindness at its core.

Expert Study

The expert study aims at cross-checking and validating the findings from the demand and supply studies by means of semi-structured interviews with three experts in the topics of workplace strategy and co-working.

Expert 1: Wim Pullen, Director of the Center for People and Buildings, a knowledge center based in the Netherlands that focuses on developing research and providing knowledge about the work environment (CfPB, n.d.). Wim has over 30 years of experience in the field and has worked with different governmental and private institutions over the years.

Expert 2: Kay Sargent, director of global Workplace practice at HOK, a global architecture, engineering and urban planning company based in the U.S. Throughout her more than 35 years of experience on workplace design and strategy, Kay has worked with multiple Fortune 500 companies to create innovative working environments (HOK, 2020). Kay has also been recognized for developing numerous articles and studies on co-working over the last years.

Expert 3: Jordy Kleemans, Head of Research and Consultancy of Savills in the Netherlands. Over his more than 15 years of experience in the consultancy sector, Jordy has advised multiple organizations, at an strategic level, in relation to complex corporate real estate issues (Savills, n.d.).

3. Findings

The main findings that resulted from the theoretical and empirical research are presented below in relation to the main research topics (Fig. II).

Co-working and the different sources of flexibility

According to the study, flexibility is a multifaceted concept that involves many definitions; in this line, co-working aligns with the needs of the organization and the employees by providing flexibility in three different ways. First, physical flexibility that allows the organization to expand or decrease the office footprint according to the needs of the business and access a network of locations available at a local and international level. Second, functional, or spatial, flexibility by offering a variety of workplace settings that cater to the different user preferences. Third, financial flexibility in relation to the short-term lease agreements, low entry barriers and speed-to-market offered which facilitate the responsiveness of the real estate strategy to the changes in the business requirements, and facilitate the diversification of the property portfolio to control the risks associated with real estate commitments.

Sources of competitive advantage in co-working

Companies in different stages of maturity can adopt co-working as a temporary space solution, a complementary space solution, or as the main office location, depending on the requirements of the organization. By aligning the strategic business goals with the approach to co-working, organizations can find five different sources of competitive advantage in co-working that include temporary advantages such as enabling the flexibility of the portfolio to respond to the dynamic business requirements; and supporting environmental sustainability through resource sharing and higher space densities. As well as extended advantages that can be sustained over a longer period of time, which include encouraging innovation in terms of the interaction opportunities offered outside of the corporate environment which result in value creation and knowledge transfer; enhancing employee satisfaction in relation to the variety of settings and inspiring workplaces provided; and enabling networking opportunities at the personal and professional level within the co-working community.

Challenges associated with co-working as a corporate accommodation strategy

As seen in the study, organizations implementing co-working in their property portfolio face different implementation barriers that are relevant to consider. These include, on the one hand, technical challenges which relate mainly to the co-working providers (supply side) and involve safeguarding the security and privacy of the company and the employees, ensuring the quality of the space—in terms of noise levels, fit-out quality and space metrics—to support the satisfaction and productivity of the employees; and evaluating the high costs of the space in relation to the requirements of the organization to determine under which conditions the strategy is affordable and sustainable for the company. While on the other hand it involves management challenges which mainly relate to the organization (demand side) and include, amongst others, the difficulty of reflecting the corporate image and culture in the space, and the obstacles of a management style based on control, instead of results.

Six strategies to adopt co-working in the property portfolio

The findings from the demand study suggest that there is an array of strategies that organizations, in different stages of maturity, can pursue to adopt co-working as part of the corporate accommodation strategy. Based on the analysis, six different alternatives have been identified:

1. **Swing Space:** A temporary workplace solution to relocate a team or part of the organization during renovation or construction works of the office space. In this strategy, co-working mainly represents a bridge between the existing and the new work environment.
2. **Expansion Space:** A strategy to support increases in the headcount, especially for companies in the growth phase. This alternative allows the organization to take up space incrementally according to the needs of the core business.
3. **Core & Flex:** A complementary space strategy that is particularly suitable for companies that have reached the maturity or renewal stages of the organization's lifecycle as it provides versatility to adapt to any changes in the business operation. This dual model consists of combining a long-term agreement for the core space and a short-term lease agreement in a co-working space.
4. **Touchdown Space:** A strategy that provides a professional work environment and a network of locations available for mobile workers that are constantly outside of the traditional corporate premises, for instance managers, sales teams, employees traveling for business, etc.
5. **Testing Market:** Organizations starting operations or opening new lines of business can use co-working for Testing the Market. In face of the high uncertainties, the services and amenities provided, the low entry-barriers, the speed-to-market and short-term commitments are particularly attractive to set up a business operation at a low risk; therefore, this strategy is particularly suitable for companies in the startup phase.
6. **Temporary Projects / Staff:** A temporary space solution to accommodate staff—internal or external to the organization—for a determined period of time. As a strategy for Temporary Projects or Staff, co-working involves short-term contractual agreements—for less than one year—of the second periphery layer of the property portfolio.

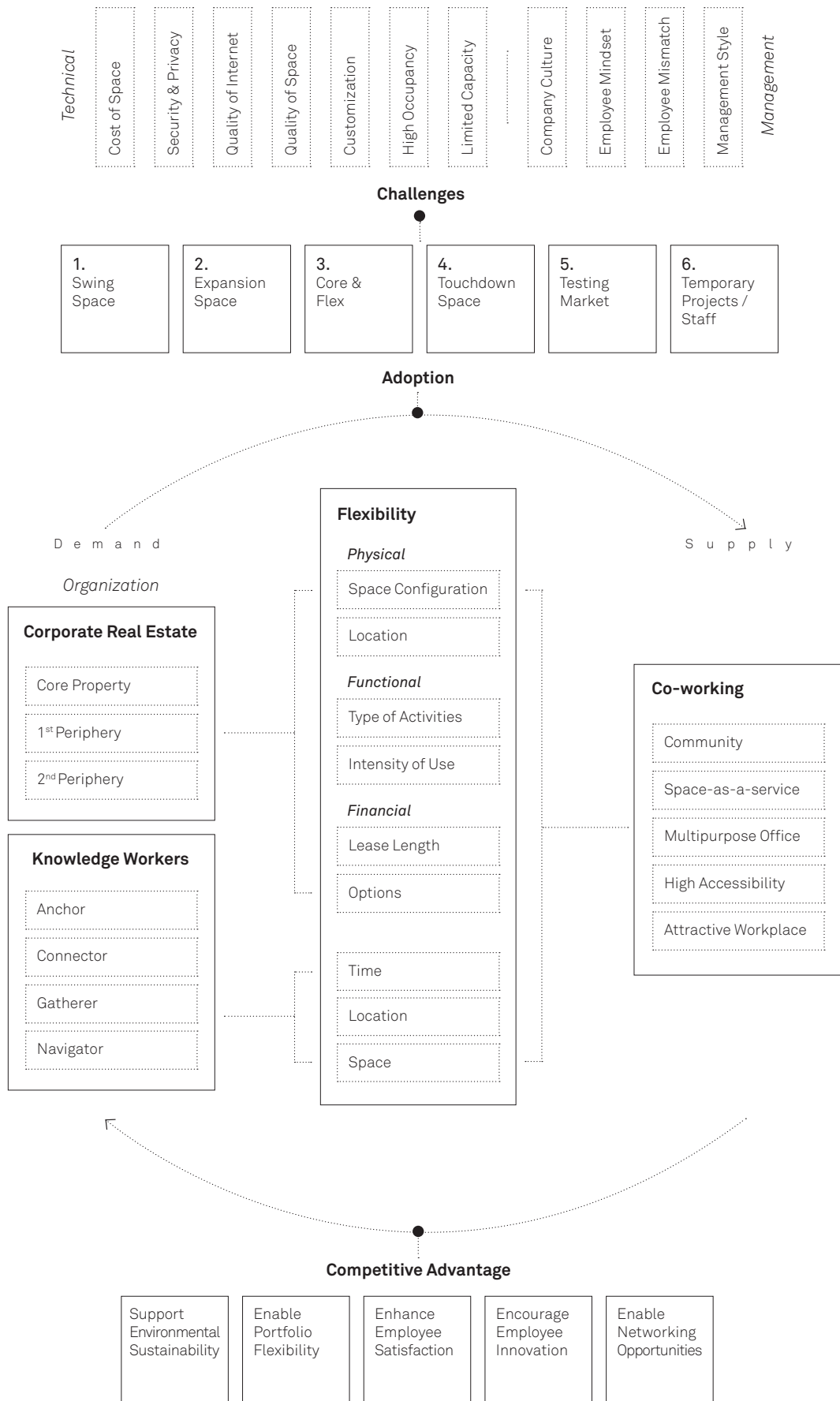


Fig. II
 Framework illustrating co-working as a corporate real estate strategy; own figure

4. Conclusion

As seen across the theoretical and empirical studies of this research, in face of the dynamic conditions of the business environment, organizations are looking into alternatives to incorporate flexibility in their corporate real estate portfolio to respond and adapt to changes; in this line, co-working has been one of the alternatives available in the market that has progressively caught the attention of the corporate occupiers.

As mentioned before, the goals of this research are first, to understand the ways in which co-working spaces support the flexibility requirements of organizations and its knowledge workers; and second, suggest alternatives to facilitate the adoption of this workplace model to contribute to the organization's performance in today's competitive environment.

Accordingly, to answer the main question of the research—*How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?*—the study suggests that companies in different stages of maturity can adopt co-working as a temporary space solution, a complementary space solution, or as the main office location, depending on the requirements of the organization. By aligning the strategic business goals with the approach to co-working, organizations can find six different strategies to incorporate co-working as part of the corporate real estate portfolio, namely, as Swing Space, Expansion Space, Core & Flex, Touchdown Space, Testing Market or for Temporary Projects / Staff. Additionally, the study also led to the identification of different temporary and extended sources of competitive advantage in co-working, as well as the different technical and managerial implementation barriers that organizations face when adopting co-working as an accommodation strategy.

5. Contributions of the Research

This thesis contributes to the field of corporate real estate management and workplace strategy by providing knowledge about the value of co-working spaces as an accommodation strategy for corporations. The research contributes to the exiting body of knowledge and closes a gap in literature by studying co-working from the concept of flexibility in relation to the perspectives of both, the organization and the knowledge workers. This creates a more compre-

hensive view of the topic, as previous studies have focused either on the perspective of the organization (Garret et al., 2017; Harris, 2015; Roth & Mirchandani, 2016; Leclerq Vandelanoitte & Isaac, 2016), or the knowledge workers (Orel 2019; Subramaniam et al., 2013; Weijs-Perrée et al., 2018).

The research provides valuable theoretical and practical information that can assist corporate real estate managers in taking strategic decisions and leverage the attributes of co-working in relation to the requirements of the organization.

6. Recommendations for future research

The findings from this thesis are bound to certain limitations in relation to the context, timing, and methodology, which provide an opportunity for future research.

First, as the research is mainly bound to organizations based in the Netherlands, future research could focus on further developing an international comparability study to account for the differences between contexts.

Second, co-working has only recently been adopted at a wider scale in the corporate sector; therefore, the research is limited to information available at the time of the study, which mainly reflects the short-term effects as experienced by the organizations. In this line, future research could focus on a follow-up of the cases presented in this study as a way of longitudinal case design, which could bring interesting observations and further insights considering a retrospective analysis.

Third, in relation to the methodology, this research is based on a qualitative study that provided significant insights on the topic. However, future research can focus on a quantitative study to determine more precisely the extent of the contributions of co-working to concepts such as competitive advantage, and flexibility of the organization; this would also facilitate the comparability between the different alternatives available in the market.

01

Introduction

1. Introduction

Changes in society, technology, and economy have resulted in a dynamic and fast-paced evolving business environment in which organizations operate. The increased competition and uncertainty in business operations have derived in an increasing demand for greater effectiveness and efficiency in the use of resources. With these pressures, multiple corporations have turned to look at how the major resources—capital, people, technology and information—can support the core business of the organization more efficiently as part of their competitive strategy; in this line, the far-seeing companies have also realized the powerful strategic value of real estate to support the achievement of corporate goals and drive business performance. This strategic management perspective was illustrated, more than twenty years ago, by Joroff and Corporate Real Estate Project 2000 (1993), who referred to the so called “fifth resource”, real estate, as a strategic tool capable of making value contributions to the higher levels of corporate management. As corporations seize opportunities to create value from their resources, the workplace becomes one of the most strategic areas as it entails the two most expensive resources of any organization: human capital and real estate.

In face of the dynamic conditions of the business environment, corporations are demanding flexibility in their corporate real estate as a way to quickly adapt to changes and remain responsive and competitive (Harris, 2015). The flexibility requirements pertain to three dimensions: physical, that refers to the building adaptability and internal configuration of space; functional, that relates to alternative workplace solutions and the space’s functional possibilities; and financial, in terms of contracts and commitments (Blakstad, 2001; Gibson, 2000).

Nowadays, with the development of mobile technologies and improved network connections, not only organizations are demanding flexibility. Today’s knowledge workers are increasingly preferring flexibility in terms of space and time, meaning freedom to choose when and where to work (Harris, 2015; Kojo & Nenonen, 2015; Ojala & Pyöriä, 2017), this has been recognized, for some years now, as essential to support their work-life balance (Duffy, Laing, Crisp, DEGW London Limited, & Building Research Establishment, 1993; Harris, 2015).

As a result of these changing preferences, the property market has responded with a growing array of property products that provide choice and flexibility to organizations and workers, these include co-working spaces, space-on-demand, amongst others. Within this wide range of options, co-working spaces are of particular interest due to its exponential growth in the last years. According to a survey carried out by Deskmag in 2019, the number of co-working spaces around the world has almost doubled the stock of 2016, this trend is expected to continue as 60% of the operators have plans to expand in the upcoming years (Deskmag, 2019). In cities like Amsterdam, co-working spaces currently account for about 5% of the total office stock of the city (Cushman & Wakefield, 2018).

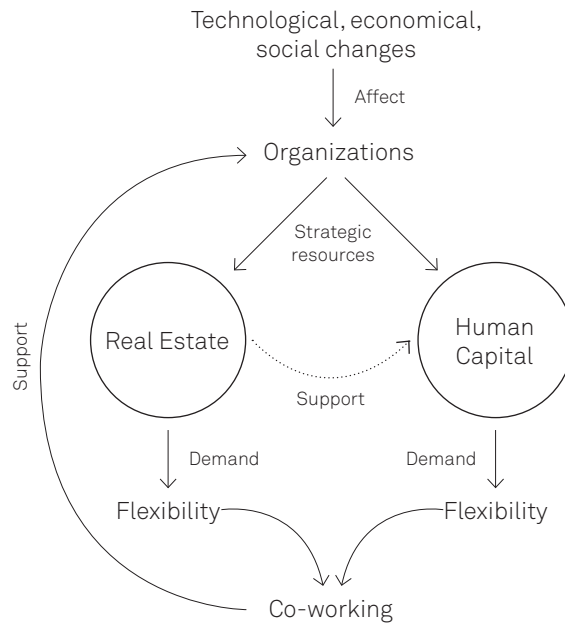


Fig. 1.01
The scheme represents the relationship between the main concepts of the research

Co-working spaces have been defined in literature as a type of multi-tenant office, with a high level of service, where a diverse group of individuals with more or less heterogeneous backgrounds share a ‘community work environment’ on the basis of a membership that grants access to multiple services and facilities (Garrett, Spreitzer, & Bacevice, 2017; Sankari, 2019; Spinuzzi, 2012; Yu, Burke, & Raad, 2019).

Sankari, Peltokorpi, and Nenonen (2018) classified the common characteristics of co-working in five categories, namely: 1) community, co-working is typically characterized by collaboration and interaction between people from different backgrounds that informally share working time together, discuss and learn from each other; 2) space as a service, by means of a short-term agreements that provide access to a physical, social and virtual working environment for a determined time span; 3) multipurpose office, as spaces usually offer a variety of settings, from open-plan to individual rooms, that allow the users to find the workspace that is most suited for their current activities (Activity-Based-Working settings); 4) high accessibility, in terms of locations that are easily accessible by public transport, and flexible opening hours that adjust to different working schedules; and 5) attractive workplace, that focuses on user experience, by providing a variety of ambiances and amenities that aim at attracting target user groups.

Since its emergence in 2005, co-working spaces have been typically associated with users such as freelancers, self-employed workers and entrepreneurs, but this is changing as corporate occupiers have started to consider the possibilities offered by this service as part of a range of solutions for their accommodation strategy.

Co-working has particularly been contemplated by corporations as a suitable complementary strategy to their property portfolio. This perspective is in line with what authors, as Gibson and Lizieri (1999b), have categorized in their approach to corporate office portfolio as “core” and “peripheral” property. Within this approach, the core portfolio is defined as facilities that require a high degree of control by the organization—due to their strategic location or because they represent the strong historical and cultural values of the organization. While peripheral portfolio is defined as supporting space with shorter contractual arrangements that adapt to fluctuations in demand over the business cycle.

The potential of co-working as a complementary accommodation strategy is also aligned with what Haynes and Nunnington (2010), have referred to as flexible arrangements around satellite operations that manage volatility through shorter leasehold agreements and complement core functions that are committed in a longer-term (either through freehold or long leasehold agreements).

1.2 Problem Statement

Real estate decisions imply the commitment and deployment of significant resources of the organization, despite the rapid growth and increased popularity of co-working spaces, little research has been done concerning the value of this office model in corporate real estate. As this trend continues to grow in the market and companies adopt it as part of their workplace strategy, understanding what co-working provides in terms of flexibility and how it can be adopted to align with the requirements of the organization and its employees becomes essential.

These strategic real estate decisions that pertain to flexible workplace arrangements are fundamental to support the core business of corporations and respond to the bewildering array of challenges of the dynamic business environment of today. The workplace, thus, is an important component for achieving corporate goals and ultimately supporting the competitive advantage of organizations.

1.3 Research aims and objectives

This research builds on the existing knowledge and has a twofold aim: first, understanding the ways in which co-working spaces support the flexibility requirements of organizations and its knowledge workers; and second, suggest alternatives to facilitate the adoption of this workplace model to contribute to the organization's performance in face of the challenges of today's competitive business environment.

Furthermore, within these aims, the objectives of this research are:

- Contributing to the field of knowledge of corporate real estate and workplace strategy
- Increasing the understanding of the demands of organizations and knowledge workers in relation to flexibility.
- Identifying the challenges faced by organizations in adopting co-working as a corporate real estate strategy.
- Determining the possible contribution of co-working to business performance.
- Assisting the decision-making process of corporate real estate managers seeking for 'flexible workplace' strategies.

1.4 Relevance

The following research is intended to contribute with knowledge that is of scientific and societal relevance.

Scientific Relevance

In the last years, some studies have focused on the potential use of co-working spaces by corporations (Garrett et al., 2017; Harris, 2015; Roth & Mirchandani, 2016; Leclereq Vandelannoitte & Isaac, 2016), while others have focused the perspective of the knowledge workers (Orel, 2019; Subramaniam, Tan, Maniam, & Ali, 2013; Weijs-Perrée, Van de Koeving, Appel-Meulenbroek, & Arentze, 2018). This study attempts to fill a gap in knowledge by joining both perspectives (organization and users) to create a more comprehensive view of the value of co-working.

Co-working is still a rather novel research topic in the field of corporate accommodation, this study increases the knowledge in co-working and contributes to the academic research in the field of workplace strategy and flexibility.

Societal Relevance

As real estate is the second most expensive resource an organization has (Gibler & Lindholm, 2012), taking efficient and strategic decisions is fundamental in today's turbulent business environment. This research gives valuable information to corporate real estate managers and assists them to take strategic decisions based on the requirements of their organizations. The information presented here is of relevance for understanding how co-working responds to the needs of knowledge workers and how the attributes of co-working can be leveraged by organizations to drive business performance.

Furthermore, this applied research is also valuable for investors and co-working space operators as it shows the potential of these type of workplaces for corporate occupiers and knowledge workers.

1.5 Research Questions

Based on a first literature review, the definition of the problem statement and the aims of this study, the main question of this research is: “How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?”

This research addresses two important aspects mentioned before, flexibility and performance. This research question aims at understanding how corporations can benefit from adopting co-working as a flexible accommodation strategy, and how this can support the competitive strategy and contribute to the performance of the organization. In order to provide an answer to this question, two sub-questions have been formulated:

- **Q1: How does the co-working space concept meet the flexibility needs of corporations and users?**

This research question relates to the demand and supply sides of corporate real estate and aims at understanding the role of co-working in meeting the flexibility requirements of organizations and users. This question is answered by three sub-questions (Qa, Qb, Qc):

a) What are the real estate flexibility demands of corporations?

This question focuses on the drivers and sources of flexibility in corporate real estate demanded according to literature. The aim of this question is to provide a standpoint from the perspective of the organization.

b) What are the workplace flexibility demands of knowledge workers?

The objective of this research question is to understand the flexibility demands from the perspective of the knowledge workers. This question aims at identifying the needs of the users to later relate them to the attributes of co-working.

c) What are the attributes of co-working in relation to flexibility?

This question creates an overview of the characteristics of co-working in relation to flexibility. Different co-working providers offer a variety of services; however, some generalization is necessary to provide a base for comparing the supply and demand sides of co-working.

- **Q2: How can co-working be adopted by corporations to achieve competitive advantage?**

This question is based upon identifying the challenges of adopting co-working as part of the corporate real estate portfolio (Qe) and determining the connections between real estate strategy and competitive advantage (Qd). The aim of this question is to propose alternatives to overcome these challenges and facilitate the adoption of co-working by corporations. This question is supported by two sub-questions:

d) What are the potential contributions of real estate to competitive advantage?

Business performance is influenced by multiple factors internal and external to the organization. This question aims at deriving from the Corporate Real Estate Management (CREM) theory the factors that link real estate strategy with the core business of organizations. This information sets a theoretical base for understanding the importance of co-working as a corporate real estate strategy.

e) Which challenges are associated with adopting co-working as an accommodation strategy?

The objective of this question is to identify the perceived challenges of adopting co-working as a corporate accommodation strategy. This question sets a series of factors that must be addressed to incorporate co-working as part of the array of solutions in the real estate portfolio of organizations.

The aim of these questions is to guide the research in the path of exploring the value of co-working spaces for corporations by analyzing the situation from two complementary time perspectives: present and future. The first part of the research focuses on the current situation and aims at understanding how the flexibility demands of the organization and the workers are met by co-working spaces. The second part, standing from a prospective approach, addresses the challenges faced in adopting co-working as a corporate real estate strategy to achieve competitive advantage.

By means of creating an overview of the current situation, the research connects the theoretical and empirical components of the study to define a framework with potential alternatives that addresses how co-working can contribute to the performance of a corporation by meeting the flexibility demands of the organization and its employees. The relationship between the main concepts of the research question and sub-questions is reflected in the conceptual model.

1.6 Conceptual Model

The conceptual model, figure 1.02, illustrates the relationship between the main concepts researched in this study. As defined by Miles and Huberman (1994), a conceptual framework is the graphical representation of the boundaries of the research, it defines the key concepts to be studied and the presumed relationships amongst them.

As mentioned before, this research revolves around the concepts of flexibility and business performance. The model is organized based on the demand and supply sides of real estate and their interrelation with the concept of flexibility. It is presumed that there is a demand for real estate flexibility in physical, functional and financial terms (Qa), while at the same time the knowledge workers demand flexibility in terms of time and space (Qb). The relationship between the supply side, co-working, and the demand side is tested to answer the first sub-question of the research (Q1: How does the co-working space concept meet the flexibility needs of corporations and users?).

The relationship between co-working and the performance of the organization is examined through the presumed contributions of aligning real estate and corporate strategies to competitive advantage (Qd) and the identification of the challenges of adopting co-working as a corporate real estate strategy (Qe). These relationships are tested to answer the second sub-question of the research (Q2: How can co-working be adopted by corporations to achieve competitive advantage?).

The interrelations presented in the conceptual model provide a framework and a guide for the development of this research.

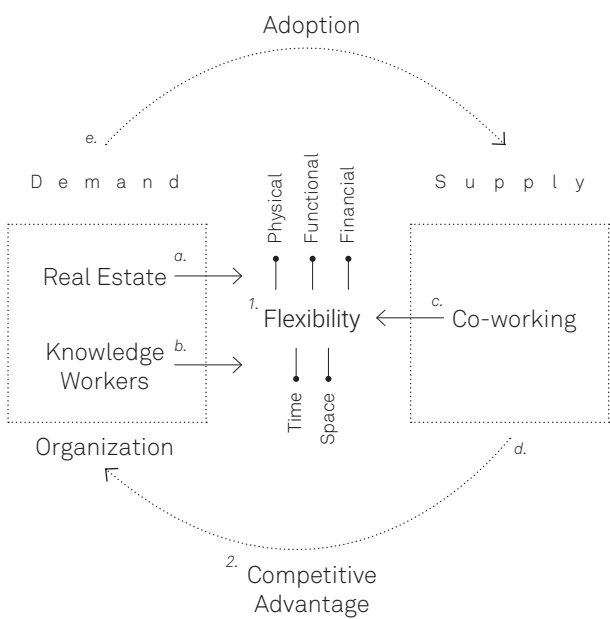


Fig. 1.02
Conceptual model illustrates the presumed connections between the key concepts of the research

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2. Methodology

This section presents an overview of the methodology of the research including the research approach, research design, methods and data collection

2.1 Research Approach

The main aim of the research is generating knowledge and understanding the relationship between concepts such as co-working, organizations, performance and flexibility, to propose alternatives that corporations can pursue to implement a co-working strategy in their portfolio. Therefore, the nature of the research can be defined as empirical. According to Barendse, Binnekamp, De Graaf, Van Gunsteren, and Van Loon (2012), the main aim of empirical research is producing knowledge and formulating explanations by using a descriptive methodology to understand a research problem.

Within the empirical research, this study is undertaken with an inductive approach; this means that the link between theory and research is defined by the fact that from observations, generalizable inferences are drawn to define a theoretical standing (Bryman, 2012).

This research follows an exploratory methodology that is focused on investigating and understanding a rather novel topic that has not been addressed in academic research. The information about the current situation sets the foundation for exploring possibilities and proposing alternatives to leverage the attributes of co-working to support the performance of the organizations.

2.2 Research Design

Research design provides a framework for the collection and analysis of data (Bryman, 2012). This research is structured in three main sections. First, literature review; second, empirical research; third, conclusions (Figure 1.03).

The objective of the first part is to generate a theoretical framework by means of a narrative literature review. This form of literature review is wide-ranging in scope and allows an overview of the field of study (Bryman, 2012). The information gathered in this section is essential to create a comprehensive understanding of what is already known about the key concepts of the research and to develop a standpoint for further developing the empirical research.

By obtaining information from theory, this methodology addresses the four 'what' sub-questions of the research:

- a. What are the real estate flexibility demands of corporations?
- b. What are the workplace flexibility demands of knowledge workers?
- c. What are the attributes of co-working in relation to flexibility?
- d. What are the potential contributions of real estate to competitive advantage?

The data for the literature review is collected via academic search engines such as Scopus, Google Scholar, and the digital platform of the TU Delft Library. Books and commercial publications also from part of the data collection.

The second part, empirical research, aims at adjusting and complementing the theoretical framework developed in the first part of the study. The empirical research is based on a qualitative study with three units of analysis: demand, supply and experts. First, the demand study is based on a multiple-case analysis of organizations using co-working spaces; the data is collected through case material publicly available, and interviews with corporate real estate managers of the organization. Second, the supply study is based on the data collected from semi-structured interviews with different co-working operators. Third, the expert study contributes to validating the findings from the demand and supply studies; for this, the data is collected through semi-structured interviews with experts in the topics of workplace strategy and co-working.

Based on the knowledge built up from the theoretical background, the empirical research is concerned with understanding: (Q1) How does the co-working space concept meet the flexibility needs of corporations and users? (Q2) How can co-working be adopted by corporations to achieve competitive advantage? and (Qe) What challenges are associated with adopting co-working as an accommodation strategy? This section is mainly concerned with understanding, in the context of co-working, the relations between demand and supply of corporate real estate, by collecting and analyzing information from practice.

The third part of the research corresponds to the conclusions of the study. This part is concerned with connecting all the findings gathered from the theoretical and empirical research and proposing alternatives to adopt co-working as an accommodation strategy, thereby, answering the main question of the research: *How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?*

Figure 1.03, gives a clear outline of the components of this research by illustrating the connections between research questions, research design, methods, data sources, and output.

Fig. 1.03

Sections of the research design; own figure

Part	1. Theoretical Research	2. Empirical Research	3. Conclusions
Method	Literature Review	Demand Study Supply Study Expert Study	Synthesis and Interpretation
Data Source	Academic Journals Books Reports	Case Studies: case material & interviews with CREM Interviews with suppliers Interviews with experts	Theoretical & Empirical Research
Research Questions	<i>What Questions</i> a. What are the real estate flexibility demands of corporations? b. What are the workplace flexibility demands of knowledge workers? c. What are the attributes of co-working in relation to flexibility? d. What are the potential contributions of real estate to competitive advantage?	<i>How / Which Questions</i> 1. How does the co-working space concept meet the flexibility needs of corporations and users? 2. How can co-working be adopted by corporations to achieve competitive advantage? e. What challenges are associated with adopting co-working as an accommodation strategy?	<i>Main Question</i> How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?
Output	a. Taxonomy of flexibility demands real estate b. Taxonomy of demands from knowledge workers c. Categorization of attributes of co-working d. Classification of factors that relate real estate strategy with competitive advantage	1. Comprehensive understanding of the connections between co-working and flexibility 2. Framework with strategies to adopt co-working as a corporate real estate strategy e. Overview of the challenges of adopting co-working	· Framework with strategies to adopt co-working as a corporate real estate strategy in relation to the concepts of flexibility, competitive advantage and implementation challenges.

2.3 Research Output

The outcome of this study is intended to close the gap in knowledge in relation to co-working in the corporate sector, as well as to support the decision-making process of corporate real estate managers looking to incorporate flexibility in the future accommodation strategies of their organizations. This study bridges theory and practice by complementing the theoretical framework (part 1) with the empirical data collected from cases in practice (part 2) and proposing alternatives to answer the main questions of the research.

As seen in figure 1.04, the theoretical research results in a series of lists that pertain to the flexibility demands of the real estate and the knowledge workers, the attributes of co-working, and the factors that connect real estate with business performance. The second part, empirical research, results in an outlook of the connections between co-working, organizations and flexibility, and an overview of the challenges of adopting co-working. This results in a framework with strategies to adopt co-working as a corporate real estate strategy.

Fig. 1.04

Scheme with the relation between the outputs of the different research components

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Main Question	Sub-questions	
MQ How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?	Q1 Comprehensive understanding of the connections between co-working, organizations and flexibility	Qa Taxonomy of flexibility demands from real estate
		Qb Taxonomy of flexibility demands from knowledge workers
		Qc Categorization of attributes of co-working in relation to flexibility
	Q2 Framework with strategies to adopt co-working as a corporate real estate strategy	Qd Classification of factors that relate real estate strategy with competitive advantage
		Qe Overview of the challenges of adopting co-working

Dissemination and audiences

This research is particularly addressed to two main groups of audience, the academic and the practical. The academic audience corresponds to researchers on corporate real estate management and workplace strategies, and students in the field of architecture, management and real estate. This research aims at increasing understanding and filling a gap in literature on co-working spaces and corporate real estate strategy, therefore, the information provided here is relevant from a theoretical perspective as it can provide valuable insights for further research.

The practical audience concerns corporate real estate managers, real estate investors and workplace service providers. This research is built upon theoretical background and draws empirical evidence from case studies, this information can be strategic for actors involved in practice to substantiate their decisions regarding real estate. The information presented here can be particularly meaningful for companies considering adopting co-working, and for co-working operators looking to improve or expand their services; the research provides significant insights into the current conditions in the field of flexibility and suggest alternatives that can result in increasing the adoption speed of co-working in the corporate real estate sector.

02

Theoretical Framework

Flexibility is a multifaceted concept that has a significantly different connotation depending on the context and the perspective in which it is defined. Flexibility has a different meaning for different actors; what employees mean when they seek flexibility can be completely different to what the organization is looking for. Sheridan and Conway (2001) have evidenced this issue, on the one hand, flexibility in the business context tends to emphasize an increase in efficiency and decrease in costs; while, on the other hand, flexibility in the work practice context usually relates first, to arrangements that enable workers to balance their personal and work responsibilities, and second, to control and autonomy to choose how to carry out work.

Flexibility, according to Reilly (1998), is a politicized concept that depends on the different meanings that it represents and how it is approached by governments, employers and employees. Although, sometimes conflicting, the different dimensions of flexibility are key, both, at the individual and corporate levels. Sheridan and Conway (2001), Harris (2015), and Ruhle and Süß (2019) have highlighted the importance of recognizing and balancing the flexibility demands of employees and workers in an effort to construct alternatives that are mutually satisfying and advantageous for individuals and organizations.

This chapter is structured in six main parts. The first section corresponds to the taxonomy of workplace flexibility demands from the perspective of the knowledge workers, this section includes a general overview of the nature of the knowledge work, and an analysis of flexibility in relation to work-life balance. The second section focuses on the taxonomy of flexibility demands in the corporate real estate portfolio from the perspective of the organization, this section includes an outline of the changes in the business context, and the analysis of flexibility in the uncertain business environment. The third section is dedicated to briefly understanding the overlap between the flexibility demands of the organization and the workers. The fourth section refers to flexibility in the context of co-working, this section focuses on the categorization of the five attributes of co-working and their relationship with the flexibility demands of the organization and the knowledge workers. The fifth section gives an overview of competitive advantage in relation to theories of corporate real estate management and particularly to co-working. Finally, the last section is dedicated to a general conclusion and the introduction of the adjusted conceptual model of the research that reflects the findings of the theoretical framework.

1. Knowledge workers and flexibility in the workplace

The following section is organized in two parts; the first one outlines the transition towards the service economy, and gives an overview of the nature of the knowledge work. The second part is dedicated to the taxonomy of the workplace flexibility demands of the knowledge workers in terms of time, location and space.

1.1 Knowledge work

Economy has been gradually transitioning from being industry-based towards more knowledge-based. This shift is reflected in the growth of the service sector since the second half of the twentieth century around the world, particularly in industrialized economies. This phenomenon was explained by Clark (1940) with the “Sector Model”, figure 2.01; the theory substantiates that, through time, every country goes through three stages of development, technological changes progressively transform the structure of employment and as this occurs, the economy moves from agrarian, to industrial, and finally to service based.

As the economic production changes from end-products to services, employment sources move away from the industrial sector, and towards the service sector (Orel, 2019). This structural change has had major implications in the nature and type of work carried out by employees; knowledge-based work is mainly concerned with the production and exchange of knowledge and information (Cole, Oliver, & Blaviesciunaite, 2014), thus, in this system, the human capital has become an essential factor of production.

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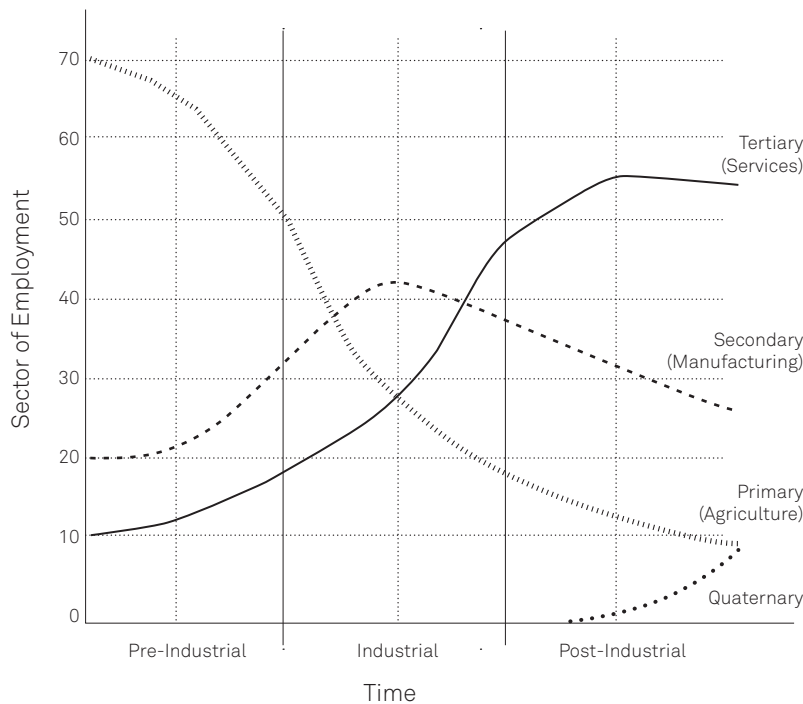


Fig. 2.01
Sector Model
by Clark; own
figure based on Clark
(1940)

Nowadays, as illustrated by Mitchell-Ketzkes (2003), knowledge workers have become the major creators of wealth, their productivity and performance is essential for the success and survival of organizations. In the process of knowledge creation, interaction, collaboration with others, and innovation play an important role. It has been stated in literature that knowledge work relies on a series of skills that include: creativity, interdisciplinary thinking, problem-solving, collaboration, networking and interaction (Kojo & Nenonen, 2016; Ojala & Pyöriä, 2017; Petrulaitiene & Jylhä, 2015; Sankari et al., 2018; Sankari, 2019).

Unlike in the primary and secondary sectors, where production processes rely on machinery or land, the work in the knowledge economy is less dependent on a specific location; because the knowledge workers are mainly concerned with processing and producing information and knowledge, the boundaries of the workplace are less attached to one particular physical space (Ojala & Pyöriä, 2017). This trend, coupled with digital technologies, mobile electronics, and the developments in information and communication technologies (ICTs), has resulted in more mobile working habits that altered the ideas of “where” and “when” to work (Joroff, 2002); meaning, skilled workers can technically perform operations from anywhere and anytime as long as they are connected to digital databases (Orel & Alonso Almeida, 2019). However, the importance of co-location and face-to-face interactions has still been highlighted as fundamental in the knowledge economy, especially for the transfer of tacit knowledge—as opposed to codified or explicit knowledge—that requires social interaction and proximity (Rychen & Zimmermann, 2008; Vissers & Dankbaar, 2013).

The developments that allow the possibility of remote working are aligned with what Alvin Toffler in 1980 defined as the “Electronic Cottage”: a space where technology enabled knowledge workers to work off traditional workplace boundaries (Toffler, 1980). The adoption of these practices, even though slower than expected, is reflected in the fact that across the European Union, an average of about 17% of the workforce is engaged in some form of remote working—either occasionally or on a regular basis—this rate is as high as 37% in Denmark, and 30% in the Netherlands (Eurofound & International Labour Office, 2017).

1.2 Demand for work-life balance and control

For knowledge workers, particularly the newest generations, the work-life balance has become an important issue. Work-life balance as defined by The European Foundation for the Improvement of Living and Working Conditions (Eurofound), recognizes that individuals have different—and sometimes conflicting—roles at work and in the private life that have to be balanced to create conditions that support people throughout an extended working life (Eurofound, 2018). Even though research on work-life balance has often focused on families with children, this issue is broader in scope as it applies to individuals regardless of their caring responsibilities. Work-life balance also involves the reconciliation of work with, for instance, interests in leisure activities, sports, socializing and volunteering (Eurofound, 2018).

According to a research carried out by Eurofound (2017), the increasing importance of work-life balance is related to three major societal transformations that include, first, the feminization of the workforce; second, the increased work intensity and extended working hours; and finally, the technological changes that have resulted in blurred boundaries between work, family, social and leisure activities. In this line, the work-life balance lies in the interface between two main factors, the number of hours spent working and when and how those hours are worked (Eurofound, 2018).

Accordingly, the workplace flexibility demands of the knowledge workers relate to three main aspects, namely, time (choosing when to work), location (choosing where to work), and space (choosing how to work).

Time Flexibility: Choosing when to work

Literature and reports have illustrated the increasing preference of workers for having autonomy over their working time (Hall & Atkinson, 2006; Termaat, Van Sprang, & Groen, 2014). Recent studies by Eurofound (2018) have evidenced that even though working time demands vary across the life course, the majority of the workers have a strong preference for having control over their working schedules. Being able to choose when to dedicate time for activities from the private life in relation to leisure, hobbies, family or friendships is important for a balanced life. Employees want to be able to

balance their work and personal lives by means of flexibility in their working time to fulfil their personal objectives (Gibson, 2003); this often means variation in starting and finishing working hours (flexitime), the possibility of taking hours off work, and choosing when to dedicate time for personal or work-related activities (Cañibano, 2018; Subramaniam et al., 2013).

Flexibility in working time arrangements make it possible to better combine work, family and personal commitments. Origo and Pagani (2008) have found positive links between working time flexibility and job satisfaction, which indirectly relates to labor productivity and firm performance. Similarly, Spreitzer, Garrett, and Bacevice (2015) suggest that allowing employees some autonomy in their work schedules results in improved productivity. Consequently, multiple countries in Europe—Portugal, Cyprus, the UK, Austria, amongst others—have promoted measures to enhance “employee-friendly flexibility”; In the Netherlands, for instance, a wide range of working time arrangements have been made available to allow employees find the best fit in terms of number of hours and organization of work through part-time work, long part-time, and self-scheduling schemes (Eurofound, 2017).

In line with these demands, workplaces that have extended opening schedules and support the workers’ choice for choosing when to work are increasingly preferred. Workplaces with flexibility in opening times allows workers to find the work schedules that best match their personal and work activities.

Location Flexibility: Choosing where to work

Flexibility regarding the place of work has also been seen as crucial for the coordination between work and the private life of the workers. The increased availability and accessibility to technological developments, particularly in ICT, has improved the flows of information, which consequently, has facilitated working from places other than the employer’s premises (Eurofound, 2018; Orel, 2019;). Cole et al. (2014) state that ICTs advancements have made work more portable, this shift in spatial boundaries increases employee flexibility to organize work between home, office, and the city.

Studies by Eurofound (2017) have found that workers are usually in favor of being able to decide where to work, this has been seen important for them, for both, reconciling work and private life, and limiting the constant interruptions by colleagues. These demands have been mentioned, for some years now, by various authors. In relation to limiting the interruptions at work, Kojo and Nenonen (2015) have highlighted the importance of being able to choose a workplace location to facilitate concentration. Van Meel and Vos (2001) have referred to the importance of family-supportive organizations with flexible working arrangements that support employees’ demands for freedom and flexibility to choose where to work. Similarly, Harris (2015) has highlighted the importance of choice and flexibility for work-life balance, career development, and leisure activities. Gibson (2003) has mentioned employees’ desire for flexibility to work from different locations to fulfil and balance their work and personal objectives.

The possibility of choosing a location to work has been recognized as relevant for accommodating individual needs (Cañibano, 2018). As workers are not obliged to travel daily to a central location, they can choose to work from home or other premises closer to functions or activities related to their private life—for instance, children’s school or childcare, sports facilities, home, etc.—or that facilitate their work activities—through concentration, minimized interruptions, space ambiance, etc. This multi-locational dimension is also associated with reduced commuting time (Pérez Pérez, Martínez Sánchez, De Luis Carnicer, & Vela Jiménez, 2004), which in turn, impacts well-being, work-life balance and productivity (Kojo & Nenonen, 2015; Yu et al., 2019).

Having the autonomy of choosing a location to work is related to positive outcomes. Literature suggests that employees working from remote locations—outside the employer’s office—feel more satisfied at their work because they have the opportunity to combine and organize their working time between the company, the residence and sometimes even client’s premises (Pérez Pérez et al., 2004). Morgan-son, Major, Oborn, Verive, and Heelan (2010) have shown that location flexibility allows workers to fulfil their household responsibilities, strengthen family relations and optimize time management, this is positively related to organizational commitment and job satisfaction and negatively related to turnover intent and job search behaviors.

Accordingly, the European Commission proposed in 2017 a Directive—A New Start to Support Work-life Balance for Parents and Carers—to include measures aimed at extending the right to request flexibility in the place of work (European Commission, 2017). The development of this type of legislations have resulted in further implementation in many countries across the European Union. In the Netherlands, for instance, the government encourages measures that allow workers to have more autonomy, and temporal and spatial flexibility (Eurofound, 2017).

Workplace arrangements that give workers the freedom to choose where to work are aligned with the flexibility demands of the knowledge workers, in relation to reconciling their personal and professional activities, and supporting their ways of working. In this sense, multi-locational workplaces are increasingly relevant as it gives employees the opportunity to choose the location that best fits their personal preferences.

Space Flexibility: Choosing how to work

There is an extensive body of literature acknowledging the increasing demands of the workers for choosing a working setting that better fits their different needs. These flexibility requirements relate to the specific space where the work is carried out, more and more, researchers and organizations are recognizing the importance of diversity in workplace settings to cater to the demands of a variety of users (Gillen & Cheshire, 2015; Greene & Myerson, 2011; Haynes, Suckley, & Nunnington, 2019; Knoll, 2011).

Long gone are the days where identical office cubicles and Taylorist or Fordist office settings were regarded as ideal working environments. Instead of being chained to a desk for eight hours a day, employees want flexibility and freedom to choose the setting that suits their preferred way of working according to the tasks to be performed (Appel-Meulenbroek, Groenen, & Janssen, 2011; Gibson, 2003). Gillen and Cheshire (2015) mention that different workers seek different types of spaces that range from quiet concentration, interaction, formal and informal meetings, amongst others. Aligned with this, Haynes et al. (2019) suggest that workers are requiring to have personal control of their office environment, they want a match between the space and their different work activities.

Greene and Myerson (2011) have categorized the knowledge workers based on their patterns of work and their mobility—within the office building and outside—to reflect the heterogeneity of the workforce, and the importance of diversity in the workplace. Individuals with high mobility (who drop by the office a few times a week) have very different needs than individuals with low mobility (who are in the office for eight hours a day). The categorization of Greene and Myerson (2011) has resulted in four types of knowledge workers, namely:

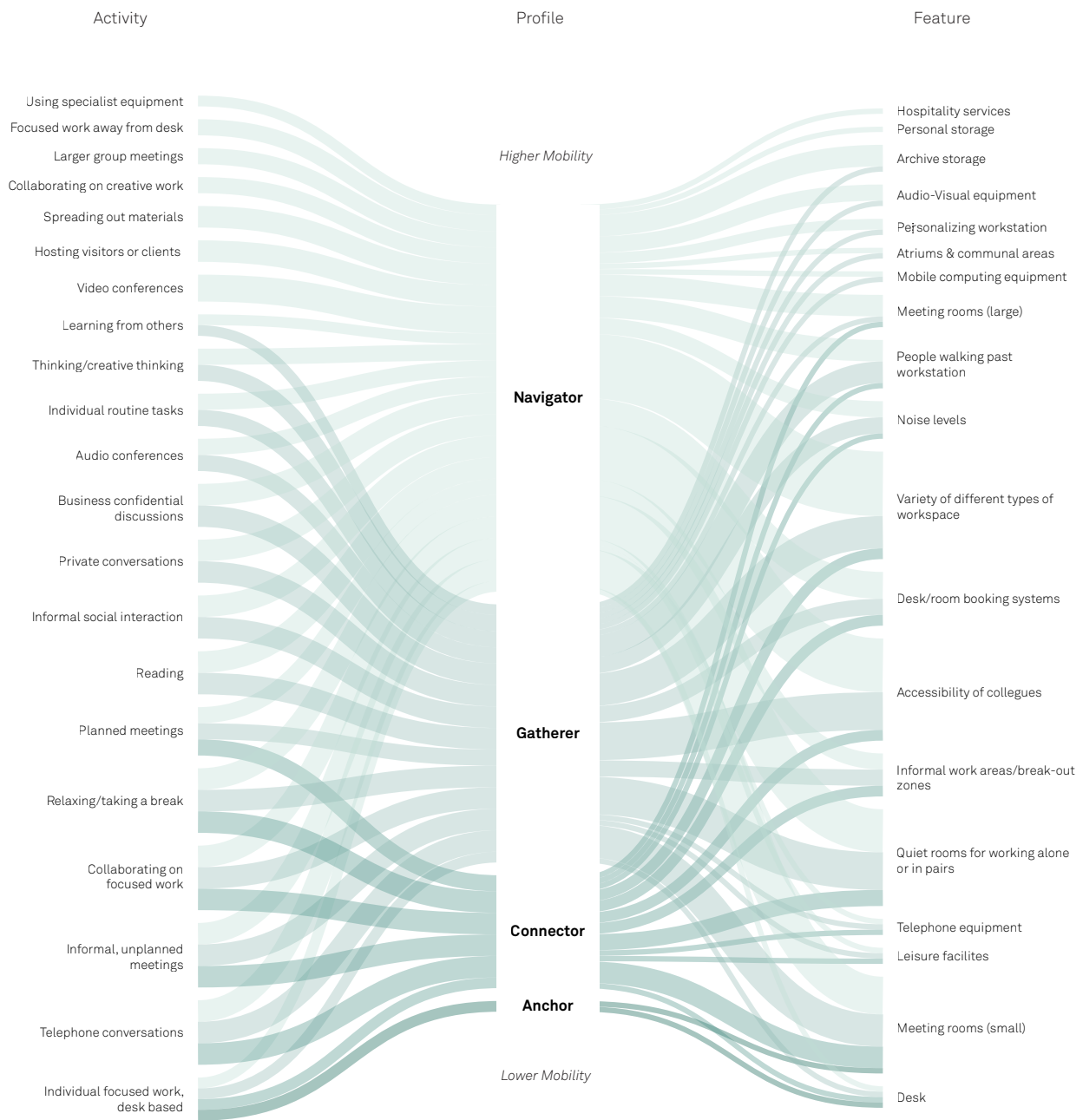
1. The Anchor: Sedentary office worker who is in the office every day. Most of the tasks are desk-based and their movement is limited to meeting rooms, areas around the workstation, and other functional facilities (printers, restaurant, etc.). Because of this, their work requires concentration at the individual level.
2. The Connector: Depends on interactions mainly within the office building. Their tasks require constant exchanges and interaction with people from different departments around the company; therefore, they usually spend their time in different places like meeting rooms,

- cafes or colleagues' desks. "They leave their jacket over the back of their chair and leave".
3. The Gatherer: Relies on many relationships generated away from the office. Their tasks involve appointments away, at client or customer offices, or other neutral "third space" locations like cafés or member clubs. Their work requires travelling, mainly at a regional level, to share information and create new business relationships.
 4. The Navigator: Mainly depends on relationships away from the office building. They are often key figures within the organization, holding large portfolios of responsibility and highly valued international roles. Their tasks involve the highest mobility, both, internally and at a global level; therefore, the office building represents for them a node within their network of places.

In their research, Greene and Myerson (2011) substantiate that the mobility of the workers affects the way in which they use the space and, consequently, their needs in the workplace. These findings are in line with the study of Leesman (2019) that revealed a remarkable connection between the activities of a particular role and the type of space suitable for them. In this research, they have categorized the workers by their activity profile—number and type of activities important in their role—and linked it with workplace features most closely associated with supporting each of those activities.

Figure 2.02, represents the link between the knowledge workers' profile, the activities important in their role, and the features of the workplace. As illustrated in the figure, the patterns of work of the different workers' profiles vary in relation to their mobility; especially, the navigator and gatherer profiles are associated with a complex array of activities and thus, require a greater variety of workplace features than those of the connector and anchor profiles. The graph is an alignment between the data of Leesman (2019), on activities and workplace features, and the workers' categorization of Greene and Myerson (2011). The main observation is that different profiles of knowledge workers benefit from different workplace solutions; both, individual and collaborative settings are important as not one solution can fit every profile.

As suggested by Harris (2015), due to these demands, the workplace is beginning to see a greater focus on user choice and autonomy. This is partially reflected in the increasing proliferation of Activity-Based-Working (ABW) environments, where the occupiers are not restricted to one workspace type, but are rather allowed to choose the most appropriate environment to undertake particular work activities (Haynes et al., 2019; Morrison & Macky, 2017). The importance of this space flexibility is illustrated by Göçer, Göçer, Ergöz Karahan, and İlhan Oygür (2017) and Agha-Hosseini, El-Jouzi, Elmualim, Ellis, and Williams (2013), their post-occupancy evaluation (POE) studies on workplace choice revealed a strong relation between freedom in choosing where to work, satisfaction with the physical work environment and productivity.



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Fig. 2.02

Alluvial Diagram with the relationships between knowledge workers profile, activities and workplace features; own figure based on Greene et al. (2011) and Leesman (2019)

Knowledge Workers	Flexibility	Type	Workplace Feature
	Time Flexibility <i>When to work</i>	·Variation in starting and finishing working hours ·Possibility of dedicating time for personal or work activities	Workplaces with extended opening hours
	Location Flexibility <i>Where to work</i>	·Work from different locations to fulfill and balance work and personal objectives	Multi-locational workplaces
	Space Flexibility <i>How to work</i>	·Types of spaces that range from quiet concentration, interaction, formal and informal meetings, amongst others	Workplaces with diversity in workplace settings (ABW)

Fig. 2.03

Workplace flexibility demands of knowledge workers; own figure

Summary

As the economy transitions from the industrial sector to the service sector, the nature of work has become mainly dependent on the production and exchange of information. In this economy, the knowledge workers have become an essential factor of production, thus, supporting their requirements in relation to the workplace can be a strategic tool to enhance their productivity and performance, and increase their job satisfaction and engagement.

From the perspective of the knowledge workers, flexibility plays an important role in the work-life balance. In this respect, three aspects—flexibility in time, location and space—have been considered essential by the workers to reconcile the roles and activities at work and in the private life (Fig. 2.03). Therefore, to answer the first subquestion of this research, *What are the workplace flexibility demands of knowledge workers?*, figure 2.04 represents a taxonomy of the workplace flexibility demands in relation to the profile of the knowledge workers. As seen in the graph, time flexibility is demanded by all the knowledge workers regardless of their profile, while location flexibility is demanded by the workers with higher mobility (navigator and gatherer); additionally, space flexibility is demanded by all the workers that are involved in multiple activities other than only individual desk-based work (navigator, gatherer and connector).

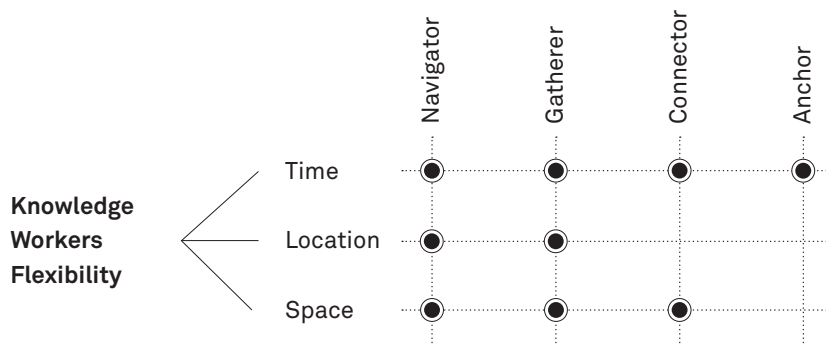


Fig. 2.04

Taxonomy of flexibility demands of the knowledge workers in relation to the workers' profile; own figure

2. Corporations and flexibility in the property portfolio

The following section is organized in four main parts. The first part outlines the changes in the business environment that have resulted in increasing competitive pressures. The second part refers to the importance of flexibility in the corporate context to respond to the dynamic business environment. The third part is dedicated to the flexibility demands in corporate real estate, in terms of physical, functional and financial terms. The last section focuses on the flexibility requirements for the different parts of the corporate property portfolio based on the core-periphery model.

2.1 Changes in the business environment

For some years now, the business environment has been suffering a major transformation. It has been argued that a number of interrelated trends have altered the nature of the business. Changes in the past decades related to globalization, technological innovation, economic instability, restructuring of the labor market, increasing global competition, and expanding customer expectations, are few of the factors that have derived in an unpredictable business environment (Gibler, Black, & Moon, 2002; Gibson & Lizieri, 1999b; Orel & Alonso Almeida, 2019; Sheridan & Conway, 2001; Weinbrenn, 2016).

In line with these changes, and with the convergence of competitive pressures, there has been an increased emphasis on consolidation, downsizing, restructuring and streamlining of processes and companies around the world (Gibler et al., 2002; Gibson, 2003). Organizations are looking for paths to respond to this fast-paced environment where rapid product and service development, shorter product life-cycles, and more demanding customers are the norm.

Cole et al. (2014) recognized three trends related to organizational structures that have been adopted to cope with the volatile conditions of the business environment. First, flatter organizations that, in contrast with hierarchical structures, depend on more decentralized decision-making processes and encourage more widespread distribution of knowledge. Second, blurred boundaries between organizations' departments and jobs, the organizational silos are pulled down so that the different units of the firm can work more efficiently together. Finally, increased flexibility, this refers to organizations being more agile and receptive to change.

The changes in economic structure and activity of the market economies have been explained through the concept of post-Fordism. In opposition to Fordism, that was based on the industrial practices of Henry Ford and emphasized the principles of "Scientific Management" of Taylor, post-Fordism overturns the rigidity of large scale fixed capital investments for mass production with more flexible and diverse systems of production (Gibson & Lizieri, 1999b). As illustrated in figure 2.05, the nature of these changes is reflected in various domains in the business environment, for instance, in ways of producing goods and services, organizational structures, employment relations, and patterns and locations of work, the general principle is that centralized hierarchical organizations with rigid structures are replaced by flatter organizational structures that rely on networks and integrated decision-making processes (Duffy et al., 1993).

Fig. 2.05

Fordist and Post-Fordist production systems (Duffy et al., 1993)

	Fordist	Post-Fordist
Production	Industry Work on objects Manual Mass Rigid Economies of scale Hard growth	Service Work with people Mental / Manual Niche / Customization Flexible Economies of scope Smart growth
Organization	Hierarchy Command Control Expansive	Participation Initiative Learning Downsized / Flattened
Employment	Core Full time In-house Blue / white collar Rooted employment Job specialization Male	Core / Periphery Variable times Outworkers Open collar Flexible employment No job demarcation Male / Female
Work patterns	Layers of management Single task Hierarchy Sequence of functions Status	Task teams Multiple tasks Operating specialist Synchrony Contribution
ICT	Automate Data Routine Centralization	Informate Knowledge Creative Integration and decentralization
Location	Places Central Transport	Networks Dispersed Communication

2.3 Fluid and dynamic entities

The consensus seems to be that in the highly uncertain conditions of today, organizations must become fluid and dynamic entities to evolve and respond to the dynamic environment (Gibson, 2001; Harris, 2015; Jakonen, Kivinen, Salovaara, & Hirkman, 2017; Lindholm, Gibler, & Leväinen, 2006; Martínez Sánchez, Pérez Pérez, De Luis Carnicer, & Vela Jiménez, 2007). Cañibano (2018) refers to the importance of flexibility in two terms, first, as a key to success and survival in competitive and challenging environments, and second, as a tool to match the constantly changing needs of organizations.

The increasing importance of flexibility for the organization has been highlighted by many authors in literature. Becker (2001) asserts that flexibility has become a matter of survival for many organizations as they need to adapt to the fierce global competitive conditions of the market; Origo and Pagani (2008) point out that flexibility is a key to the competitive success of firms, due to its impact in productivity and profitability, particularly, because of the firm's ability to reconfigure its resources efficiently to the changing circumstances; Martínez Sánchez et al. (2007) refer to flexibility as a source of competitive advantage in relation to the dynamic capacity and responsiveness of the firm, because, as organizations modify their resources it becomes more difficult to imitate by its competitors.

According to literature, flexibility is increasingly preferred on different levels and aspects of the organizations (Jylhä, Remøy, & Arkesteijn, 2019). Firms are combining different sources of flexibility, this is seen, for instance, in human resources with the layering of the workforce in core and peripheral, the core staff is retained and supported by the staff with shorter employment contracts (Duffy et al., 1993; Gibson, 2001). Reilly (1998) also referred to this notion in terms of core and peripheral activities of the organization, to differentiate the main purpose of the company and the supporting “secondary” activities—for instance, Information Technology (IT), human resources and accounting.

Furthermore, as organizations seek for a plethora of routes to become responsive to the external environment, the physical resources, become paramount. Real estate commitments require financial and physical obligations far into the future, in that sense, taking decisions in a highly turbulent environment becomes certainly complex. This duality, as defined by O'Mara (2000), represents a “structuring dilemma” grounded in the uncertainty of the external environment and the need of taking decisions that respond to that uncertainty. The search for resource flexibility is increasingly vital, nevertheless, the challenge lies in the fact that real estate has been defined as an inherently inflexible asset (Gibson, 2001) that is static, immovable, large, complex and expensive (Gibson, 2001; Too, Harvey, & Too, 2010).

Yet, it is under these circumstances that corporate real estate managers are increasingly challenged to find ways in which flexibility can be achieved (Gibson, 2001). Matching the physical resources with the realities of the business operation is one of the many targets. In the words of Gibson (2003), workplaces should respond to the cycles of expansion and contraction of the market, as well as organizational changes, the implication that staff is preferring to work in more flexible ways must be also reflected in the property.

2.4 Flexibility demands in the Corporate Real Estate portfolio

The growing need for flexibility within corporate real estate portfolios has been reflected in numerous commercial reports. The findings of the CBRE EMEA Occupier Survey of 2018 indicate that companies increasingly see flexibility as a key element of their corporate portfolios to support wider business goals, such as agility, innovation and talent attraction (CBRE, 2018a). Consecutively, in 2019, the same survey reflects a growing desire for flexible space that can adapt and evolve with dynamic business requirements; this preference is also reflected in the fact that 45% of the surveyed occupiers are planning to use flexible office spaces in the upcoming three years (CBRE, 2019). Similarly, the report “Investment in office property in the Netherlands” highlights the desire for flexibility in the office market, in terms of type of space and new lease structures, as a way to manage risk under fluctuating business cycles (IVBN & JLL, 2017). Furthermore, Knoll (2011) has highlighted the corporate desire for flexibility in real estate as a response of more spatial and organizational distributed firms.

Multiple authors in literature have referred to the need of office buildings that are productive, efficient, innovative and flexible (Appel-Meulenbroek & Haynes, 2014; Gibler et al., 2002; Gibson, 2003; Van Meel & Vos, 2001). Too et al. (2010) point out the importance of flexibility in corporate real estate as a tool to complement the business strategies; in that sense, Gibson (2003) has stated that flexible property solutions are driven, on the strategic level, by the need to support business change, and on the operational level, by the aspiration of increasing the productivity of the employees.

Within this notion, the concept of strategic flexibility becomes relevant; this term refers to the capability of organizations to effectively adapt and reconfigure resources and processes to quickly respond to dynamically changing environments. In this respect, Brozovic (2018) identified four dimensions of strategic flexibility—timely response, range of solutions available, perspective (proactive or reactive), and area of focus—that relate to the allocation and reconfiguration of resources under conditions of uncertainty. In this sense, flexibility in the corporate office environment is not a concept that has to be universally applied to every unit and aspect of the portfolio (Becker, 2002), but rather to particular components and under the circumstances that are optimal for the organization.

Corporate occupiers are recognizing the advantages of different forms of real estate flexibility for different types of functions, and at varying stages of maturity (CBRE, 2018a). There are multiple shades of flexibility that apply to different dimensions of the property portfolio, meaning, flexibility can have different forms depending on the perspective in which real estate is considered; in this sense, corporate real estate can represent a physical, functional, or financial asset for different departments within a company, each of these perspectives leads to a different source of flexibility (Gibson, 2001).

The flexibility approach to corporate property portfolio developed by Gibson and Lizieri (1999b), represents a clear categorization of the different flexibility preferences of the organizations, namely, physical, functional, and financial.

Physical Flexibility

The demand for physical flexibility in the corporate real estate portfolio, relates to two infrastructure attributes: the configuration of the internal space and the location of the building.

In relation to the first attribute, physical flexibility relates to the demand for building features that have the capacity to accommodate changing organizational space requirements. Within the physical perspective, the space layout, and the shape and size of the floorplates are important as they are directly related to the possibility of adapting the internal configuration of the spaces to meet the changing needs of the organization and the workforce (CBRE, 2019; Gibson, 2001; Gibson & Lizieri, 1999b; Knoll, 2011).

For Blakstad (2001), the preferences of flexibility in physical terms correspond to the ability of the building's structural and technical systems to adjust to changes in use, ownership or environment. In this perspective, flexibility to rearrange elements within an existing main structure can be achieved through: partitionability, this refers to the possibility of dividing the building into different functional units; multifunctionality, which relates to the internal layout of the building that allows different arrangements of the space without major modifications; and extendibility, which refers to the possibility of a building to be extended horizontally or vertically.

Physical flexibility is increasingly preferred by corporations as it has been associated with the possibility of adapting the space to the needs of the users both in the short-term, space arrangements related to furniture settings, and in the long-term, reconfiguration of areas and space divisions. According to Mitchell-Ketzes (2003), a critical aspect of successful and innovative workplaces is the ability of the workplace to morph and change as quickly as the business requires. Similarly, Harris (2015) states that the reconfiguration of the workplace is essential to quickly and efficiently facilitate the operation of the organization.

In relation to the second attribute, an aspect that has gained relevance in the context of physical flexibility, is location. First, in these terms, some organizations are acknowledging that location flexibility in the property portfolio can significantly reduce indirect costs by limiting travel expenses through the combination of consolidated centralized headquarters with secondary offices across a number of sites. These policies also have a significant impact on sustainability, Knoll (2011) has claimed that working from dispersed offices has drastic implications in reducing the carbon footprint of the employees, compared to centralized offices that require long commutes. Second, for some authors, location flexibility and spatial decentralization has also been seen as a source of competitive advantage as it gives firms the possibility to access a pool of customers, clients and also talent, that might not be possible from a single location (Gibson & Lizieri, 1999a; Halvitigala, Antoniades, & Eves, 2019; Martínez Sánchez, et al., 2007).

In both cases—configuration of the internal space and location of the building—physical flexibility is an aspect that has gained importance in the last decades in the context of real estate as more organizations consider it fundamental for their corporate portfolio.

Functional Flexibility

Functional flexibility refers to the activities undertaken inside a building, and the possibilities of accommodating different uses within the space (Gibson & Lizieri, 1999b, Lindholm, 2008). Workspaces are required to evolve as the work processes, and the activities and tasks performed by individuals change through time (Duffy et al., 1993; Gibson & Lizieri, 1999b). Appel-Meulenbroek and Haynes (2014) have highlighted the importance of spaces that support the current and future business activities. Accordingly, corporations have expressed their requirement for workplaces that can accommodate a more dynamic range of uses first, in terms of the type of activities, and second, in terms of the intensity of use of space (CBRE, 2018a).

First, with regard to the type of activities, Blackstad (2001) has related the functional flexibility of office buildings with the capacity to accommodate a variety of areas that support the activities of the different users. Some authors have stated that a closer relation between the activities carried out and the features of the building is linked to higher productivity of employees (Duffy et al., 1993).

The match between the variety of work activities and adequate spaces, means having an array of options available that are aligned with the different tasks performed at the office, this naturally represents a challenge. Multiple organizations have tackled this issue with “office innovations” as the aforementioned Activity-Based-Working (ABW) environments (Appel-Meulenbroek et al., 2011). For many organizations, this represents a suitable solution to support multiple activities and workstyles as they offer a variety of settings—from individual spaces for concentration, teamwork rooms, and reading areas, to communal spaces and areas for events (Haynes et al., 2019; Kojo & Nenonen, 2016).

Additionally, functional flexibility, in terms of space options that fit into different work tasks, has been recognized as important as it allows individuals and teams to relocate in space depending on the activities undertaken at minimum downtime and cost (Gibson, 2000). There is evidence that, when there is a need to accommodate organizational changes, allowing people and not furniture to move, has significant implications for reducing the cost of churn (Becker, 2002; Gibler et al., 2002; Gibson, 2000).

Second, functional flexibility relates to the intensity of use of space. This preference is driven by the fact that it has often been seen that areas in the workplace are unoccupied for longer periods of time, Duffy et al. (1993) referred to this as “the inefficiency of the office building”. According to Deloitte (2010), in the average company about 30 to 40% of the physical workspaces are vacant on a regular business day. Organizations are looking for strategies that allow them to make a more efficient use of space according to their particular needs.

Within this same perspective, organizations are looking for greater flexibility by increasing or decreasing the occupancy density in the buildings; this expands the capacity and gives more time to react to changing requirements without the acquisition of additional space (O’Mara, 2000). In this line, shared workspaces, hot-desking and communal areas have been commonly used strategies to increase the functional flexibility in relation to the intensity of use of the corporate property (Harris, 2015; Lindholm, 2008; Morrison & Macky, 2017).

Financial Flexibility

A fundamental part of the flexibility preferences of corporations relates to the financial aspects of the property. Organizations are looking for methods to manage the financial risks and exposures associated with real estate decisions as a response to uncertainty (Gibson & Lizieri, 1999b; O'Mara, 2000). Financial flexibility is mainly related to two aspects, first, the length of lease arrangements, and second, the availability of options in the real estate market (Blackstad, 2001; Becker, 2001).

The office market is often associated with long-term and relatively fixed contractual agreements; in the Netherlands, the typical lease term is five to ten years with renewal periods of two to five years (JLL, 2017). Halvitigala et al. (2019) and Miller (2014) indicated that firms that are growing, shrinking or experiencing significant turnover are struggling to match the fixed leased space with the needs of the organization. Similarly, Appel-Meulenbroek and Haynes (2014), suggested that there is a time-lag between the needs of the organizations and the supply of real estate.

The discrepancy between the leased space and the actual spatial needs of the organization has been illustrated by Miller (2014). The findings suggest that firms have the most efficient space intensity at the start of lease, this is related to the difficulty of predicting the number of employees and their time spent at the office through time. For instance, in a downturn cycle, firms often struggle to downsize until the lease expires; as a result, the space per worker is likely to increase, this indicates “shadow space” or hidden vacancy—meaning companies are leasing more space that is actually required.

O'Mara (2000) suggests that any costs incurred to assure greater flexibility must consider the time saved, the lowered risk of making unnecessary commitments, and the less obvious costs of not having enough space and incrementally acquiring additional space. As mentioned in literature, the speed of entry and exit of real estate commitments is paramount for the efficient operation of the organization (Gibson, 2000, 2003; Halvitigala et al., 2019; O'Mara, 2000).

Research by CBRE (2017) has shown that the uncertainties in the business environment have implied that occupiers are more reluctant to sign long-term leases, and instead, are more attracted by shorter leases that offer freedom to expand or contract at short notice. According to Lindholm et al. (2006), matching the provision of space with the duration of business needs is critical to support the core strategy of the organization and add value to the firm.

Short-term leases and break clauses facilitate the coordination of the space with the volatility of the market. According to Haynes and Nunnington (2010), from a financial perspective, leasing property in short-terms frees up capital that can be invested in the core business with higher returns and limits the proportion of non-liquid capital assets. In addition, this type of leasehold is associated with reducing the risk of being locked into an unsuitable or obsolete building and giving the opportunity to test (location, building, spatial arrangements) without a major commitment.

The demand for shorter leases is reflected in the emergence of the flexible office sector—business incubators or accelerators, innovation centers, co-working spaces and serviced offices (CBRE, 2017, 2018a, 2019). Based on a study of corporate occupiers, the findings of CBRE (2019), indicate a growing interest in the flexible office sector as a key element of the corporate portfolio to address demand increases, test alternate workspace and occupancy models, reduce costs, and attract and retain talent.

Another aspect that relates to financial flexibility is the availability of options that respond to the various and changing needs of the organization. In the words of Asson (2002) and O'Mara (2000), flexibility is the key for any business going forward, the uncertainties in the environment hamper the ability of predicting accurately where and when the space will be needed in the future. In these terms, an effective and integral portfolio strategy is not based on one solution per se, but on an array of potentially effective solutions simultaneously in play (Becker 2001; PwC, 2018).

In this sense, financial flexibility relates to spreading the risk of real estate commitments in a variety of workplace solutions that have the capacity to quickly respond to different circumstances. The goal, according to O'Mara (2000), is to increase options on the supply side to buffer uncertainty. Leasing property for short-terms is probably not appropriate for all the parts of the property portfolio; in this line, a more suitable strategy is to balance the portfolio by spreading the risk over a diverse range of products that combines serviced offices, standard leases and freehold (Becker, 2002; CBRE 2018b; Gibler & Lindholm, 2012).

Becker (2001) affirms that the value of options open over time is related to the opportunity of selecting different alternatives and strategies that are more suitable under specific circumstances; this minimizes the risk of irreversible commitments as some options that solve the requirements of today can have different implications throughout time.

02 |

**Corporate
Real Estate
Portfolio**

Flexibility	Type	Feature
Physical Flexibility <i>Space</i>	· Configuration of the internal space · Location of the building	Modular buildings Multi-locational offices
Functional Flexibility <i>Uses</i>	· Support multiple activities · Intensity of use of space	Diversity in workplace settings (ABW) Increase occupancy rates
Financial Flexibility <i>Contracts</i>	· Length of lease contracts · Availability of options	Short-term leases Diverse and integral portfolio

Fig. 2.06

Flexibility demands in the corporate real estate portfolio; own figure

2.5 Core-Periphery Model in the corporate property portfolio

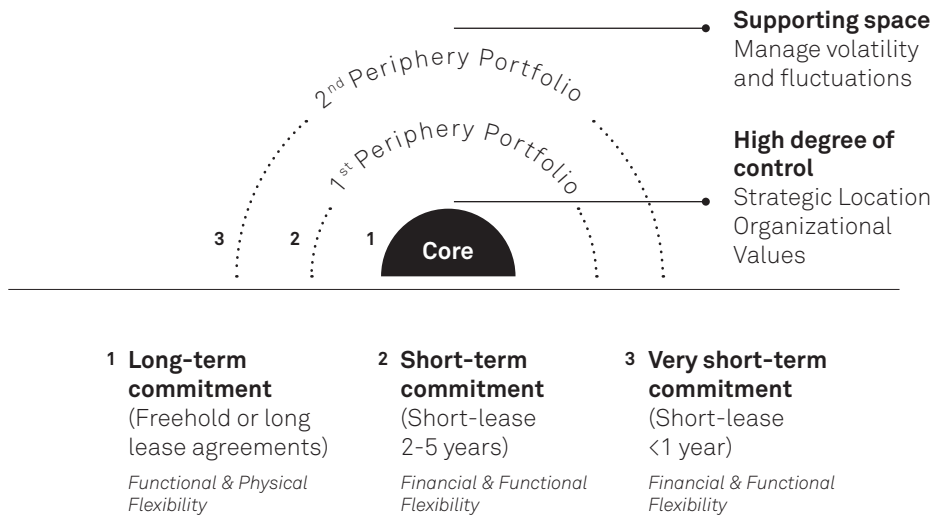


Fig. 2.07

Core-Periphery Model of the corporate property portfolio; own figure based on Gibson and Lizieri (1999b)

The consensus seems to be that flexibility in the property portfolio has been increasingly preferred by organizations to face the conditions of uncertainty and volatility in the market. However, one important consideration is that not all sources of flexibility are equally required for all parts of the portfolio; several authors indicate that each type of flexibility is required at different times and for different purposes within the life-cycle of an organization (Gibson, 2000, 2001; Gibson & Lizieri, 1999a, 1999b; Haynes & Nunnington, 2010). Accordingly, Gibson and Lizieri (1999b) developed the core-periphery model, a three-tiered approach to corporate real estate that acknowledges the different flexibility needs—type and degree—of the different parts of the portfolio according to the particular business requirements. The model is based on three main categories—core, first periphery and second periphery.

First, the core portfolio refers to facilities that are needed for the long-term, and thus, require a high degree of control by the organization—this often includes manufacturing facilities, headquarters and research, and development facilities (Gibson & Lizieri, 1999b). In these terms, as the core portfolio is usually owned or leased in long-terms, the flexibility required relates mainly to physical and functional aspects that allow adaptation as the organization changes (Fig. 2.07).

Second, the first periphery refers to space that supports the core property and is acquired through shorter term contractual arrangements—three to five years. This space is often used for specific projects, or in business departments that are more prone to be affected by fluctuations in the business cycle (Gibson & Lizieri, 1999b). As a result, the property is expected to be flexible in financial and functional terms to support the variety and changes in the uses and activities in the building and limit the financial risks in the face of uncertainty.

Third, the second level of periphery portfolio relates to the supporting space that the organization commits on a very a short-term (Gibson & Lizieri, 1999b). In this category, the agreements are often based on a monthly, weekly or even hourly basis, and are often supplied by co-working spaces, serviced offices or business incubators. Because of the speed of entry and exit, flexibility in financial and functional terms is key in this layer.

In this perspective, the corporate portfolio usually consists of core property acquired in the long-term, that is physically flexible; and complementary peripheral property acquired in the short-term, that is financially flexible. Additionally, regardless of the part of the portfolio, functional flexibility is essential across the different parts of corporate real estate.

Summary

Multiple factors have resulted in a dynamic and uncertain business environment. In the face of these volatile conditions, organizations are adopting different practices that overturn the rigidity of previous “Fordist” production systems to become more responsive and agile to change. In this line, flexibility in real estate has been seen as a means to embrace change and support the evolving needs of the organization under conditions of uncertainty.

The increasing need for strategic flexibility in the corporate real estate portfolio has been widely acknowledged in literature. In this line, three main sources of property flexibility—physical, functional and financial—have been defined as fundamental for specific parts of the property portfolio (core or peripheral). Thus, to provide a clear standpoint from the perspective of the organization and answer the second subquestion of this research, *What are the real estate flexibility demands of corporations?*, the taxonomy in figure 2.08 outlines the demands and sources of flexibility in corporate real estate in relation to the components of the property portfolio. As seen in the figure, functional flexibility is important in all parts of the property portfolio, while physical flexibility in terms of space configuration is more important for the core property and financial flexibility is seen as fundamental for the peripheral corporate property.

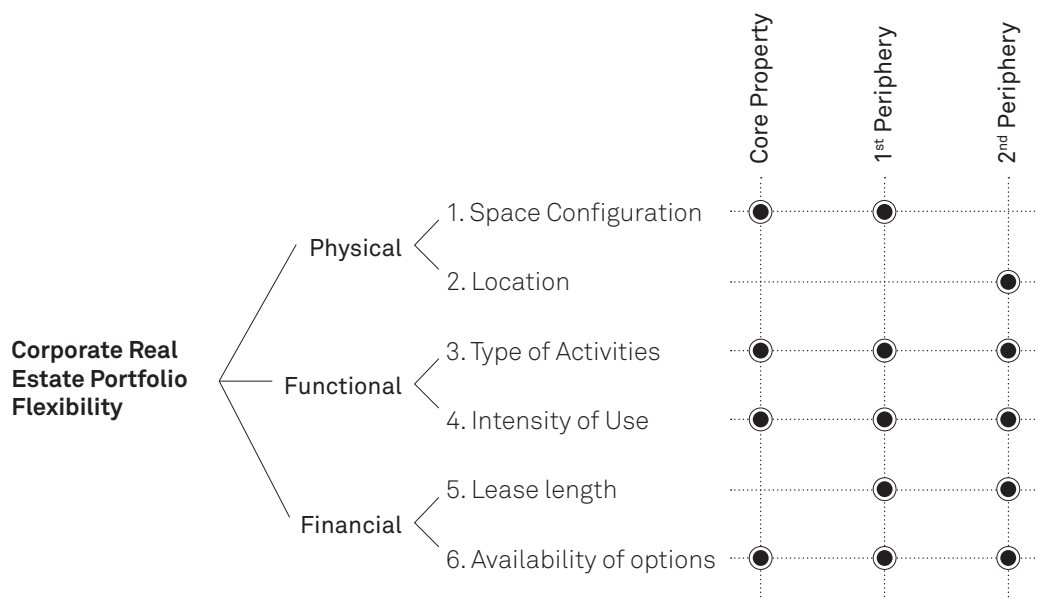


Fig. 2.08

Taxonomy of flexibility demands in the corporate real estate portfolio in relation to the Core-Periphery Model; own figure

3. Flexibility an integrative approach

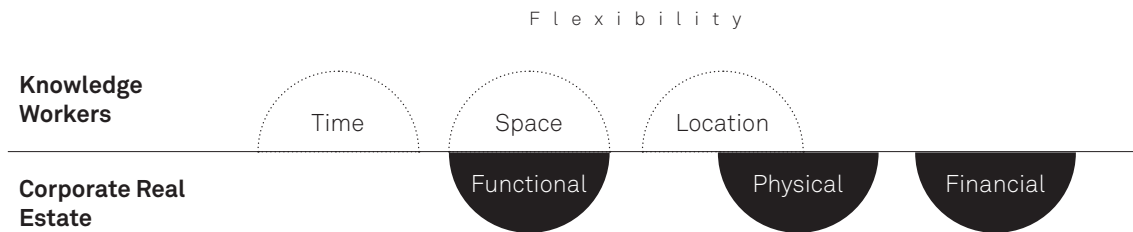


Fig. 2.09

Intertwinement between the flexibility demands of the organization and the knowledge workers; own figure

021

Flexibility is a concept that has often been approached either as beneficial for the organization, or beneficial for the employee. Cañibano (2018) has referred to this as the “binary approach” to flexibility, suggesting it is seen as a contest between the interests of two mutually exclusive parts: the organization or the employee. Even though each party attributes a different meaning to the same concept, as seen in the previous section, the flexibility preferences of the knowledge workers and the organization are interrelated. Figure 2.09, illustrates the overlapping and intertwining between the demands of both parts.

Cañibano (2018) suggests that flexibility should be examined as a paradox to explore the simultaneity and contradiction of the concept. In this sense, finding workplace arrangements that simultaneously meet the preferences of the organization and the employees is fundamental. Reilly (1998) and Sheridan and Conway (2001) advocate finding alternatives that recognize the interplay between employees’ needs and the business strategy to construct mutually satisfying outcomes.

4. Co-working and Flexibility

The following section is organized in three parts; the first one gives an overview of the changes in the workplace in the last years and the current trends. The second part focuses on the definition of co-working, and the exponential growth of the concept in the last decade in the office market. The last section is dedicated to the attributes of co-working and their relationship with the flexibility demands of the organizations and the knowledge workers.

4.1 Changes in the Workplace

The workplace has been defined by Mitchell-Ketzes (2003) as an ecosystem comprised of people, process and place that aims at supporting individuals and the nature of their work. The business environment, the type of work, and consequently, the workplace, have suffered major transformations throughout time. In this aspect, Van Meel and Vos (2001) state that workplaces change to reflect the ideas, values and meaning of work over time. The transformation of the workplace is evident when reflecting back from the Taylorist office, the modernist office, the paperless office, to the most forward-looking workplaces of today that disrupt any conception of what the office used to look like in the twentieth century (Img. 01-02).



Img. 01

Reference image of Taylorist office (Medium, n.d.)



Img. 02

Reference image of modernist office in the 1960's; Union Carbide Building SOM (Stoller, n.d)



Img. 03

Prototype of Mobile Office by Hans Hollein (*Hans Hollein Mobile Office Vienna, 1969*)

Since the 1970's a considerable amount of literature has been dedicated to imagining and predicting "the office of the future". Hans Hollein, in 1969, coined the term "mobile office" and conceptualized the workplace as an inflatable plastic tube, equipped with a telephone and a drawing board (Img. 03), that allowed people to work anywhere at any time with minimal physical space (Van Meel, 2015). Although technological developments impacted the type of work and the mobility of the workers, the adoption of these futuristic practices is less ubiquitous than predicted.

The claims around the "death of the office" were mainly based on a strong belief that the advancements in technology would render the physical space obsolete (Clifton, Füzi, & Loudon, 2019; Van Meel, 2015). However, these predictions underestimated the increasing importance of face-to-face interaction in an economy where boundless opportunities are found in transferring and sharing knowledge. Even though there are signs that reveal profound changes in the workplace, the physical space is not demised; instead, the meaning of workplace has transformed from a "sole place of shelter" (Sankari, 2019), to a network of physical, virtual and social aspects extremely important to support knowledge sharing and interaction (Harris, 2015; Joroff, 2002; Van Meel & Vos, 2001).

As the nature of work in the service economy relies on processing, sharing and transferring information and knowledge, the importance of the workplace for individual and organizational performance is increasingly recognized (Termaat et al., 2014). Clifton et al. (2019) have evidenced the paradox of the workplace in the knowledge economy: on one hand, the type of work and ICTs developments allow more footloose and mobile work practices, while on the other hand, the same factors drive the need for proximity and co-location of workers.

Few employees produce value in isolation (Joroff, Porter, Feinberg, & Kukla, 2003), instead social interactions are fundamental for knowledge creation and dissemination (Haynes et al., 2019). In fact, Clifton et al. (2019) refer to the “ever-increasing forces of agglomeration” in relation to the evidence that suggests that workers are carrying out many of their activities in closer proximity to one another; this is specially related to the importance of geographical proximity, face-to-face interactions and social networks for the exchange of tacit knowledge (Boschma, 2005; Capdevila, 2013; Clifton et al., 2019).

In this line, and with the recognized importance of the knowledge workers for the performance of organizations, the workplaces have started to shift their focus towards being more people-centric (Harris, 2015; Hood, 2015). This is aligned with three significant trends:

1. Focus on the social aspects of the office: workplaces are increasingly prioritizing knowledge sharing and interaction, this is commonly done through formal and informal collaborative meetings, social spaces and events that nourish innovation, networking, creativity and support community building (CBRE 2019; Harris, 2015; Orel, 2019; Savills, 2019).
2. Focus on User Experience: User Experience (UX) in the workplace has become a trend, replacing the physical space in value offerings (CBRE, 2019; Petrulaitiene, Korba, Nenonen, Jylhä, & Junnila, 2018). According to CBRE (2019), 37% of the companies are planning to introduce a User Experience program in the next three years, which often includes: nutrition and wellness programs, wayfinding apps, environmental control systems, and personal service offerings (CBRE, 2018a; Leesman, 2017; Morrison & Macky, 2017; Weinbrenn, 2016).
3. Focus on service provision: As the experience design evolves, service offerings and amenities become fundamental in the office space. Staff and visitors are treated more like consumers of space and services (Gillen & Cheshire, 2015); this is seen with the emergence of value-added services such as concierge desk, expert consulting, personal development, and even dry cleaning and daycare services (CBRE, 2019; Gillen & Cheshire, 2015; Hood, 2015; Savills, 2019).

The workplace is seen as a strategic business tool to increase productivity, creativity, interaction (Mitchel-Ketzes, 2003). Additionally, with the shortages of skilled labor and the “war for talent” (CBRE, 2016a, 2018b; Savills, 2019; Termaat et al., 2014) companies are recognizing the workplace as a crucial element for attracting and retaining staff (Termaat et al., 2014; Van Meel & Vos, 2001; Weinbrenn, 2016) and demonstrating the values and culture of the organization (Gillen & Cheshire, 2015; Smollan & Morrison, 2019).

The last decades have seen a proliferation of new workplace models and strategies, alternative to the traditional generic office models, that aim at supporting the work of the knowledge workers and match the needs of the organizations—these often include serviced offices, co-working spaces, incubators, amongst others. Within these alternatives, co-working has been regarded as an interesting alternative to support distributed work, increase the spark of new ideas, support interaction and community building, encourage cross-discipline learning, and support employees’ autonomy (Sankari, 2019; Spreitzer et al., 2015).

4.2 The co-working phenomenon

The concept of co-working can trace its origins back to the mid-1990's with the emergence of "hacker-spaces" in Berlin, the idea behind was to provide an open space where people with common interests related to digital technology could gather, collaborate, and share ideas and knowledge (Deskmag, 2013; Roth & Mirchandani, 2016). Later, in 2005, the first official co-working space, Spiral Muse, founded by Brad Neuberg, opened in San Francisco as an alternative workplace that combined freedom and flexibility of independent working with the structure and community aspects of traditional offices (Capdevila, 2014; Deskmag, 2013; Roth & Mirchandani, 2016; Spinuzzi, 2012).

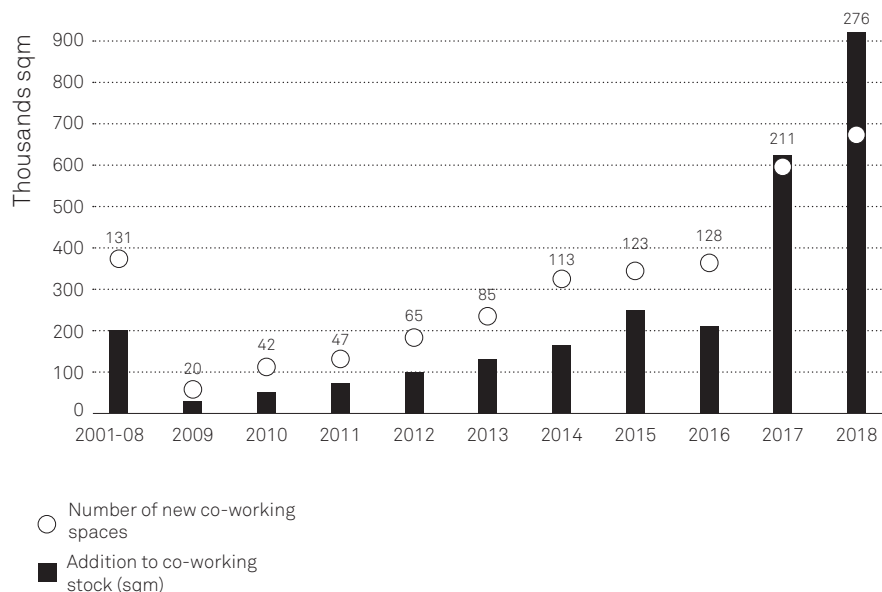
Co-working spaces have been defined in literature as a type of multi-tenant office, with a high level of service, where a diverse group of individuals with more or less heterogeneous backgrounds share a 'community work environment' on the basis of a membership that grants access to multiple services and facilities (Garrett et al., 2017; Sankari, 2019; Spinuzzi, 2012; Yu et al., 2019). Since its emergence, co-working spaces have become a widespread phenomenon with around 22,000 spaces and more than 2,000,000 members worldwide (Deskmag, 2019). In Europe, co-working spaces have experienced an exponential growth, figure 2.10 illustrates the annual additions, in terms of sqm, in the European

market since 2009. The size of the phenomenon is also reflected in commercial reports, the consensus is that Amsterdam and London are the stand-out markets in Europe (Colliers, 2019; Cushman & Wakefield, 2018, 2019). As seen in figure 2.11, in terms of volume, London represents the largest co-working market in Europe with more than a million sqm; while in terms of market share, Amsterdam takes the lead, the 400,000 sqm account for about 6% of the total office stock of the city (Cushman & Wakefield, 2019).

The remarkable growth of co-working has been mainly fueled by a key source of demand: entrepreneurs and freelancers; however, the concept is increasingly attracting corporate occupiers due to the service level offered and networking opportunities provided (Bouncken, Laudien, Fredrich, & Görmar, 2017; Cushman & Wakefield, 2019; JLL, 2018). The potential of the market is reflected in the fact that, with the increasing demand, the growth of the co-working space sector is expected to continue in the next years; the forecast is that in London and Amsterdam co-working will represent about 10% of the overall office stock in five years' time (Bouwinvest, 2018; Colliers, 2019; Cushman & Wakefield, 2018).

Fig. 2.10

Co-working expansion 2001-2018, annual additions to the stock (Colliers, 2019)



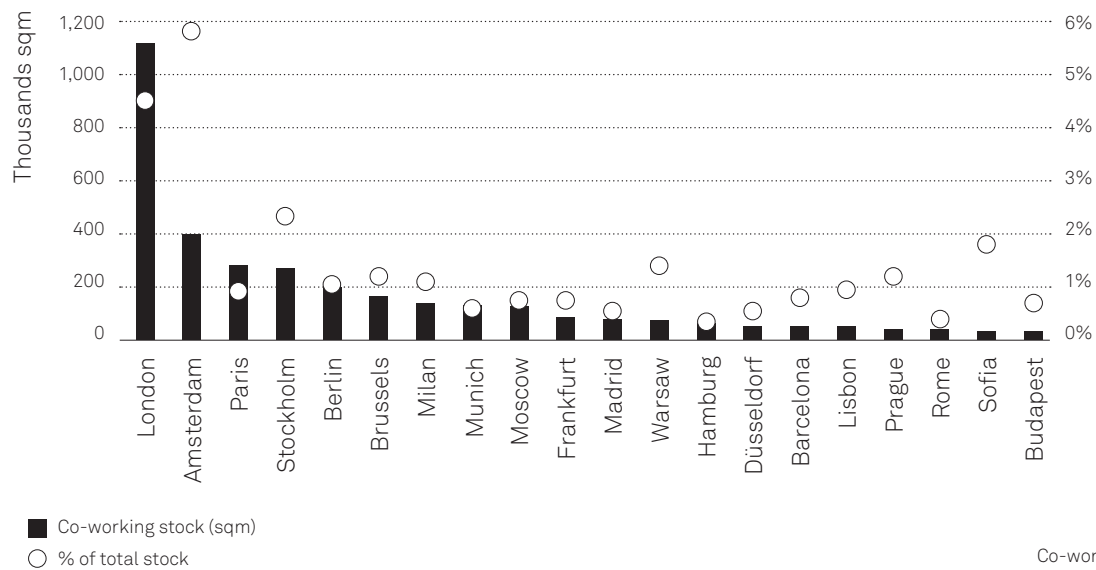


Fig. 2.11

Co-working stock and market share in Europe (Cushman & Wakefield, 2019)

4.3 Attributes of co-working

The concept of co-working has evolved and adapted throughout the years, co-working operators offer a wide variety of workspace products that range from shared desks, dedicated desks, private offices, meeting rooms, and open-plan areas (Savills, 2019). Although there are significant differences—in terms of space and service offerings—across the different operators, Sankari et al. (2018) defined the five common attributes of co-working, namely: community, space-as-a-service, multipurpose office, high accessibility and attractive workplace. These characteristics define the core values of co-working, the following section explains each of the features in further detail, the benefits associated with them, and their relationship with the flexibility demands of the knowledge workers and the organizations.

1. Community

The distinct feature of co-working spaces is the emphasis on interaction and collaboration between individuals from different backgrounds. The main focus is on creating a sense of community to leverage the synergies of interaction, informal encounters and knowledge sharing. In this aspect, the community manager plays an important role to give rise to social interactions, facilitate the connections among members and build trust within the

space (Bouncken et al., 2017; Bouncken & Reuschl, 2016; Clifton et al., 2019; Kojo & Nenonen, 2016; Orel, 2019; Roth & Mirchandani, 2016; Sankari, 2019; Sankari et al., 2018; Spinuzzi, 2012; Spreitzer et al., 2015; Weijs-Perrée et al., 2018).

According to Jakonen et al. (2017) the value of co-working does not lie in the desk offered, but rather in the social aspects related to community and collaboration; in this perspective, the focus of the workplace shifts from the physical space, to the relationships and interactions between people and spaces. The community attribute of co-working is highly relevant in the knowledge economy as it has the potential to strengthen professional and social ties.

Association with other people is a basic human need, the social ties that co-working offers relate to overcoming the drawbacks of remote working, particularly, in relation to isolation (Morganson et al., 2010; Weijs-Perrée et al., 2018). Co-working members enjoy the balance between community and autonomy. According to Orel (2019), and Roth and Mirchandani (2016), people find supportive networks in co-working spaces, the synergy of social interactions leads to a sense of belonging, motivation and satisfaction. Hood (2015) has stated that co-working members experience the camaraderie

that is often missing in corporate environments. Research by Orel (2019) evidences that the social attributes of co-working enhance the productivity of the workers, nourishes their social lives and creates a balanced lifestyle.

The professional ties related to the community aspect of co-working refer to knowledge creation, transfer and dissemination. Boschma (2005) has mentioned the increasing importance of interaction and spatial proximity in the knowledge economy; while organizations intend to increase cooperation by bringing people together, co-working spaces rely on the voluntary nature of the face-to-face interactions and trust-based relationships that facilitate the exchange of tacit knowledge (Clifton et al., 2019; Jakonen et al., 2017). As stated by Capdevila (2013), these trust-based relationships lower the transaction costs related to search, validation and transfer of information and knowledge.

Furthermore, Capdevila (2013, 2014) has referred to co-working spaces as microclusters, where the diversity and complementarity of the members creates synergies for value creation and innovation, and contributes to the cross-pollination of different bodies of knowledge. In this perspective, the community attribute is a valuable asset from which learning and collaborations can emerge.

Even though community is not an attribute of co-working that directly relates to the flexibility demands of the organizations or the knowledge workers, the multiple benefits associated with the production and dissemination of knowledge and information in collaborative and community environments are increasingly relevant for production in the knowledge economy.

2. Space-as-a-service

Co-working spaces are normally offered on a membership basis that grants access to the physical, social and virtual working environment for a period of time—on an hourly, daily, weekly or monthly basis. Most of the services are included in the membership fee, while others can be purchased or leased under special arrangements—catering, dry cleaning, tailoring, daycare, additional furniture, stationary, etc. (Bouncken & Reuschl, 2016; Garrett et al., 2017; Halvitigala et al., 2019; Hood, 2015; Petrulaitiene et al., 2018; Sankari, 2019; Sankari et al., 2018, Yu et al., 2019).

Co-working is associated with user-centric value offerings that aim at delivering a high-quality workplace experience. The physical space offered is supplemented and enhanced with additional services—such as community events, personal programs, work related services, etc.—focused on meeting the needs of organizations and knowledge workers outside of the traditional corporate space. This characteristic is aligned with what Danivska (2018) referred to as the “servitization of the workplace”, this concept emphasizes the employee-centric bottom-up approach to workplace management where users and organizations have the flexibility to pay for the use of different service packages on a short-term basis.

In this line, co-working presents an alternative to traditional leasing models by means of short-term agreements that are tailored to the specific demands of the users and the organization. The membership subscription typically includes access to open areas and shared desks, while private offices and designated desks can be acquired for an additional fee (Bouncken & Reuschl, 2016; Van Meel, 2015; Weijs-Perrée et al., 2018). As the acquisition of space is based on short time spans, co-working provides occupiers the freedom to quickly expand and contract their space requirements according to the needs of the organization (Halvitigala et al., 2019). This pay-per-use payment structure limits the financial risks typically associated with real estate commitments, and facilitates the match between space and organizational requirements in the face of uncertainty.

Additionally, under the new accounting standards for commercial leases, organizations are likely to benefit from these short-term agreements (CBRE, 2018). With the new International Financial Reporting Standards (IFRS 16) real estate leases have a significant impact upon the financial statements of a company; almost every lease is brought onto the balance sheet as an asset and a liability; however, flexible leases, that are shorter than one year, are seen as a service agreement, and are thus excluded from the organizations’ balance sheet (Savills, 2019). The result is that the contractual arrangements offered by co-working operators on a pay-per-use basis become an attractive alternative to keep leases off the balance sheet (Halvitigala et al., 2019; Savills, 2019).

Based on these findings from the literature, the conclusion is that space-as-a-service is a characteristic of co-working that first, directly responds to

the financial flexibility demands of the corporations. The speed of entry and exit offered by co-working is aligned with the demands of the organizations to manage volatility and react to changes in an uncertain business environment. Second, the user-centric service offerings of co-working are aligned with the workplace flexibility demands of the knowledge workers in terms of space, location and time, as the network of spaces and services aim at attracting and satisfying a wide range of users.

3. Multipurpose office

Co-working spaces are usually Activity-Based-Working environments that allow users to choose workspaces that are suitable for their current tasks. This often includes formal meeting rooms, team-work rooms, reading areas, silent working spaces, informal and creative spaces, open-plan areas, communal kitchens, and event spaces (Brown, 2017; Kojo & Nenonen, 2016; Sankari, 2019; Sankari et al., 2018; Weijs-Perrée et al., 2018).

Co-working spaces are intended to align with the different workstyles of a variety of individuals; therefore, they usually offer a combination of spaces for shared, informal, quiet, concentrated, or confidential work (Spreitzer et al., 2015). According to the findings of Palvalin, Van der Voordt, and Jylhä (2017), workplaces that support concentration, communication, and self-management practices have an impact on individual and team productivity. In this line, Morrison and Macky (2017) state that the diversity of work surfaces offered in co-working spaces lead to higher satisfaction, which in turn, improves the performance and productivity of the workers.

Co-working spaces not only offer a variety of work surfaces, spaces for informal encounters and leisure activities are also commonly found; these supporting spaces are seen as fundamental to facilitate networking, enable social interaction, and support healthy working habits (Morrison & Macky, 2017; Orel & Alonso Almeida, 2019).

The availability of varied environments and settings typically offered in co-working spaces cater to the flexibility demands, in terms of space, of a broad range of knowledge workers. While at the same time, the multiple uses accommodated in the space relate to the functional flexibility demanded by organizations for the property portfolio.

4. High accessibility

Co-working spaces are usually located in central locations or close to transport hubs that facilitate the accessibility by public transport. Additionally, co-working spaces are typically open 24/7 and over the weekends (Bouncken & Reuschl, 2016; Hood, 2015; Sankari, 2019; Sankari et al., 2018; Termaat et al., 2014; Weijs-Perrée et al., 2018; Weinbrenn, 2016).

As mentioned by Sankari (2019) and Spreitzer et al. (2015), flexible opening hours give members the freedom to choose the work schedules that best fit their agendas. This autonomy over when to work is particularly substantial in co-working spaces, where the work schedules of the members are expected to be variable; Roth and Mirchandani (2016) have defined this as a 'judgement-free' environment, as there are no pressures from other members to adhere to a nine-to-five schedule (Spreitzer et al., 2015).

The high accessibility of co-working also refers to the fact that the large operators usually provide a network of locations, which is sometimes even extended at the international level (Weijs-Perrée et al., 2018). Roth and Mirchandani (2016) have argued that the availability of multiple co-working locations has benefits for the individual workers as it allows them to choose where to work, and has the potential of reducing the unproductive time spent commuting back and forth to a corporate facility. Kojo and Nenonen (2015), Knoll (2015), and Orel and Alonso (2019) suggest that a network of locations gives corporations a closer access to a portfolio of clients and customers, as well as talent.

Furthermore, Yu et al. (2019) argue that the workplace accessibility, in terms of location and opening hours, offered in co-working spaces has a significant impact on the environment, economy and urban planning. By cutting commuting times and sharing facilities, co-working has the potential to reduce traffic congestion, pollution and CO₂ emissions.

The accessibility attribute of co-working directly responds to the flexibility demands of the knowledge workers in terms of when and where to work; 24/7 schedules and availability of locations gives choice and autonomy to the workers to find the working patterns that best suit their individual preferences. Simultaneously, the network of locations offered by large co-working operators responds to the physical flexibility demands of the corporations.

5. Attractive workplace

Co-working spaces aim at being attractive workplaces that deliver a high user experience, in this aspect the atmosphere and design of the spaces are important characteristics, as well as the services and facilities available to the users—events, catering services, personal services, etc. (Bouncken et al., 2017; Orel & Alonso Almeida, 2019; Sankari, 2019; Sankari et al., 2018; Weijs-Perrée et al., 2018).

Co-working operators are concerned with providing inspiring working environments for its users. Orel and Alonso (2019) have mentioned that ambience, or workspace atmosphere, is a cornerstone for collaboration and resource exchange amongst workers that share an office space. In this same line, Hood (2015) stated that co-working spaces offer engaging workplace environments that accelerate teamwork and knowledge transfer among the workers.

The high-level service packages provided by co-working spaces are increasingly focusing on user experience; and more and more the value offerings are evolving towards the hospitality industry. Operators are often incorporating personal services to attract users, these include wellness (fitness centers, nutritional programs, etc.), transportation (bikes and shared cars), and others (dry-cleaning, florist, package handling, etc.) (CBRE, 2019; Gillen & Cheshire, 2015; Termaat et al., 2014). Additionally, co-working spaces aim at being attractive workplaces by enhancing the social aspects of the office. Offerings related to professional, educational and social events aim at providing opportunities for personal development, work-life balance, as well as increasing the engagement with the community (Bouncken & Reuschl, 2016; Brown, 2017). Kojo and Nenonen (2016) stated that co-working is aligned with the workplace transformation, where the social aspects of work are increasingly more relevant than in the past.

As workers become more demanding of their workplace, incorporating services and amenities that are attractive for the users becomes fundamental for organizations. Attractive workplace is not an attribute of co-working that directly responds to the flexibility demands of the organization or the knowledge workers, however, it has been recognized by several authors as a key feature to attract and retain talent (Harris, 2015; Roth & Mirchandani, 2016; Sankari, 2019; Weinbrenn, 2016).

Summary

As the business environment and the type of work have changed throughout the years, the workplace has also suffered major transformations; this has led to the emergence of different workplace concepts that offer alternatives that aim at catering to the demands of the knowledge economy. In this line, co-working is a workplace concept that has experimented exponential growth in the last decade. Initially driven by the demands of freelancers, entrepreneurs, and independent workers, co-working has started to extend to the corporate real estate sector.

According to literature, five attributes define the core values of co-working, namely, community, space-as-a-service, multipurpose office, high accessibility and attractive workplace. To answer the third subquestion of this research—*What are the attributes of co-working in relation to flexibility?*—figure 2.12 illustrates the relationship between these core values of co-working and the previously identified flexibility demands of the knowledge workers and the organizations. As seen in the figure, co-working responds to nearly all flexibility demands—excluding space configuration—of both, the workers and the organization.

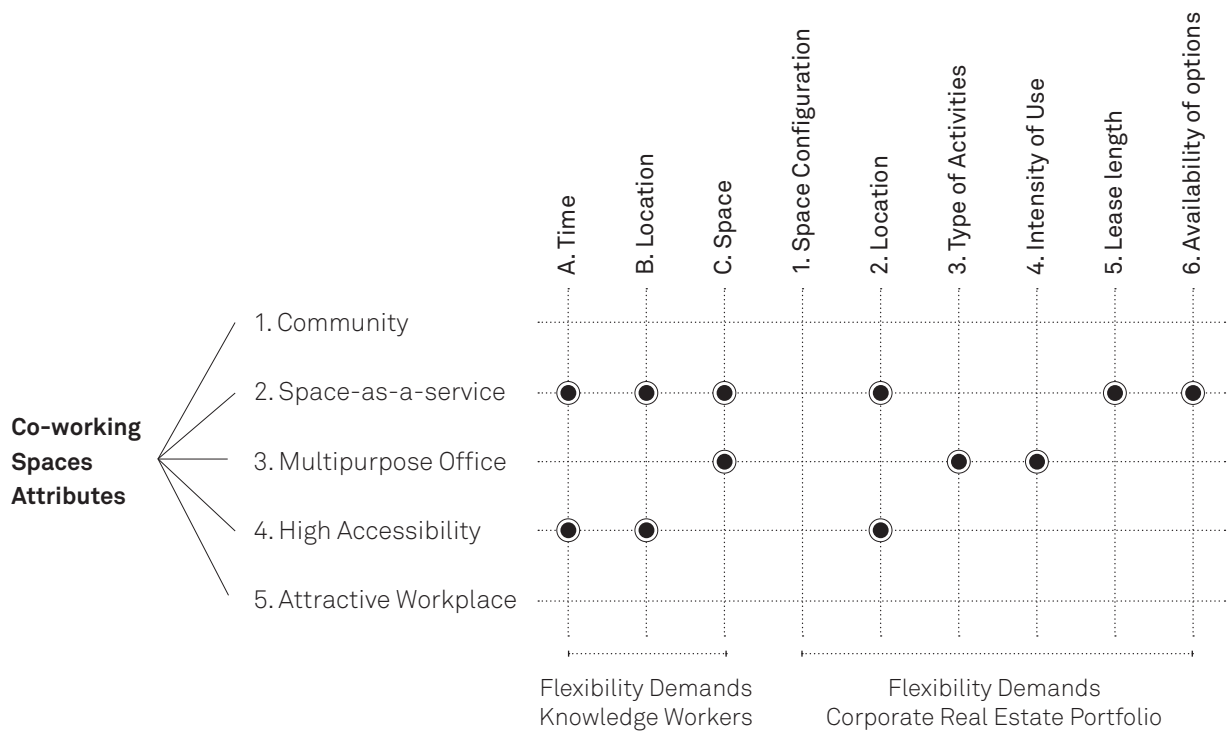


Fig. 2.12

Categorization of attributes of co-working in relation to flexibility demands; own figure

Conclusion

Co-working in relation to flexibility demands

Based on the analysis from the previous sections, from both the demand and supply sides of corporate real estate, it is possible to conclude that co-working is a workplace strategy capable of simultaneously meeting the flexibility demands of the organizations and the knowledge workers. To provide a clear answer to the first question of this research: *How does the co-working space concept meet the flexibility needs of corporations and users?* Figure 2.13 illustrates the connections between the attributes of co-working, the workplace flexibility demands of the knowledge workers, and the real estate flexibility demands of corporations. As seen in the figure, the attributes of co-working match the workplace flexibility demands of the knowledge workers in terms of time, location and space, and the real estate flexibility demands of the organization in terms of physical (location), functional (type of activities and intensity of use) and financial (lease length and availability of options) aspects.

According to the findings in literature, co-working is an attractive concept that has benefits at the individual and corporate level. As seen in figure 2.13, the attributes of co-working are particularly aligned with the demands for the second periphery portfolio of corporate real estate, and the navigator and gatherer knowledge workers' profile. Therefore, co-working is an alternative real estate accommodation strategy that complements the core property of the organization, especially for mobile workers that depend on interactions with different people, and fit in the navigator and gatherer profiles of knowledge workers.

- Supplied by co-working
- Demanded by the organization / knowledge workers
- Match between supply and demand

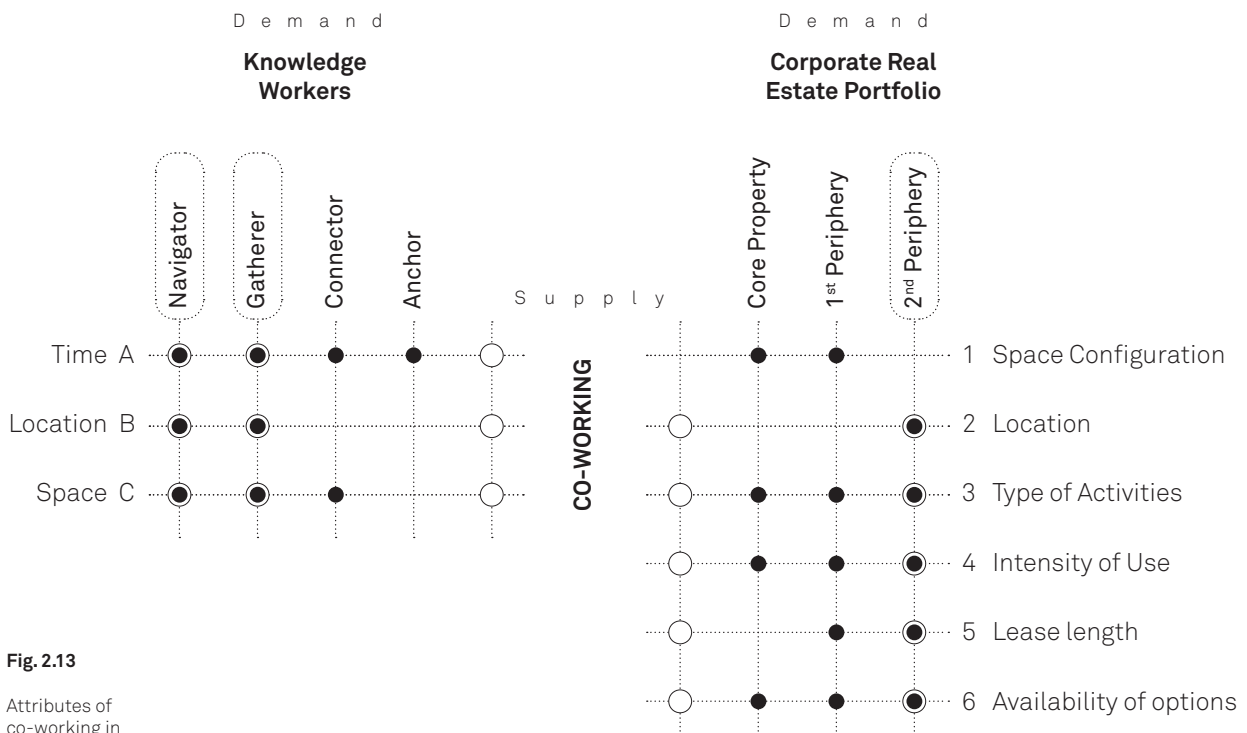


Fig. 2.13
Attributes of co-working in relation to the flexibility demands; own figure

5. Corporate Real Estate and Competitive Advantage

The following section addresses corporate real estate in relation to the performance of the firm. The section is organized in three parts, the first part, gives an overview of the concept of competitive advantage and the resource-based view theory. The second part focuses on the sources of competitive advantage in corporate real estate as found in literature. The third part is dedicated to understanding the concept of competitive advantage in relation to co-working.

5.1 Competitive advantage and the resource-based view of the firm

Given the dynamic conditions of the business environment, the new working practices and the increasing global competition, organizations are looking for ways to achieve sustainable competitive advantage. In this line, corporations are increasingly focusing on aligning their resources to efficiently support the overall business competitive strategy (Gibler & Lindholm, 2012) and enhance business performance (Foon & Nair, 2010). This notion has been conceptualized by Barney (1991), according to his resource-based view theory, firms have tangible and intangible resources—assets, capabilities, knowledge, information, etc.—that must have four attributes to hold the potential of sustained competitive advantage. In this perspective (Barney, 1991), resources need to be:

- a. Valuable, meaning that they enable the firm to improve its efficiency and effectiveness.
- b. Rare, in the sense that the same resource is not simultaneously possessed by a large number of firms.
- c. Imperfectly imitable, meaning that the resource is difficult to duplicate due to unique historical conditions, or because the source of competitive advantage is difficult to identify (causal ambiguity), or the resource is a socially complex phenomenon that is beyond the ability of the firms to systematically manage.
- d. Non-substitutable, meaning that there are no other strategically equivalent resources that can be substituted by other firms.

In this line, several authors have argued that corporate real estate is a resource with the potential to contribute to sustainable competitive advantage (Gibler et al., 2002; Kortmann, Gelhard, Zimmermann, & Piller, 2014; Martínez Sánchez et al., 2007; Too et al., 2010). According to Jensen, Sarasoja, Van der Voordt and Coenen (2013), the last decades have seen a shift towards perceiving real estate as a resource capable of making valuable contributions to the firms' performance, rather than a necessary burden. Heywood and Kenley (2008) have argued that corporate real estate plays an important role in organizational competitiveness as it is the second costliest organizational resource (after human resources). Similarly, CBRE (2016b) has stated that real estate is a key contributor to the broader organizations' strategies and objectives. Particularly, the potential of corporate real estate to contribute to competitive advantage lies in the fact that it combines tangible and intangible aspects; on the one hand, it involves the physical space as a tangible resource, and on the other, it involves intangible aspects in relation to supporting the workers in the knowledge creation and transfer process. As explained by Becker (2001), in the context of business performance, the physical asset in corporate real estate is only half of the equation, the other half relates to the knowledge infrastructure.

Furthermore, an integral corporate real estate strategy that aims at contributing to the performance of the firm must be aligned both, with the organization's strategic goals, and with the different departments within the organization to ensure that the physical space supports the activities and requirements of the workers. In this perspective, Jylhä (2019) has referred to the concept of vertical and horizontal alignment in corporate real estate; where vertical corresponds to strategic alignment between the different levels of the organization—corporate, business, functional; and horizontal refers to the alignment across the different corporate functions—such as real estate, human resources, information technology, operations, etc.

The relation between real estate and business performance is rather complex. As the purpose of real estate is to serve the value-creating activities of the organization (Termaat et al., 2014); Appel-Meulenbroek and Haynes (2014) have argued that the effect of corporate real estate in the organization's performance is dependent on multiple variables and cannot be analyzed in isolation. Therefore, the connection of real estate with other aspects of the organization, for instance human resources, financial aspects, operational processes amongst others, is essential.

5.2 Sources of competitive advantage in corporate real estate

Within this strategic management approach to corporate real estate, different authors have developed multiple hypothesis to link corporate real estate to competitiveness (e.g. De Vries, De Jonge, & Van der Voordt, 2008; Den Heijer, 2011; Gibler & Lindholm, 2012; Jensen, Nielsen, & Nielsen, 2008; Macmillan, 2006; Nourse & Roulac, 1993). As found in literature, figure 2.14 outlines the aspects identified as sources of competitive advantage in corporate real estate. The authors are organized in chronological order from left to right, starting with the most recent.

Fig. 2.14

Sources of competitive advantage in corporate real estate according to literature; own figure

	Gibler and Lindholm (2012)	Den Heijer (2011)	Jensen, Nielsen and Nielsen (2008)	De Vries, De Jonge and Van der Voordt (2008)	Macmillan (2006)	Nourse and Roulac (1993)
1	·Increasing the value of organization's real estate assets	·Increasing real estate value	·Economical	·Possibility to finance	·Exchange value	·Capture the real estate value creation of business
2	·Encouraging and supporting employee innovation and creativity	·Stimulating innovation ·Stimulating collaboration		·Innovation		
3	·Promoting marketing, sales and organizational brand	·Supporting culture ·Supporting image	·Culture	·Culture ·Image	·Cultural ·Image	·Promote marketing message ·Promote sales and selling process
4	·Enabling flexibility	·Increasing flexibility ·Controlling risk	·Adaptation	·Flexibility ·Risk control		·Flexibility
5	·Enhancing employee wellbeing and satisfaction	·Increasing user satisfaction	·Social ·Satisfaction	·Satisfaction	·Social	·Promote human resource objectives
6	·Increasing employee efficiency and productivity	·Supporting user activities ·Improving quality of place	·Productivity ·Spatial ·Reliability	·Production	·Use value	·Facilitate managerial process and knowledge work ·Facilitate control production, operations, and service delivery
7	·Supporting environmental sustainability	·Reducing footprint	·Environmental		·Environmental	
8	·Reducing real estate related costs	·Decreasing costs	·Cost	·Cost		·Occupancy cost minimization

As seen in figure 2.14, the different approaches to linking real estate and business performance overlap to a certain extent. Accordingly, the categorization of Gibler and Lindholm (2012) presents an integral approach, as it covers all the aspects mentioned by the other authors. Each of these eight concepts are explained in further detail according to the findings in literature.

1. Increasing the value of organization's real estate assets: this relates to the value in exchange of the real estate assets, in terms of return on capital, yield, book value, etc.; in this line, increasing the value of the assets also refers to low vacancy rates, appropriate property management and accurate financial information about the corporate space.

2. Encouraging and supporting employee innovation and creativity: the emphasis in this aspect is on real estate features that facilitate collaborative and innovative work. This attribute is increasingly relevant as it supports intangible aspects of competitive advantage in relation to knowledge creation.

3. Promoting marketing, sales and organizational brand: these aspects refer to the image of the organization that convey certain values, and other attributes that facilitate the access and attraction of customers and clients.

4. Enabling portfolio flexibility: this aspect refers to two concepts; first, flexibility in the context of finance, meaning lease structures and contracts that limit the risks of the organization. And second, flexibility in the context of the building, particularly in relation to adapting the physical space to accommodate changes in the future.

5. Enhancing employee wellbeing and satisfaction: this means on one hand, providing pleasant and functional working environments that respond to the requirements of the workers; and on the other hand, encouraging social interactions that result in increased personal comfort. These aspects are also increasingly associated with talent attraction and retention.

6. Increasing employee efficiency and productivity: this aspect refers to ensuring the optimal operation of the business by providing facilities that match the activities carried out by the employees.

7. Supporting environmental sustainability: this aspect mainly refers to reducing the carbon footprint of the organization, and efficiently using natural resources—water, energy, etc.

8. Reducing real estate related costs: this means minimizing occupancy costs and operation expenses, as well as reducing costs of churn.

Each of the eight aspects illustrate the potential contribution of real estate to the competitive advantage of the firm; however, these should not be seen in isolation, acknowledging the interrelation between the different aspects is key to understand the complex relationships between the different sources of competitive advantage. In this line, two clusters—costs and productivity—are particularly evident (Fig. 2.15). Regarding the first, enabling the flexibility of the portfolio to react to business changes in financial and physical terms also relates to reducing real estate related costs, this becomes evident especially considering scenarios where an organizational restructuring implies reducing the headcount which results in high vacancy rates and inefficient use of space; long-term lease commitments that result in a mismatch between the space acquired and the requirements of the organization; or even the costs of not having enough space to accommodate business growth. In these terms, reducing real estate costs not only refers to minimizing operational and capital investments, but also to the effective and efficient responsiveness of the portfolio to the business requirements.

Regarding the second, it has been widely acknowledged in theory (CBRE, 2016b, 2018a, 2019; Eurofound, 2018;) that enhancing employee wellbeing and satisfaction is strongly associated with driving productivity improvements; while at the same time encouraging employee innovation and creativity is seen as a key factor in competitive advantage not only in terms of value creation and knowledge sharing that contribute at the business level, but also in relation to increasing satisfaction and productivity at the employee level. Therefore, employee productivity is also driven by workplace features that encourage the satisfaction of the employees and that support the creativity and innovation processes of the workers.

Considering the different theoretical standings, corporate real estate is a strategic resource capable of making valuable contributions to business performance. Therefore, to answer the third subquestion of this research, *What are the potential contributions of real estate to competitive advantage?*, figure 2.15 outlines the main aspects found in literature that link corporate real estate to sustainable competitive advantage. These aspects are further explored in the next section within the specific context of co-working.

02—



Fig. 2.15
Aspects of corporate real estate that contribute to competitive advantage as found in literature; own figure

5.3 Co-working in relation to Competitive Advantage

As co-working expands to the corporate sector, understanding its potential contribution to the sustained competitive advantage of the firm becomes essential. The criteria defined by Barney (1991) provides a starting point, according to his theory four empirical indicators illustrate how useful a resource is for generating competitive advantage. Accordingly, in the context of co-working:

- a. Valuable: co-working provides a workplace that meets the flexibility requirements of the organization and the users, and is built upon a platform for community and social interaction that is increasingly relevant in the knowledge economy. Therefore, co-working as a corporate real estate strategy can be defined as a valuable resource for the organization.
- b. Rare: co-working has had an exponential growth in the last years, and with the multiple operators in the market, it would be difficult to assert that co-working is a rare resource. However, co-working has been mainly adopted by freelancers, independent workers and entrepreneurs and it is still a rather novel concept in corporate real estate. The adoption of this model has not been done yet at a large scale in the field of corporations, so the first-movers are more likely to accrue the resource advantages of co-working.
- c. Imperfectly imitable: in this point, two aspects are important. First, in co-working different tangible (the physical space) and intangible (knowledge, interaction and collaboration) aspects are at play, therefore, it is difficult to determine specifically the source of competitive advantage, this, according to Barney (1991), is termed “causal ambiguity”. Second, one of the key attributes of co-working is community, the informal social interactions and collaborative practices that contribute to knowledge sharing can be defined as a complex social phenomenon that is beyond the abilities of firms to systematically manage and influence or reproduce with the same outcomes. Therefore, co-working as a corporate real estate strategy can be defined, to a certain extent, as an imperfectly imitable resource.
- d. Non-substitutable: the substitutability of co-working relates to two aspects. On the one hand, the physical space offered by co-working can be easily replaced by other workplace alternatives in the market; while on the other,

the community created around members of heterogeneous backgrounds, which provides an environment for knowledge creation and sharing, is difficult to substitute for strategically equivalent resources. Therefore, co-working, in reference to its intangible aspects, can be partially defined as a non-substitutable resource.

Based on this analysis, co-working possesses certain attributes (mainly intangible) that hold the potential to contribute to competitive advantage. The extent to which co-working can contribute to the firm's competitive advantage is difficult to measure or quantify; specially because corporate real estate in general is a complex resource that is interdependent of multiple variables—for instance management practices, human resources, operational decisions, etc.—that affect the performance of the firm.

Nevertheless, the previously identified aspects that, according to theory, connect corporate real estate with competitive advantage provide a deeper insight into the potential contributions of co-working. Accordingly, each of the eight aspects are examined in relation to the attributes of co-working (Fig. 2.16).

1. Increasing the value of organization's real estate assets: because co-working is acquired in short-term leases, there is no direct connection with the value of the organization's real estate assets. This aspect is not applicable to co-working, at least from the corporate occupier perspective.

2. Encouraging and supporting employee innovation and creativity: co-working emphasizes the social aspects of the workplace within a community of individuals with more or less heterogeneous backgrounds, in this line, sharing knowledge and ideas with workers from different fields and areas of expertise is likely to result in innovative ideas that can be valuable at a personal and business level.

3. Promoting marketing, sales and organizational brand: even though co-working is characterized by its high accessibility and attractiveness, these attributes are not directly connected with promoting the brand and sales of the corporation as it is not used as the main office location of the organization. In theory, in the corporate sector, co-working is mainly used for business-to-business relations rather than with customers and clients.

4. Enabling portfolio flexibility: one of the main characteristics of co-working relates to the short-term payment structure that provides financial flexibility and reduces the risks and costs of committing to space on a long term. Additionally, as stated in the previous section, co-working provides physical flexibility by providing the opportunity to adapt the office space to the business requirements.

5. Enhancing employee wellbeing and satisfaction: attractive workplace is one of the attributes of co-working that refers to the high-level service provision with a focus on user experience. The package of personal services—such as fitness centers, wellness programs, bike sharing, dry-cleaning, etc.—offered by co-working operators is directly related to enhancing employee wellbeing and satisfaction. Additionally, the high accessibility, the community aspect, and the possibilities of social interaction offered by co-working are increasingly recognized as important for the wellbeing and job satisfaction of the employees (Gillen & Cheshire, 2015; Kojo & Nenonen, 2016). In the same line, the availability of varied settings that cater to different user preferences is associated with contributing to employee satisfaction and ultimately, improving productivity.

6. Increasing employee efficiency and productivity: one of the attributes of co-working—multipurpose office—relates to this aspect. As mentioned before co-working spaces usually offer Activity-Based-Working environments that provide different workspaces that are suitable for different tasks, activities and workstyles of a variety of users. It has been suggested that this combination of individual

and collaborative spaces has an impact on employee productivity (Göçer et al., 2017). Additionally, the high accessibility of co-working, in terms of location, can potentially result in reducing the unproductive time spent commuting. As stated before, employee productivity is an aspect that is also influenced by workplace features that enhance the satisfaction of the employees and encourage innovation.

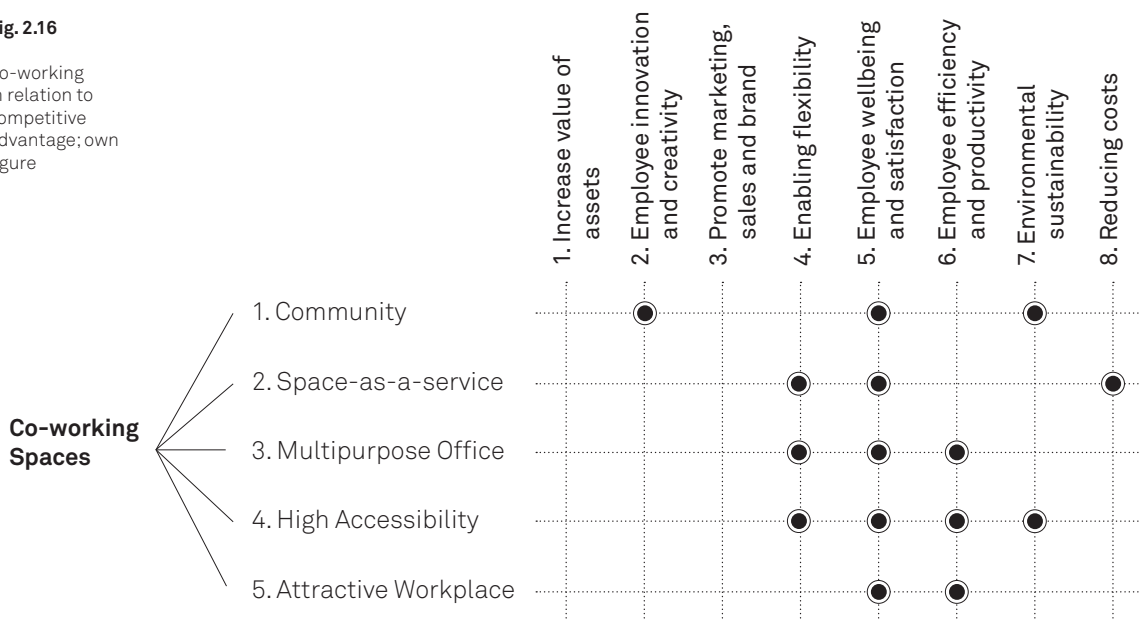
7. Supporting environmental sustainability: two features of co-working are relevant in this aspect. On one hand, environmental sustainability is related to resource sharing, inherent to co-working, that results in more efficient consumption of resources and reduced slack space; and on the other hand, it refers to the potential reduced commuting times of employees. Both aspects result in a lower carbon footprint for the organization and the employees.

8. Reducing real estate related costs: co-working can reduce occupation costs because the payment of the spaces is made in a pay-per-use structure, where the organization only pays for the space that it is actually occupying, being desks, meeting rooms or event spaces (Weinbrenn, 2016; Yu et al., 2019), in this line, as mentioned before, enabling the flexibility of the portfolio to respond to dynamic business requirements also has a significant impact in reducing the costs associated with long-term commitments, high occupancy rates, or interruptions in the business operation due to the lack of space to support the organization’s growth. Additionally, the resource sharing in co-working translates into economies of scale that make workplace services more affordable for the organization (Bouncken et al., 2017).

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Fig. 2.16

Co-working in relation to competitive advantage; own figure



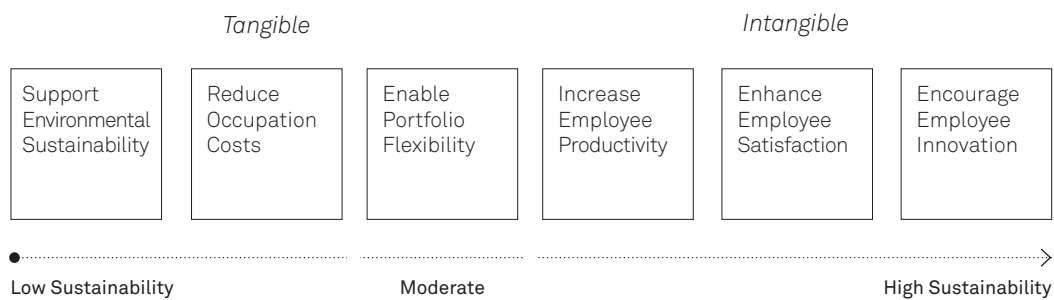


Fig. 2.17

Sustained competitive advantage in co-working; own figure

Based on this analysis it is possible to infer that co-working can potentially contribute to the competitive advantage of the firm in six different ways, namely, encouraging employee innovation, enhancing employee satisfaction, which also contribute to increasing employee productivity; supporting environmental sustainability; and enabling portfolio flexibility which also contributes to reducing occupation costs. However, these contributions to the competitive advantage of the organization are likely to deteriorate over time with the widespread adoption of co-working in the corporate sector; meaning that the early adopters have a leverage over the resource advantages of co-working—also referred to as “first-mover advantages” by Barney (1991).

As Foon and Nair (2010) state, the objective of the firm is not limited to possessing competitive advantage, but rather to sustain it over time; meaning that, organizations should focus on resources or attributes that other current or potential competitors are not able to duplicate or imitate (Barney, 1991; Foon & Nair, 2010). In this line, the distinction between tangible and intangible resources becomes paramount to identify the sustainability of the advantage provided. Foon and Nair (2010) suggest that intangible resources, which relate to for instance know-how, knowledge infrastructure, and branding, are more sustainable over time as compared to tangible resources such as cost advantages and product or service advantages, that are easily duplicated and imitated by other firms. Furthermore, the authors suggest that flexibility or capability to change, and organizational culture are moderately sustainable advantages.

In relation to the six potential sources of competitive advantage in co-working, the distinction between intangible and tangible resources provides a significant insight into the sustainability of the advantages

provided. Accordingly, as seen in figure 2.17, reducing occupation costs and supporting environmental sustainability are tangible aspects that provide a temporary advantage that can be easily replicated by other firms implementing a co-working strategy or other similar alternatives available in the market. Contrary, the advantages related to the knowledge infrastructure, which refer to increasing employee productivity, enhancing employee satisfaction, and encouraging innovation are intangible aspects that are not easily competed away through the duplication efforts of other firms (Barney, 1991); meaning that, the tacit nature of the value creation process of the knowledge workers is not easily replicated by other firms and therefore, the competitive advantage provided can be sustained over a longer period of time. Within this notion, several authors (Foon & Nair, 2010; Stoelhorst & Van Raaij, 2004) have highlighted the increasing importance of focusing on innovation as a continuous source of competitive advantage that allows firms to outperform others in a constant learning and development process, that makes rivals' positions obsolete.

With respect to portfolio flexibility, the financial and physical capability to respond to the changes and fluctuations in the dynamic business environment provide a competitive advantage that can be moderately sustained over time. According to Stoelhorst and Van Raaij (2004), flexibility allows the quick and efficient reconfiguration of the resources under changing circumstances which, in the specific case of co-working, relates to the financial real estate commitments and the physical space provided. In this line, flexibility in the context of co-working involves tangible aspects that can, to a certain extent, provide competitive advantage that will deteriorate over time as co-working becomes commonplace in the corporate sector.

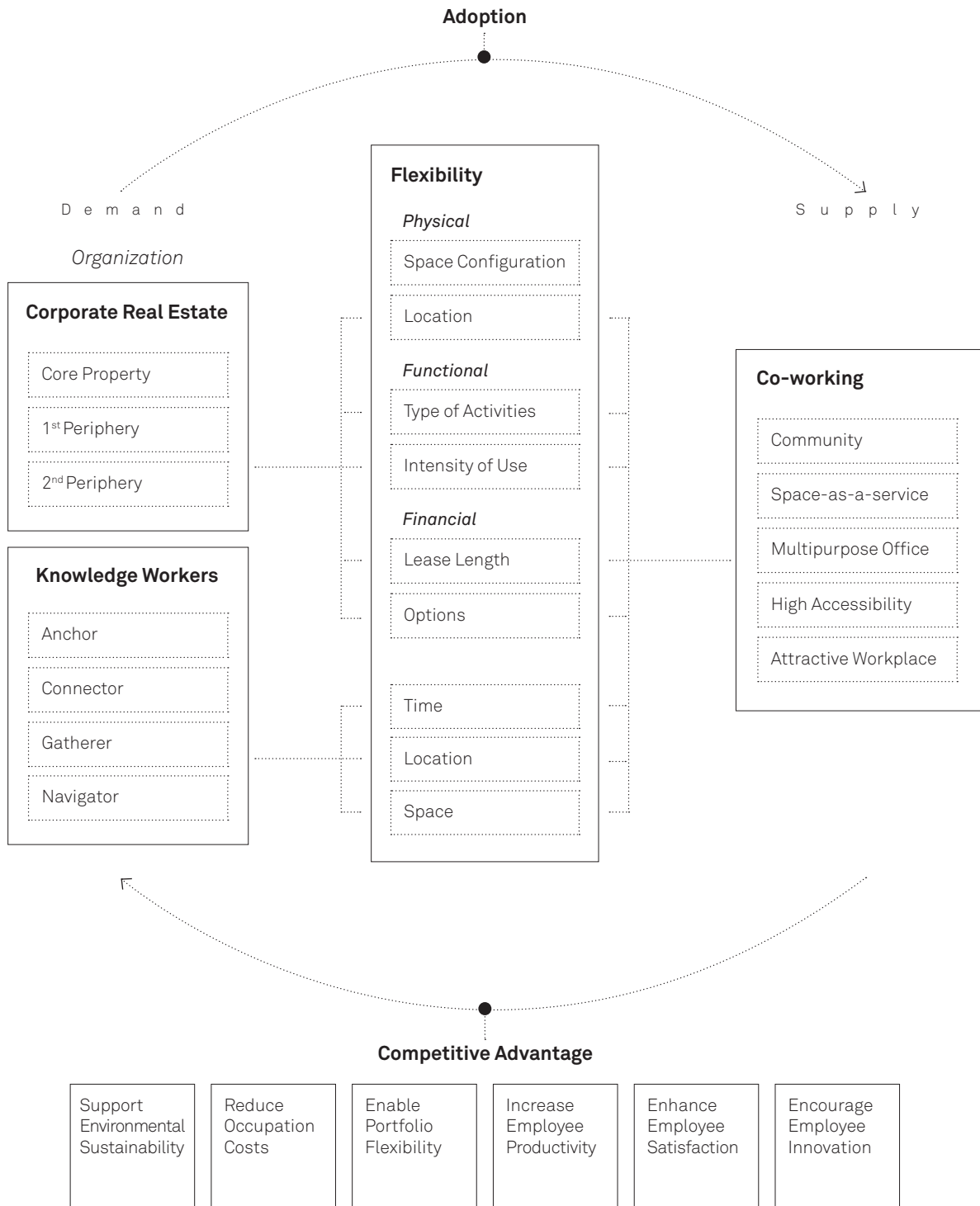
6. Conclusion

Based on the findings of the literature review, the conceptual model presented in section 1.6 has been further developed to synthesize the theoretical framework of the research (Fig. 2.18). According to the literature, the corporate real estate portfolio is composed of three layers—core, first periphery and second periphery—that have specific flexibility demands in physical, functional and financial terms. Additionally, the demand side is composed of the knowledge workers; according to the findings, four profiles of knowledge workers—anchor, connector, gatherer and navigator—have been identified, each of these have particular flexibility demands that pertain to three aspects: time, location and space—meaning choosing when, where and how to work.

From the supply side, the core values of co-working have been defined in terms of five attributes: community, space-as-a-service, multipurpose office, high accessibility and attractive workplace. Each of these characteristics have been associated with specific flexibility demands of the knowledge workers and the corporate real estate. Even though flexibility is a concept that has a different connotation for the workers and the organization, the attributes of co-working have the potential to simultaneously address the different workplace requirements of the corporation and the workers.

Based on the analysis of supply and demand in relation to flexibility, it can be concluded that co-working is a real estate strategy that is particularly aligned with the requirements for the second periphery property portfolio of the organization, and for workers with patterns of work that are mobile and dependent on interactions, which relate to the gatherer and navigator knowledge workers' profiles.

Additionally, in terms of performance, based on the analysis it can be concluded that co-working is a resource with attributes that are, to a certain extent, valuable, rare, inimitable, and non-substitutable. More specifically, co-working as an accommodation strategy has the potential to contribute to the temporary competitive advantage of the firm through supporting environmental sustainability, reducing occupation costs and enabling flexibility; and to the long-term sustainable competitive advantage of the firm in relation to enhancing employee innovation, satisfaction and productivity.



02 —

Fig. 2.18

Conceptual model of the research adjusted to illustrate the theoretical framework of the study; own figure

03

Empirical Research Methodology

This chapter outlines the empirical research methodology and is structured in six main parts. Accordingly, first, research design; second, demand study; third, supply study; fourth, expert study; fifth data analysis technique; and sixth, data plan.

1. Empirical Research Design

The empirical research of the study is composed of three main parts (Fig. 3.01). First, analysis from the demand side through case studies of corporations that have started to use co-working as part of their accommodation strategy; in this part, five cases (A to E) are analyzed individually and the main findings from the demand side are presented in a cross-case analysis (CC). Second, analysis from the perspective of the suppliers—co-working operators—in relation to the challenges faced in providing services to corporate occupiers; this consists of combining the findings (F) of interviews with four co-working operators (W to Z). Analyzing both perspectives, demand and supply, results in a holistic overview of the possibilities and challenges of co-working in the corporate sector.

Finally, the analysis is complemented with the perspective of three experts in the topic of workplace and co-working (1-3). The third component of the empirical research, expert study, aims at cross-checking the information collected from the other two data sources—demand and supply studies. The three components of the study—supply, demand and experts—contribute to triangulating the information collected, which, as stated by Bryman (2012), ensures the objectivity of the findings and improves the validity of the study.

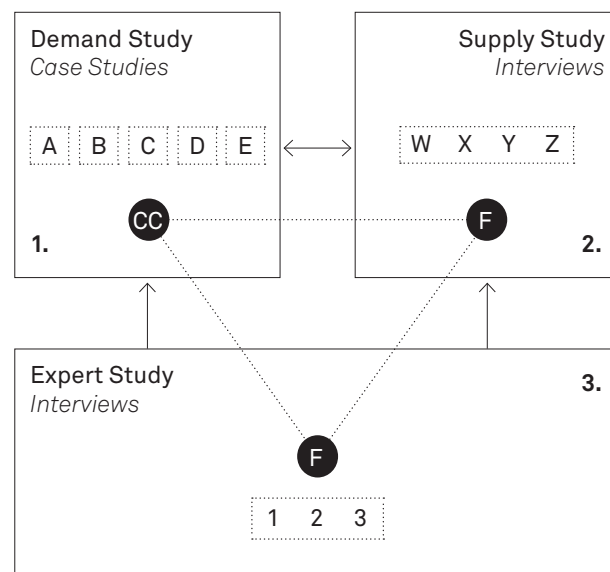
03
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Fig. 3.01

Structure of the empirical research; own figure

The empirical research is based on a qualitative research methodology with the objective of finding common patterns across the different data sources to shed empirical light about the concepts defined in the theoretical background, and define general conclusions, that apply at a higher conceptual level than the specific cases. The empirical research aims at answering the research questions: (Q1) *How does the co-working space concept meet the flexibility needs of corporations and users?* And (Qe) *Which challenges are associated with adopting co-working as an accommodation strategy?*

In this line, this research aims towards analytic generalization that, in contrast with statistical generalization, is based on theoretical propositions that are enhanced by the findings of case studies and interviews; as defined by Yin (2009), the empirical research results in either: a) corroborating, modifying, rejecting or advancing the theoretical concepts, or b) finding new concepts that arise upon the completion of the study. Accordingly, in this study, the goal of the empirical research is twofold:

- a. Evaluate and adjust the propositions that resulted from the theoretical framework, meaning that: first, the attributes of co-working meet the physical, functional, and financial flexibility demands of the corporate real estate of organizations, and the time, location and space flexibility demands of the knowledge workers. And second, co-working is particularly suitable for the second periphery of the corporate property portfolio, and for the knowledge workers that fit in the navigator and gatherer profiles.
- b. Provide an overview of the challenges faced by organizations in adopting co-working as a corporate accommodation strategy.

2. Demand Study

This section presents an overview of the methodology of the demand study including the research approach, case study design, case study selection criteria, introduction to case studies, and data collection.

2.1 Research Approach

The empirical component of this research aims at getting a deeper insight into the concept of co-working as a corporate real estate strategy in relation to the demands of the organizations and knowledge workers, within the context of real estate flexibility. In order to get a holistic and comprehensive understanding, this research focuses on case study analysis; as defined by Yin (2009, p. 18) “*case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident*”. Particularly in this thesis, this research strategy allows investigating the contemporary phenomenon of co-working in the real-life context of real estate flexibility.

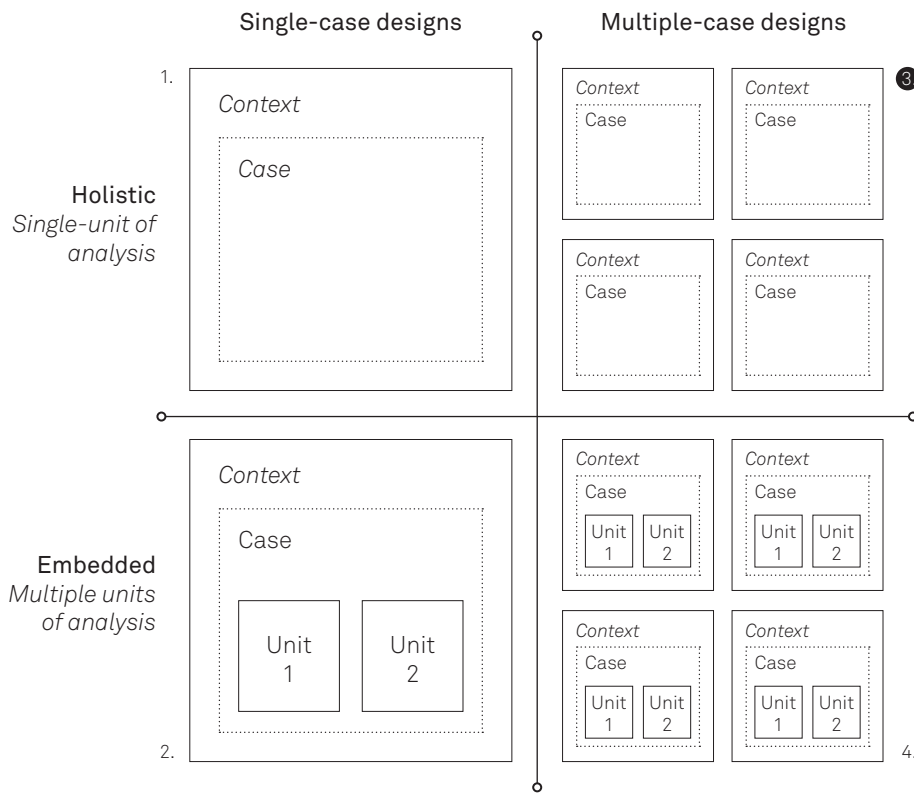


Fig. 3.02

Types of design for case studies; own figure based on Yin (2009)

03 |

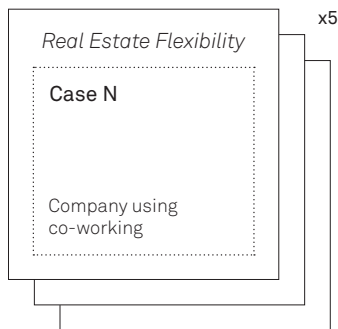


Fig. 3.03

Diagram of the multiple-case holistic design of the research; own figure

2.2. Case Study Design

The case study research is designed based on the categorization of Yin (2009); as seen in figure 3.02, case study design has two dimensions, number of cases and units of analysis, that result in four typologies: single-case holistic, multiple-case holistic, single-case embedded and multiple-case embedded. In this perspective, and in order to ensure the quality of this study—in terms of construct validity, internal validity, external validity, and reliability (Yin, 2009)—this empirical research is approached as a multiple-case design (Fig. 3.03).

The study is based on five cases of organizations that have incorporated a program to use co-working spaces as part of their accommodation strategy, the analysis includes interviewing the corporate real estate managers of the organization and consulting case material. The research is replicated across the cases to find patterns that relate to the aforementioned theoretical propositions; as suggested by Yin (2009), this increases the sensitivity of the research and enhances the insights of the empirical study. According to several authors on research methodology, a multiple-case study improves theory building and results in more compelling and robust findings that minimize the biases and errors in a study (Bryman, 2012; Yin, 2009).

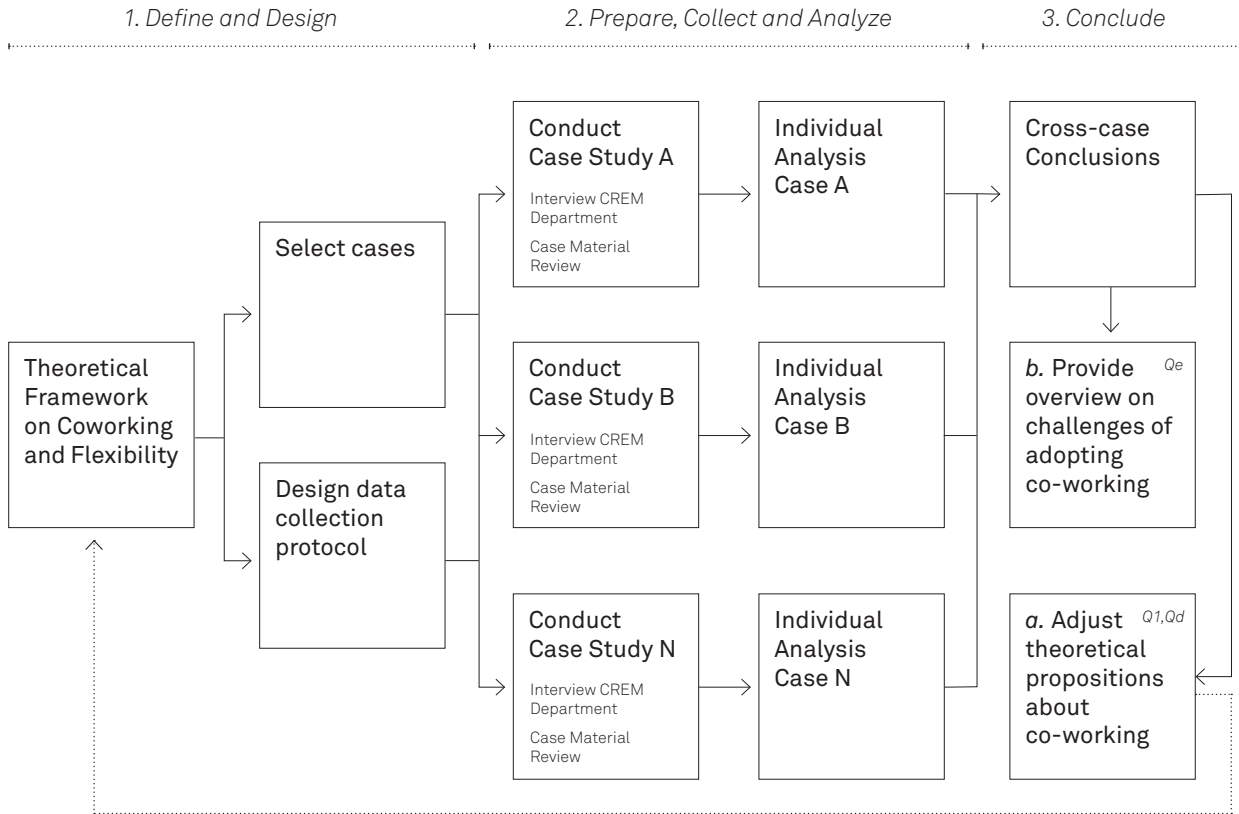


Fig. 3.04

Multiple-case study procedure; own figure based on Yin (2009)

03 —

Based on the steps suggested by Yin (2009), figure 3.04 illustrates the multiple-case study procedure of this research. The first part consists of the development of propositions in relation to co-working and flexibility based on the theoretical framework, and the preparation for the collection of data—case selection and design of data collection protocol. Second, collecting the data from the cases by means of interviews with corporate real estate managers and case material review; in this phase, each of the cases is analyzed individually. Third, the data collected is analyzed to find common patterns across the cases, and with this, define general conclusions that either corroborate, modify or supplement the theory defined from the literature review.

2.3. Case Study Selection Criteria

The definition of criteria for selecting the specific cases is fundamental to establish certain conditions that ensure the feasibility of the study and the consistency of the findings. Based on the concepts defined in the theoretical framework, the selection criteria are divided in two: required, meaning all the cases must fulfill; and desired, meaning that at least one of the cases has to meet this criterion. Figure 3.05, illustrates the eight parameters defined and the relevance they have in selecting the cases.

Fig. 3.05

Case study
selection criteria;
own figure

	Criteria	Reason
Required	1. The organization has included co-working spaces as part of their accommodation strategy	As this research looks into the value of co-working as a complementary accommodation strategy, focusing on front-runner organizations that have adopted co-working (either moderately or substantially), provides significant insights into the main aspects of this research: meeting the flexibility preferences of the organization and the workers, and contributing to competitive advantage.
	2. The users involved in the co-working program are knowledge workers employed within the company	Ensuring that the co-working spaces are used by at least part of the employees of the company, rather than only by outsourced labor, enables a comprehensive understanding of the effects of the program in the organization.
	3. The workers involved in the co-working program belong to finance, technology, consultancy, ICT, management or other knowledge intensive fields	As this research focuses on the flexibility demands of the knowledge workers, is important to ensure that the users involved in the program work in a knowledge intensive field, so that the findings can be compared with the theoretical framework.
	4. The organization is located in the Netherlands	This facilitates the process of data gathering and allows conducting interviews face-to-face. In addition, the findings can be comparable as they are embedded in the political, economic and social characteristics of the Dutch context.
Desired	5. The organization has the possibility of using co-working spaces in multiple locations	Ensuring that the organization is working with co-working operators that have more than one location available, is important as it covers the locational flexibility aspects previously defined.
	6. The organization is using a co-working space that has an extended opening schedule (hours / open in the week-ends)	Ensuring that at least one organization is working with co-working spaces that have an extended opening schedule is important to cover the previously identified time flexibility demand of the knowledge workers.
	7. The organization is using a co-working space that offers varied working settings for different activities	Ensuring that at least one organization is using a co-working space that offers different settings for varied activities (concentration, informal conversation, individual work, collaborative work, etc.) is important to cover the previously identified space and functional flexibility demands of the workers and the organization.
	8. The organization acquires access to the co-working space in a short-term basis	Ensuring that at least one organization has short-term commitments (less than one year) with the co-working operator is important to cover the financial flexibility demands of the organization.

2.4. Introduction to Case Studies

Based on the selection criteria of figure 3.05, five front-runner companies have been selected as a case study for the research. Figure 3.06, gives an overview of the selected cases in relation to the previously defined criteria.

Case A—Transportation Company

Case A corresponds to an innovative tech company from the transportation industry with an exponential growth over the last years. Since establishing its operations in the Netherlands, the organization has been using co-working spaces in different ways to support the development of the company.

Case B—Communications Agency

Case B corresponds to an expanding creative firm from the P.R and communications industry. The company started its operations, in 2009, based at a co-working space in Amsterdam. After 10 years of being headquartered at a co-working space, the company has recently moved to its own office location.

Case C—Consumer Goods Company

Case C corresponds to a multinational company from the fast-moving consumer goods (FMCG) industry. The company is one of the oldest in the industry, and has been regarded as one of the top employers across the world. As a front-runner organization, the company has taken a first important move towards incorporating co-working as a complementary accommodation strategy in one of its locations, wherein about 30% of the workforce will be located at a co-working space.

Case D—Energy Company

Case D is a multinational company from the energy industry. The company is listed as one of the top corporations in the Fortune Global 500 ranking of 2019 (Fortune, 2019). As an innovative organization, the company has started to adopt co-working as part of the accommodation strategy in certain locations across the EMEA region to diversify the real estate portfolio and provide versatility to cope with the business needs.

Case E—Entertainment Company

Case E is a multinational media-services and production company, leader in the entertainment industry. The company is listed as one of the top regarded companies and world's best employers across the globe (Forbes, 2019a, 2019b). As a fast-paced and dynamic organization, the company has been expanding its operations in the EMEA region, in this process, the company has used co-working as a temporary solution to start the operation in some of the new markets.

	Criteria	A	B	C	D	E
Required	1. The organization is using co-working as part of its accommodation strategy	X	X	X	X	X
	2. The users are knowledge workers employed within the company	X	X	X	X	X
	3. The workers involved in co-working belong to a knowledge intensive fields	X	X	X	X	X
	4. The organization is located in the Netherlands	X	X	X	X	X
Desired	5. Co-working space offers multiple locations	X	X		X	X
	6. Co-working space has an extended opening schedule	X	X	X	X	X
	7. Co-working space offers varied working settings for different activities	X	X	X	X	X
	8. Access to the co-working space in a short-term basis	X	X	X	X	X

Fig. 3.06

Case studies in relation to selection criteria; own figure

2.5. Data Collection

The data from the cases is collected through a qualitative methodology, according to Yin (2009), this approach allows addressing complicated research questions and collecting a rich and strong array of evidence. First, semi-structured interviews are conducted with corporate real estate managers to gather information about the challenges faced in implementing a co-working strategy, the alignment with their flexibility demands, and the contribution to the competitive advantage of the firm. As stated by Bryman (2012), semi-structured interviews allow concepts and theories emerge out of the data. Second, written material about the cases is reviewed to complement the information collected through the interviews.

Semi-structured Interviews

For the semi-structured interviews with the corporate real estate managers of the organizations an interview protocol is developed to define the main themes to be covered. As suggested by Bryman (2012), the interview protocol is based on a set of core questions that are replicated, and a few supplementary questions that vary according to the specific case. The protocol (Appendix A) is structured in five main parts that include first, a general introduction to the interviewee's background; second, a general approach to co-working in reference to the context of the organization; third, an overview of the connections between co-working and flexibility for the company; fourth, an

overview of the benefits and challenges of co-working as an accommodation strategy of the corporation; and fifth an insight into the future strategies of the company in relation to co-working.

The interviews are conducted in English and the audio, with the consent of the participants (Appendix D), is recorded and transcribed with the purpose of facilitating the comparability of the information and ensuring transparency with the interpretation of the findings.

Participants

The participants in the study have been selected based on their experience in their professional field, particularly as corporate real estate managers of the organization. The participants have been contacted through e-mail, three interviews have been carried out face-to-face and two of them through phone call. A detailed list of the interviews of each case can be found in Appendix E.

Case Material Review

The individual case study analysis includes reviewing publicly available written material about the cases. This mainly involves background information about the organization, historical development of the headcount, and general information about the accommodation strategy.

3. Supply Study

The second component of the empirical research, supply study, is based on semi-structured interviews with co-working operators. This section presents an overview of the methodology of the interviews including the approach, selection, and data collection.

3.1 Approach

Understanding the perspective of different co-working operators gives a deeper insight into the topic of co-working in the corporate sector. Particularly, the objective of this is to gain insights into the position of the providers in relation to the corporate occupiers, understand the challenges of co-working in relation to corporate users, and get an insight into the alignment between the flexibility demands of the organizations and the services provided by the co-working operators.

3.2 Suppliers Selection

For the supply study, four co-working providers have been selected based on a purposive sampling approach. According to Bryman (2012), purposive sampling allows selecting participants that are strategically relevant to answer the research questions. In this line, two criteria have been defined from the outset: first, all the providers are based in Amsterdam, and second, all the providers have been operating the business for more than two years. Additionally, to ensure variety, the four companies selected are based on different co-working concepts, and have different scales, this diversity allows to build a broader perspective and increases the validity and reliability of the findings.

Provider W—Collab

Collab is the co-working branch of The Student Hotel; the company was established in Amsterdam in 2017 around the concept of a complete connected community. Collab has seven locations in the Netherlands, Germany and Italy, and is currently working on expansion plans to start operations in over 36 new locations around Europe by 2021.

Provider X

The second co-working provider, was founded in 2013 around the concept of providing workplaces for growers. With over seven years of operating in the Netherlands, the company has currently five locations distributed in Amsterdam, Schiphol and Utrecht.

Provider Y

The third company is a multinational co-working provider founded in the Netherlands. Currently, the company operates in about 350 locations in more than 20 countries worldwide. Being one of the largest co-working operators in Europe, the company has laid the foundation for the growth of co-working in the corporate sector based on the concept of success and creative working environments.

Provider Z—Treehouse Tribe

The Treehouse Tribe is a co-working provider with one location in Amsterdam-Noord. The company was founded in 2017 based on the idea of creating a community with kindness at its core.

3.3 Data Collection

The data is collected by means of semi-structured interviews with representatives of the different co-working providers. The interviews provide information from the supply perspective in relation to the themes that emerged from the literature review.

Semi-structured interviews

The semi-structured interviews with the co-working providers are based on an interview protocol that is replicated across the four providers. This facilitates the analysis of the interviews and ensures the comparability of the findings. The interview protocol is structured in four main sections that include first, a general introduction to the co-working space and the background of the interviewee; second, general aspects of co-working in relation to the corporate sector; third, an overview of the demands from the corporate users and the benefits and challenges of co-working as an accommodation strategy for corporations; and fourth, an insight into the role of the corporate users in the future plans of the co-working operators. As suggested by Bryman (2012), the protocol consists of a set of core questions that are replicated in all the interviews, and a set of questions that are adjusted to each of the specific interviewees (Appendix B).

The interviews are conducted in English and the audio, with the consent of the participants (Appendix D), is recorded and transcribed with the purpose of facilitating the comparability of the information and ensuring transparency with the interpretation of the findings.

Participants

The participants in the study are employees from the co-working operators; two of them are managers of the co-working space (W-X), one of them is the Chief Financial Officer of the company (Y), and the other one is the founder and manager of the space (Z). The participants have been contacted through e-mail and all the interviews have been carried out face-to-face. A detailed list of the interviewees can be found in Appendix E.

4. Expert Study

The third component of the empirical research, expert study, is based on semi-structured interviews with three experts. This section presents an overview of the methodology of the interviews, including approach, and data collection and analysis.

4.1 Approach

Through in-depth knowledge on workplaces and co-working, the experts' perspective creates a broader scope to understand the topic of co-working in the corporate sector, and contributes to validating the accuracy of the preliminary findings of the demand and supply studies. As explained by Bryman (2012), using other sources of data results in greater confidence in the findings of the research and enhances the credibility of the study.

4.2 Experts

This perspective of the empirical research is based on three recognized experts on workplace strategy and design. The experts have multiple published papers and articles on a variety of related topics that include wellbeing at workplace environments, workplace decision-making methods and processes, workplace trends, amongst others.

Expert 1—Wim Pullen

Wim Pullen is the Director of the Center for People and Buildings (CfPB), a knowledge center based in the Netherlands that focuses on developing research and providing knowledge about the work environment which contributes to taking evidence-based choices about an organization's accommodation (Center for People and Buildings, n.d.). Wim has over 30 years of experience in the field and

has worked with different governmental and private institutions over the years.

Expert 2—Kay Sargent

Kay Sargent is the director of global Workplace practice at HOK, a global architecture, engineering and urban planning company based in the U.S. Throughout her more than 35 years of experience on workplace design and strategy, Kay has worked with multiple Fortune 500 companies to create innovative working environments (HOK, 2020). Kay has also been recognized for developing numerous articles and studies on co-working over the last years.

Expert 3—Jordy Kleemans

Jordy Kleemans is the Head of Research and Consultancy of Savills in the Netherlands. Over his more than 15 years of experience in the consultancy sector, Jordy has advised multiple organizations, at an strategic level, in relation to complex corporate real estate issues (Savills, n.d.).

4.3 Data Collection

The data is collected by means of semi-structured interviews with each of the experts. The interviews provide a broader perspective on the themes covered by the demand and supply studies.

Semi-structured interviews

The semi-structured interviews with the experts are based on an interview protocol that is developed for each of the specific interviews. The interview protocols are structured in three main parts; first, a general overview of the main concepts of the theoretical framework; second, a discussion in relation to the main preliminary findings of the interviews conducted in the cases and to the co-working providers; third, an overview of the future possibilities of co-working as a workplace strategy for corporations. The protocols have a series of core questions that are common to the three interviews, and a set of questions that are adapted to provide deeper knowledge based on the expertise of each of the interviewees (Appendix C). As suggested by Bryman (2012), semi-structured interviews provide insights into the perspective of the participants about an specific topic, and allow theories and concepts to emerge out of the data.

5. Data Analysis Technique

The data collected from the twelve interviews is transcribed and then analyzed and coded using ATLAS.ti. In the program, each of the interviews is analyzed based on codes; as explained by Bryman (2012, p.568) coding in qualitative research is a process whereby the data is broken down into components that seem to be of potential theoretical significance for the study and labeled according to concepts of categories. In this case some of the codes used correspond to concepts or categories identified in literature that are part of the theoretical framework, such as “financial flexibility” or “space flexibility”; while others emerged as the data was analyzed, for instance “challenge cost”, or “advantage networking”. A detailed list of the codes used can be found in Appendix F.

The examples below, based on short excerpts from the interview transcriptions, illustrate the use of codes in the analysis of the data collected:

<div style="border: 1px dashed black; border-radius: 15px; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Financial Flexibility</div> <p style="text-align: center; margin-top: 5px;">T h e o r y</p>	<p>“So we are doing this strategy for the first time and the nice thing is that it gives us this flexibility in the future, should we not need so much space, then we can simply terminate part or all of these serviced office desks. So, flexibility is really important, in the company at the moment, and that’s one of the things that you get with serviced offices that you cannot get with traditional office; and in fact, in some places they won’t accept less than a 10 year lease for the kind of opportunities we were looking at, especially in very tight markets.”</p>
<div style="border: 1px dashed black; border-radius: 15px; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Challenge Cost</div> <p style="text-align: center; margin-top: 5px;">E m e r g e n t</p>	<p>“Co-working is an interesting alternative for corporations, but one of the things that you always put in the balance is that it is an expensive space, when you compare with a large or relatively good-sized group, and considering cost-benefit of how much it costs to rent a space and fit it out, I think co-working gets a little out of pocket, you end up paying a little more because it gives you that flexibility you need. But like any business, there comes a time when it is no longer affordable, it is not sustainable, and it is better to move to a traditional space.”</p>

Accordingly, the coding process in the software assists in organizing the data according to the defined themes of the theoretical framework, and facilitates the comparability of information across the cases. Each interview is coded and analyzed individually and then, the codes are analyzed in relation to the different perspectives—demand, supply and expert.

6. Data Plan

The data plan includes the handling of the data sets collected during the research, and the reusability of the data holdings after the study is finished.

Regarding the handling of the data sets of the empirical research according to the GDPR (General Data Protection Regulation) requirements, a series of measures are taken into consideration. First, an Informed Form of Consent is provided to each of the interviewees to ensure that they understand the nature of the research and agree to participate in the study; the form can be found in Appendix D and the signed forms can be provided on request by the researcher.

Second, the Informed Form of Consent consists of five main agreements: a) voluntary participation in the study, the participants can refuse to answer any questions and can choose to withdraw from the study at any time; b) the interviews are audio-recorded to facilitate the processing of the data and ensure the reliability of the data collected; c) the participants can choose to remain anonymous; d) selected parts of the interview can be used as a quotation in the research outputs; e) the data collected is used for academic purposes and the final graduation thesis is published in the educational repository of TU Delft.

Third, the interview recordings are stored offline and are deleted one year after the graduation date; this information is only accessible by the research team. Fourth, the personal information of the participants, including e-mail address or personal contact details, is not shared beyond the research team. Fifth, all the interview transcripts are anonymized to ensure that the sensitive company information is treated confidentially; with exception of the experts' interviews, the personal names of the participants are not used and only their position at the company is mentioned.

Regarding the reusability of the data holdings, this research follows the FAIR (Findability, Accessibility, Interoperability, and Reusability) guiding principles of data management of Wilkinson et al. (2016). Accordingly, with respect of findability and accessibility, this research is published in the open-source data repository of TU Delft, the study is indexed and researchable with keywords that relate to the main concepts of the thesis. Additionally, in terms of interoperability and reusability, the research is written in English and the information collected from other sources—e.g. academic journals, books, commercial reports, and doctoral dissertations—is cited according to the APA 6th referencing style.

04

Empirical Research Results

This chapter is structured in four parts. First, analysis of the individual cases of the demand study; second, cross-case analysis; third, findings from the supply study; and fourth, findings from the expert study.

1. Individual Case Analysis—Demand Study

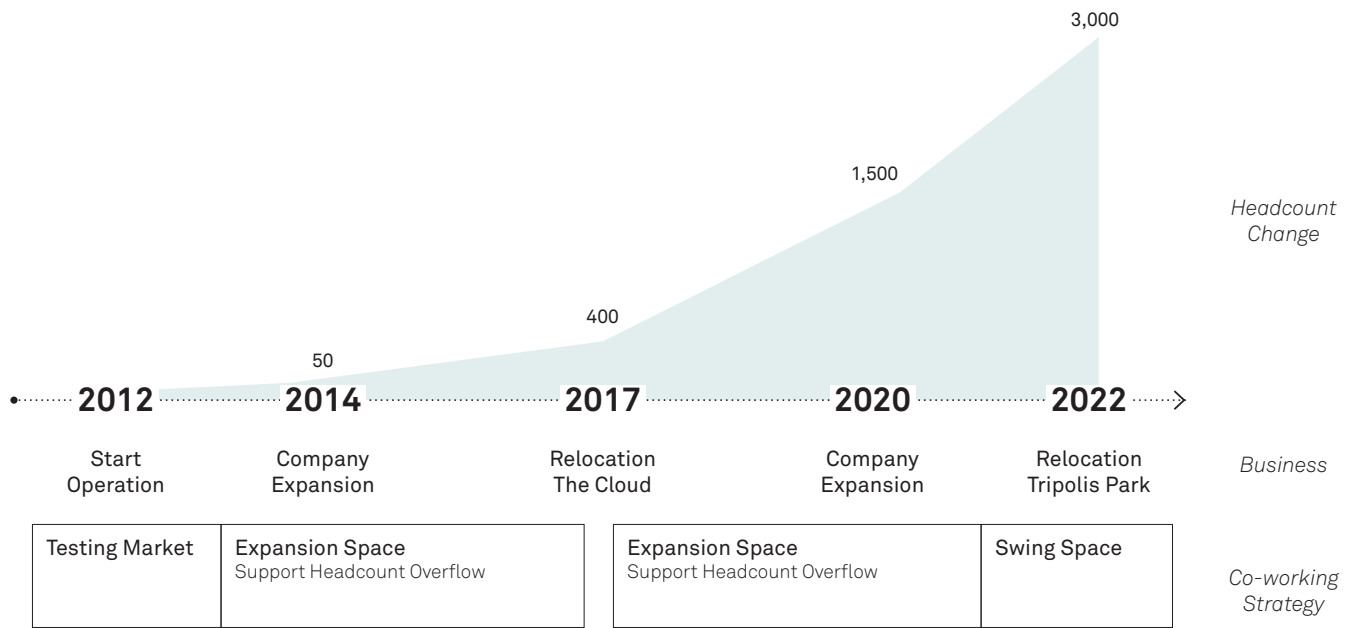
The individual analysis of each case is organized in six main sections. First, a brief introduction to the company and the role of co-working in the accommodation strategy of the organization. Afterwards, the findings of each case are analyzed in four main categories, namely, 1) Co-working strategy, this section gives an overview of how the company is using co-working spaces and for what part of the property portfolio; 2) Drivers, this includes an overview of the main reasons why the company uses co-working spaces as part of the accommodation strategy; 3) Advantages, this refers to the contribution of co-working spaces to the performance of the company and its employees; 4) Challenges, this includes an outline of the difficulties and risks associated with using co-working spaces. Finally, the last section includes a summary of the findings per case and the connections with the different concepts of flexibility.

1.1 Case A—Transportation Company

Case A is a multinational ride-hailing company that develops applications and offers services that include transportation, ride sharing, food delivery, and micro-mobility systems. The company, founded in 2009, is currently undergoing one of the tech industry's fastest global expansions, with operations in more than 60 countries and 27,000 employees around the globe.

In 2012, the organization started operating in the Netherlands, and few years later, the company established its international EMEA headquarters in the Dutch capital. Since 2015, Amsterdam houses the largest engineering office outside the U.S. with core technical teams such as Payments and Developer Platform, along with other departments such as Operations, Marketing, Communications and Sale.

The company's headcount in the Netherlands has exponentially grown throughout the years. In 2014, the head office, located at a co-working space, housed about 50 employees; within two and a half years, the headcount increased eight times, to a total of 400 employees. With the projected expansion plans of the core business, in 2017, the company relocated its headquarters to "The Cloud" an office complex located next to the Amsterdam Amstel train station; the office was set-up in a partnership with Spaces—a large co-working provider based in the Netherlands—with the aim of gradually increasing the headcount to 1,000 employees over the next ten years. However, in the last three years, the company has already grown to 1,500 employees. To support the growth of the business and with the introduction of new lines of service, the company has recently signed a lease to relocate in 2022 to "Tripolis Park", an office complex of 30,000m² where the company will have the capacity to scale up to 3,000 employees. During this process, in the next couple of years, about 600 employees will be temporarily located at a co-working space. (Source: case material and interview A)



*Temporary Projects / Staff

Co-working strategy

The organization has used co-working spaces throughout the development of the company (Fig. 4.01). As mentioned by the interviewee, co-working has been a strategic partner along the growth of the company, it has been used for different purposes depending on the stage of the business. In the early stages, when the company initiated operations in the Netherlands, co-working provided an ideal office space to locate a team of 50 employees as they opened the market; the low initial investments and short-term lease agreements allowed the company to set-up the operation in the face of uncertain conditions inherent to new markets. As the company grew, co-working was used as an expansion space to support the headcount overflow; the co-working location allowed the company to grow up to 400 employees while minimizing the interruptions of the operation. The organization mainly occupied the private offices offered by the co-working operator; during this time, co-working was used as the core part of the property portfolio of the company.

The role of co-working spaces in the accommodation strategy of the company changed when the organization relocated, ahead of plans, to its new office location in The Cloud. With this change, co-working became a supportive space that was part of the peripheral property portfolio. The company partnered with Spaces to co-locate in The Cloud; the strategy provided flexibility in the long-term as the company could gradually take up space from the co-working provider as the operation expanded over time, as illustrated by the interviewee:

“One of the reasons why we went to The Cloud was because indeed Spaces was there, so we had that flexibility to decide if at some point we grew and we no longer had the capacity within our space, we could use a company like Spaces to continue growing. So that was what happened, and what is happening right now.”—Interviewee A

Fig. 4.01

Case A timeline in relation to co-working strategy; own figure

Now, with the upcoming relocation to Tripolis Park in 2022, co-working will serve as swing space while the new office building is under construction. Co-working will be a transition bridge while the company moves from the current 8,400m² office at The Cloud, and settles into the new 30,000m² headquarters at the Tripolis complex; during this period, about 600 new employees will be temporarily working from a co-working space.

In the interview, it was also evidenced that co-working has been sporadically used by the company for setting up temporary projects or supporting teams as new lines of service are developed in the organization. In some of these occasions the company rents private offices, while in others it uses flexible desks through the membership agreements.

Drivers

As a fast-growing tech company, the unprecedented expansion in the last years and the resulting volatility in the headcount has been the main driver for using co-working spaces in their accommodation strategy. As the core business expands, the uncertainty over the headcount has sparked the need for flexibility, as reflected by the interviewee:

“The headcount for this type of companies is always a black hole, you never know when and how many you are going to have. Today it can be that you are planning to grow to 200 people because the business asks for it and everyone is aligned to that strategy of 200 people; and in a matter of two weeks or a month it can be practically twice as many people. So, I think that for these types of companies where growth from a business point of view is tangible, but it is still very difficult for the company at that time to relate for sure how much that growth represents in a space, or in a number of people, that kind of flexible spaces gives that benefit of reacting quickly to continue supporting the business and without generating a disruption of the operations.”—Interviewee A

Throughout the different stages of the company, one of the main reasons for using co-working spaces relates to the increasing need for flexibility to quickly expand the office area and respond to the fast changing needs of the core business; whether it has been used as the main office space or as complementary space, the company has been looking for the speed-to-market provided by co-working to support its operation in the Netherlands; as stated in the interview:

“[...] the flexibility that this type of spaces gives is practically fundamental to face that uncertainty that means not knowing how many people I will have tomorrow. How can I generate a physical space to house these people, considering that real estate does not happen overnight? Where can I go if I want to hire these people tomorrow?”—Interviewee A

Advantages

For the company, co-working has been a means to support the expansion of the business operation over the last eight years. In this line, the contribution of co-working to the competitive advantage of the firm has been related to three main aspects, enabling portfolio flexibility and enhancing employee satisfaction and innovation.

First, the quick access to space provided by co-working has been fundamental to support the growth of the company while ensuring the continuous operation of the business. For the company, co-working has enabled the flexibility of the portfolio to expand the office footprint in response to the business needs, this aspect is mainly related to one of the common attributes of co-working, space-as-a-service. In that sense, the short-term lease agreements facilitate the access to space in a shorter period of time as compared to traditional leases. As illustrated by the interviewee:

"[...] flexibility, that immediacy, that speed-to-market to get the operation up and running. We need to hire people to help us launch the operation. So, we are looking for that immediacy, because they are already there we can get the operation running; so, you can tell the business: you can start hiring personnel tomorrow because we already have a place. I think that is the great benefit and it is one of the things that we hope are always there, that they are immediate and that the lease agreements are also immediate and that the space reduction is also immediate if we need it." —Interviewee A

Second, it has been mentioned that the state-of-the-art facilities and multiple settings provided by co-working contribute to the satisfaction of the employees over their workplace, this has been seen as valuable for the company to support its employees,

"It is truly an added value, it is a plus, for companies like us, that companies like WeWork, Spaces, and others, are investing so much in these spaces, because the great differentiation is that before, in other times, serviced office spaces were previously closed, dark, in the inside there was no access to natural light, the collaboration areas were just the cafeteria, you had a coffee machine, there was not even a sofa, they've radically changed that paradigm." —Interviewee A

The attractive environment of co-working spaces has also facilitated the transition between the different workplaces and has contributed to mitigate the challenges associated with the relocation of the office.

"[...] the investment that these providers are making in all these spaces are more and more based on the feedback of the users, they are aligning those investments with the needs of the end-users; they are even hiring other companies like Gensler to always make better designs. Obviously, that is something that helps us a lot to lower that anxiety of the changes and working outside of the head office." —Interviewee A

Third, in terms of innovation, as mentioned in the interview, co-working spaces offer inspiring working environments that give the opportunity to interact, collaborate and enhance the creativity of the employees. The connections with other users of the co-working space opens a possibility for bringing new ideas to the business. As explained by the interviewee:

“I think they are ‘humanizing’ these kind of co-working spaces; because then it is a space where the benefits that they sell you are truly tangible. It is an opportunity to connect, it is an opportunity to come and spend the 16, 12, 8, or 9 hours you spend in working in a space that truly generates and fosters that collaboration, that creativity. And they begin to generate communities. So, I think they are making it a space that beyond the flexibility to grow and the immediacy of space, the flexibility to expand or retract; they are generating communities of creation, so that large companies do not feel isolated in the corporate environment, and can have that experience.” —Interviewee A

Challenges

The challenges that the company has faced when using co-working spaces as part of their accommodation strategy can be defined in four main categories, namely, quality of the internet service, cost of the space, security and privacy, and company culture and image.

First, the company has experienced, occasionally, problems with the internet service. Particularly, the connectivity and bandwidth of the internet network are fundamental for the operation of companies in the service sector that are heavy users of the ICT infrastructure. In relation to this, the main difficulty is that the co-working operators usually have an agreement with a particular internet service provider, for the occupier this limits the control over a service that has a considerable impact in the operation of the company. This has been evidenced by the interviewee:

“We have had cases where we rented co-working spaces where bandwidth is an issue, where the internet is an issue, and this has an impact in our operation; especially when we have people who are heavy users of telecommunications, to call customers, restaurants, etc. [...] Internet and bandwidth for a person who is going to arrive and go to work traditionally on their computer, send emails, etc., fine; but for someone who is going to have an operation, sometimes 24/7, that needs to constantly be talking to clients and being available; well, it begins to interrupt your operation.” —Interviewee A

Second, co-working is perceived as an expensive space. The flexibility in terms of lease agreements and the services provided come at a cost, and this is seen as a barrier for incorporating co-working at a wider scale across the portfolio, especially when comparing it with other options available in the market.

“One of the things that you always put in the balance is that it is an expensive space, when you compare with a large or relatively good-sized group, and considering cost-benefit of how much it costs to rent a space and fit it out, I think co-working gets a little out of pocket, you end up paying a little more because it gives you that flexibility you need. But like any business, there comes a time when it is no longer affordable, it is not sustainable, and it is better to move to a traditional space.” —Interviewee A

Third, the company has experienced sporadic issues in relation to security, mainly concerning the accessibility to their private office space from external parties. Although in co-working spaces keycards, fobs and security passes are usually required to enter private spaces, there is still a vulnerability related to the management of the security hardware devices in multi-tenant buildings. Additionally, there are concerns about exposing or sharing sensitive information of the organization when using the shared areas of the co-working space. In relation to this the interviewee has commented,

“In terms of security, it has not been constant, but yes, we have had some issues at co-working spaces, so, on our side we need to keep an eye on the accesses to our space. But also, where information is being shared, where information can be projected, etc. And we need more support from the co-working side, in the sense that they should carry the conversation to know how much sensitive material you are going to be handling, and also ensuring that their procedures are obviously at the level, to limit that someone can come to the door of our office without authorization. And normally, we have seen this type of things in a reactive way.” —Interviewee A

Fourth, an issue that has emerged in the cases where part of the team works at the co-working space, is the cohesion between the employees and the company. As mentioned in the interview, certain employees might feel disconnected from the head office as they spend most of the time at the co-working location. In relation to this, the interviewee suggested that change management and communication are essential tools to ensure that the employees feel connected to the organization and maintain the corporate culture.

“We’ve also had some issues with the connection of the employees with the company, The truth is it has to do, not with the co-working operator, meaning it is not a matter of the supplier company; I think it is rather a matter of adequate change management that the company, and especially our area, must handle with these groups; whether it is a group that has been in the organization for a long time and which is part of core business—for example Marketing or Human Resources, etc.—or a new group of people that you are creating, such as a support area, etc.; whatever the audience may be, I think it depends a lot on how the company deals with change management.” —Interviewee A

Summary

The strong expansion plans of the core business and the uncertainty over the headcount are one of the main reasons why the company decided to incorporate co-working as part of their accommodation strategy. In this line, co-working has contributed to the performance of the organization by enabling portfolio flexibility, and supporting employee satisfaction and innovation.

Co-working has had different roles throughout the different stages of the company, for testing the market, as expansion space, as swing space and for temporary projects and staff. In this process, co-working has provided flexibility in three main ways: first, physical flexibility by allowing to quickly react to the needs of the core business and providing an expansion space for the company; second, functional or space flexibility, which relates to the different environments and workplace settings offered that align with a variety of users; third, financial flexibility, specifically in terms of the speed-to-market offered to start the operation and the short-term commitments that facilitated, in this case, the expansion of the company’s footprint.

As seen in figure 4.02, in the process of adopting co-working, the company has faced four challenges that relate to first, the quality of the Internet service in terms of the connectivity and bandwidth of the network; second, the high costs of the space; third, the vulnerability in terms of security and privacy of the organization and the employees; and fourth, the difficulty of reflecting the company’s culture and image.

Fig. 4.02

Summary findings Case A; own figure

04 |

**Case A
Transportation
Company**

Category	Type	Feature
Co-working Strategy	<ul style="list-style-type: none"> · Testing Market · Expansion Space · Swing Space · Temporary Projects / Staff 	Different roles throughout the development of the company
Driver	<ul style="list-style-type: none"> · Strong expansion plans 	High uncertainty over headcount
Flexibility Provided	<ul style="list-style-type: none"> · Physical Flexibility · Functional / Space Flexibility · Financial Flexibility 	Expansion Space Variety of work settings Short-term contracts
Contribution to Competitive Advantage	<ul style="list-style-type: none"> · Enabling Portfolio Flexibility · Enhancing Employee Satisfaction · Supporting Innovation 	
Challenges Faced	<ul style="list-style-type: none"> · Quality of Internet service · Costs of space · Security & Privacy · Company Culture & Image 	

1.2. Case B—Communications Agency

Case B is an international P.R. and communications agency headquartered in Amsterdam, with offices in London and Los Angeles. The portfolio of clients includes Airbnb, General Mills, B. Building Amsterdam, amongst others.

The company, founded in 2009, was initially located at the co-working location Spaces Herengracht. With the growth of the organization over time, in 2017, the company relocated to a bigger office space in the city center of Amsterdam at Spaces Vijzelstraat. Recently, in 2019, the company was restructured and rebranded, and after 10 years of being headquartered at a co-working space, the company decided to relocate its team of 20 employees to their own office space in Amsterdam Oud-Zuid. (Source: case material and interview B)

Co-working strategy

The communications agency in Case B is a company that started its operations in a co-working space. For over 10 years, co-working provided an environment for the growth and development of the firm (Fig. 4.03). Initially in 2009, the company started as a satellite desk at Spaces Herengracht. Over time, the team expanded and the organization moved to a small private office in the same co-working location. From 2017 until 2019, with the scale up of the company, the team moved to a bigger private office at the Spaces Vijzelstraat location.

During the last 10 years, the organization occupied the private offices offered by the co-working operator; for the company, co-working was the head office location in Amsterdam, and thus, represented the core part of the property portfolio of the organization.

Drivers

Company B started as an independent entrepreneurial project; in relation to this, the need for a space with low entry barriers to set up the operation of a starting company and support the scale up of the business over time was the main driver for locating at a co-working space. As stated by the interviewee, according to the needs of the business at that time, the founder was looking for workspace in a central location and a community with networking opportunities.

“At the time when the founder was starting out on her own, she wanted to plug into a co-working space which was centrally located in the city, which offered a community of like-minded, creative business owners. It just so happened that Spaces was opening their location on the Herengracht and they had a satellite desk available for the company to start operations.”—Interviewee B

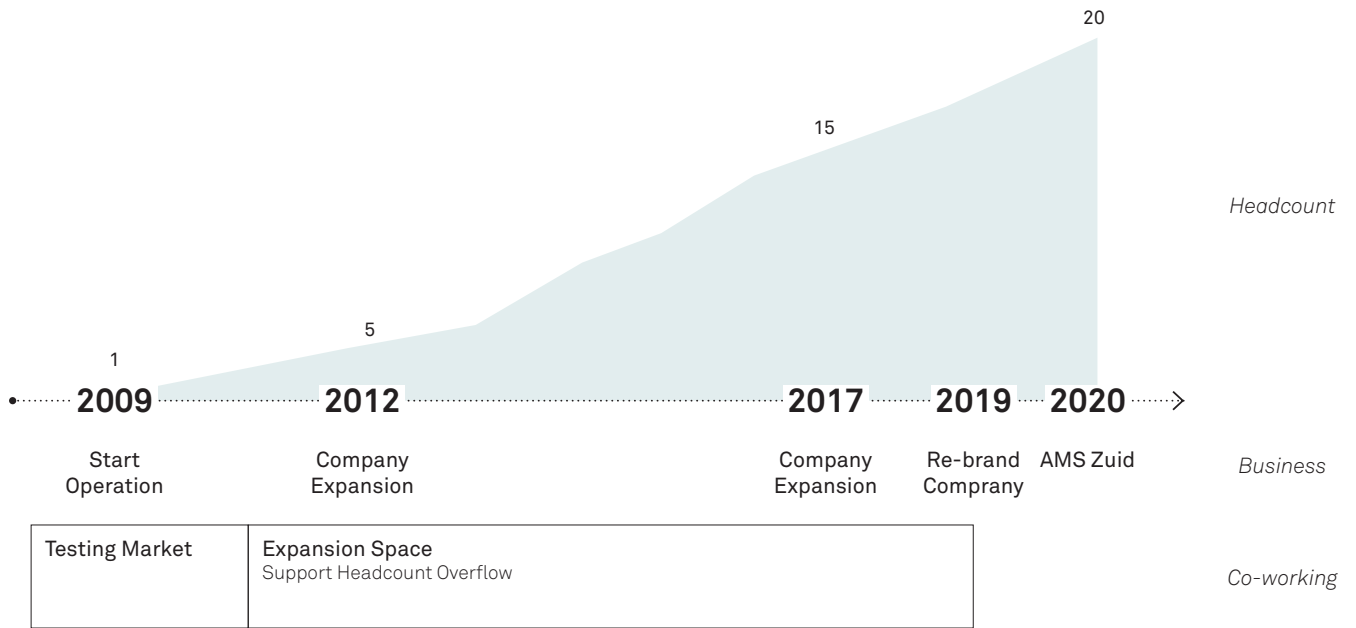


Fig. 4.03

Case B timeline in relation to co-working strategy; own figure

Advantages

For the company, co-working offered an opportunity to support the establishment of the organization and the growth of the company. In that sense, the contribution of co-working to the competitive advantage of the firm relates to two main aspects, networking and enabling portfolio flexibility.

First, co-working provides access to networking opportunities related to the diversity of tenants. As mentioned in the interview, community is a fundamental attribute of co-working specially for starting firms that seek for a support network and opportunities for interaction between individuals or collaboration between businesses.

“Co-working spaces can really help small service businesses establish themselves to be able to operate and service clients, it is great for networking and being part of a community of like-minded individuals and teams where you can connect and bounce ideas off one another.”—Interviewee B

Second, for the company, co-working enabled the flexibility of the portfolio to support the physical expansion of the operations throughout time. Co-working provides multiple settings that allowed the company to scale up from an individual desk to a private office, within the same operator. Additionally, as mentioned by the interviewee, co-working facilitated the access to a central location, and other shared services and spaces that contributed to the satisfaction of the employees.

“The main benefits of using co-working for the organization are the central location, networking events offered by the co-working community, being able to access both shared and private spaces within the co-working space building (meeting rooms at extra cost, full-service cafeteria (extra cost)).”—Interviewee B

Challenges

Based on the 10 years of experience with co-working spaces, the challenges faced by the company can be defined in four aspects, quality of the Internet service, cost of the space, security, and noise levels.

First, one of the challenges faced specifically relates to the quality of the Internet service. The company experienced occasional connectivity issues of the Internet network, particularly in relation to the stability of the Internet connection; these in return, can have a negative impact in the productivity of the employees and can affect, to a certain extent, the operation of the company. As mentioned in the interview, the Internet service is included in the utilities provided by the co-working operator, and thus, the quality of the service cannot be controlled by the company:

“There are Internet connectivity issues, as you are beholden to the building’s service providers and cannot choose your own service, so if you have special requirements or are not satisfied with the provider there is not much you can do.”—Interviewee B

Second, in terms of cost of the space two issues have been exposed, on one hand the facilities and services included in the agreement—which come at a considerable cost—are often not used by the organization. On the other hand, in this case, the space has shown to be a cost-effective solution for setting up the operation with a small team, but as the company scaled, the costs become considerably high and other solutions in the market proved to be more efficient. As suggested by the interviewee:

“Co-working spaces not necessarily provide financial flexibility. Co-working spaces appear to be more flexible for the freelancer or small team who opt for their agreements to be on a month-to-month basis. When you have a large team (10+ persons), you have to provide stability and sign a multi-year lease for your office space. It is almost the opposite of flexibility because if the company and team are not making use of the co-working services, which are almost always offered as an additional cost, it can feel like you are paying for common areas, services which you do not make use of.”—Interviewee B

Indeed, in line with the challenging high costs of the space, one of the reasons that motivated the company to relocate to its own office space in Amsterdam Oud-Zuid was to control the operational costs and invest in a workplace that represented the new brand and identity of the company.

“The main reasons were that we wanted to go out on our own, not making full use of the Spaces offering, save operational costs, inject the team and the company into a new space and environment as we recently rebranded in March 2019.”—Interviewee B

Third, in relation to security, the standard measures that involve hardware devices such as keycards and fobs are often seen as impractical in the day to day routine at the office; especially, considering that these devices are required to access all the private spaces—offices, meeting rooms, etc. In this line, the interviewee mentioned:

“Overall the experience of the employees working at the co-working space in Amsterdam was good, I can say that overall, the team were satisfied with working from Spaces. The benefits mentioned were experienced by the team but there were also drawbacks such as the extremely high level of security (key fobs to get in and out of every door).”—Interviewee B

Fourth, in terms of noise levels, the interviewee mentioned that the employees have experienced distractions coming from the common spaces; these naturally have an impact on the employees’ concentration and productivity, even when working at a private office space.

“The main challenges of using co-working is the distractions in the communal spaces such as foosball and table tennis which can hinder some people’s ability to concentrate [...]”—Interviewee B

Summary

The low entry barriers to a professional environment with networking opportunities motivated the founder to establish the operation of the company at a co-working space. For over 10 years, co-working provided a space to support the expansion of the business. Throughout that time, co-working provided flexibility in three different ways. First, functional or space flexibility, this relates to the fact that co-working provided multiple workplace settings that met the different needs of the company, from flexible desks, to private offices, phone booths, meeting rooms, amongst others. Second, physical flexibility, co-working provided a space to expand the footprint of the office and support the growth of the headcount over time. Third, financial flexibility, this specifically relates to the short-term lease agreements that facilitated establishing the operation of the company.

As seen in figure 4.04, the organization faced four challenges when using co-working as the main office location, namely, the quality of the Internet service, the high costs of the space, the excessive security measures, and the noise levels that affected employee's ability to concentrate.

Fig. 4.04

Summary findings Case B; own figure

04 |

Case B Communications Agency	Category	Type	Feature
	Co-working Strategy	<ul style="list-style-type: none"> · Testing Market · Expansion Space 	Supporting the establishment and growth of the organization
	Driver	<ul style="list-style-type: none"> · Starting business operation 	Need for space with low entry barriers to start operation
	Flexibility Provided	<ul style="list-style-type: none"> · Physical Flexibility · Functional / Space Flexibility · Financial Flexibility 	Expansion space Variety of work settings Short-term contracts
	Contribution to Competitive Advantage	<ul style="list-style-type: none"> · Enabling Portfolio Flexibility · Enabling Networking Opportunities 	
	Challenges Faced	<ul style="list-style-type: none"> · Quality of Internet service · Costs of Space · Security & Privacy · Noise Levels 	

1.3. Case C—Consumer Goods Company

The third case is a multinational company from the fast-moving consumer goods (FMCG) industry with multiple brands that include packed consumer goods, cleaning products, fragrances and home and personal care products. The company has presence in over 190 countries and more than 150,000 employees around the world.

Since 2009, one of the company's branch offices has been occupying a 24,000m² office building. However, in the last years, the company has been restructured and the headcount has been reduced from 1,150 to about 700 employees. Under these conditions, the current office space is no longer suitable for the needs of the company; with this in mind, the organization has developed a new accommodation strategy that involves relocating to a central location, downsizing the main office area to about 6,500m² and supplementing that space with a co-working operator.

The transition to the new locations will take place in the summer of 2020. In this strategy, the main office building will have the capacity of housing about 500 employees, while the complementary co-working space will have a capacity of 200 desks. The employees will have the possibility of choosing on a daily basis whether they prefer to work at the head office or at the co-working space, depending on their personal needs, activities and schedules. (Source: case material and interview C)

04

Co-working strategy

For the case C, the company's accommodation strategy is based on a core and flex model. In this strategy, 70% of the employees work at the head office location (core), while the other 30% works at a co-working space located within walking distance. In this case, the core part of the portfolio, head office location, is acquired in the long-term with a lease agreement of 10 years; and complemented with co-working space, acquired in the short-term with a lease agreement of 2 years. This structure provides versatility to cope with changes in the headcount as experienced in the past by the company.

“We are doing this hub and spoke strategy. We have signed a contract for a new office lease in the CBD, much smaller office, and to supplement that office we have taken a co-working contract for two hundred desks, five-minute walk away, so that employees will have the option to choose between going to the traditional office, or to go to the serviced office accommodation. We have only signed for two years for the serviced office.”—Interviewee C

In the interview, it was also mentioned that in previous occasions co-working has been used temporarily, and on a small scale, as swing space or to support temporary teams in the organization. Figure 4.05, illustrates the changes in the global headcount of the organization over time, in relation to some relevant business decisions and the co-working strategy.

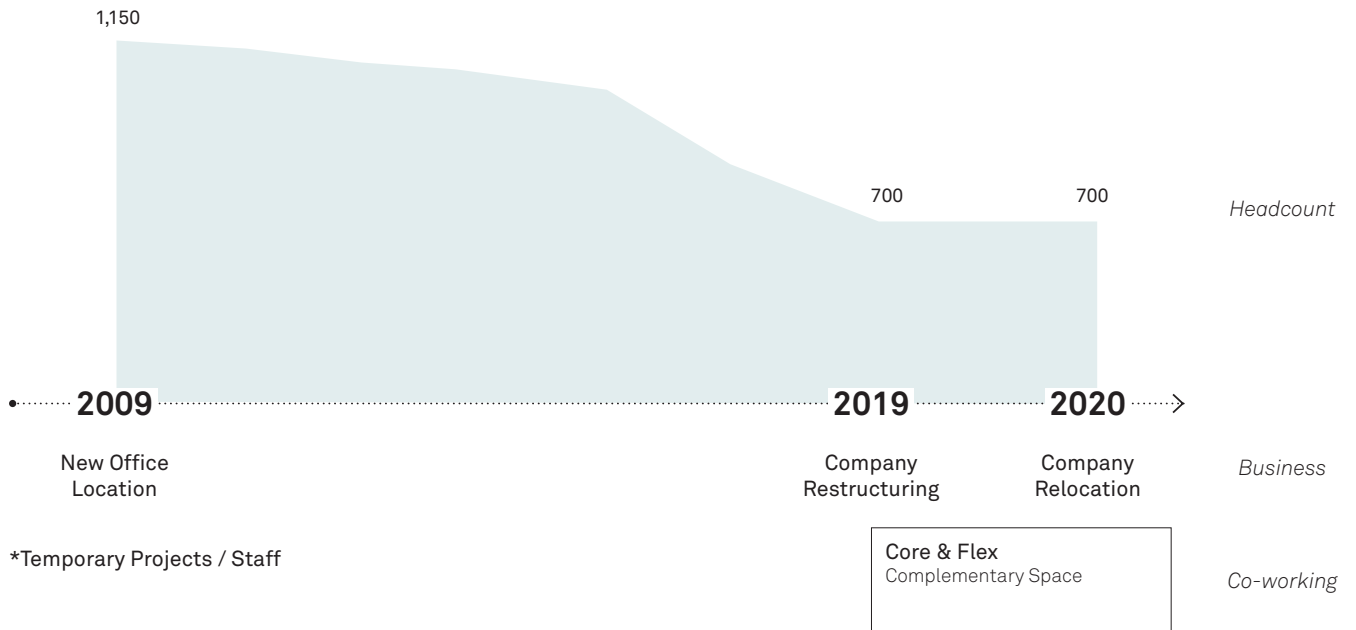


Fig. 4.05

Case C timeline in relation to co-working strategy; own figure

Drivers

The initiative to adopt co-working in a core and flex strategy has been mainly driven by a restructuring of the company. Within the last years the headcount was reduced over 40%—from 1,150 to about 700 employees. In the previous location, the company occupied a 24,000m² office building that was committed in the long-term; therefore, the company was looking for an opportunity to downsize and relocate to an office space that aligned with the current business needs.

“[...] it was driven by a restructuring of the company, we had an enormous office of 24,000 square meters, and we had 700 people; in the 24,000 square meter office you probably expect at least two thousand people, and maybe in the past that worked. So, we were looking to get out of the contract, so we managed to find a replacement tenant which made it easy for us to relocate.”—Interviewee C

Advantages

In the case C, co-working is an alternative to face the volatility of the headcount considering the uncertainty of the business operation, and to provide a more collaborative and dynamic business environment for the workforce. Therefore, the contribution of co-working to the competitive advantage of the firm mainly pertains to three aspects, enabling portfolio flexibility, supporting employee satisfaction, and enabling networking opportunities.

First, for the company, co-working is a strategy to enable the flexibility of the portfolio to respond to the changing requirements of the core business. In this case, combining the core office with co-working space provides an opportunity to reconfigure the real estate resources according to the future needs of the company with minimum impact on the business operation. As stated in the interview:

“Flexibility is very important, the organization is in a constant state of transformation and the business find it very hard to project beyond just the next three years, you know, what the headcount will look like, or what the needs of the organization and employees will be. [...] the nice thing is that it gives us this flexibility

in the future, should we not need so much space, then we can simply terminate part or all of these serviced office desks. So, flexibility is really important, in the company at the moment, and that's one of the things that you get with serviced offices that you cannot get with traditional office; and in fact, in some places they won't accept less than a 10 year lease for the kind of opportunities we were looking at, especially in very tight markets. So, we have a 10 year contract on one building and then a very flexible contract on another.”—Interviewee C

Second, in terms of employee satisfaction, co-working is characterized by providing diversity of workplace settings that accommodate different users' preferences and activities, as well as offering attractive spaces that focus on user experience. As stated in the interview, co-working provides flexibility for the employees to choose their preferred working environments:

“[...] provide a more collaborative and energetic working environment, where people can choose if they want to work at their desk or if they want to work in what we call a scrum space, with a project team on a short-term project, or if they want to work in a quiet area in a phone booth, or in a meeting room, or using the kind of coffee area. So, it's to give the employee the flexibility to have lots of different types of works settings to choose from and that's what people appreciate.”—Interviewee C

Third, as mentioned in the interview, co-working provides a platform for interacting and building a network between the different users that belong to the space and work for other organizations. This community aspect is both relevant in terms of encouraging innovation and bringing new ideas to the business, and also to strengthen the social aspects of the workplace that contribute to employee satisfaction.

Challenges

The main challenges that the company has faced in incorporating co-working as part of their accommodation strategy relate to ensuring the quality of the services, the cost of the space, and the mindset of some teams in the company.

First, for the company one of the key challenges of adopting co-working has been ensuring the quality of the space and level of the services provided by the operator; these include space metrics, ergonomics, noise levels, as well as the connectivity of the Internet network and other supportive services included in the cost.

“The main challenges that we face are ensuring the quality of the space, the level of services [...] the quality of the fit-out needs to be similar to the main office, and the level of service needs to be similar. So, there's lots of question marks, and I think the fear is that some serviced office providers, cut corners especially because they've expanded so fast that service levels suffered and then there was an impression that they squeezed people into five square meters per person, and the acoustics are bad, and so on.”—Interviewee C

Second, in terms of costs, as suggested in the interview, co-working can be a cost-effective solution for setting up the operation of small teams, however, for bigger teams the occupation costs can be considerably high when comparing other solutions in the market. Therefore, the costs that come with the flexibility and services provided have to be considered based on the requirements of the company as it might not be a suitable solution for all parts of the property portfolio.

“When you get down to smaller office sizes it's a cost efficiency. But there's always a point I think somewhere around 25 desks were it actually becomes more expensive to take co-working spaces.”—Interviewee C

Third, a challenge that the company has faced internally in adopting co-working in their real estate portfolio is the preference of certain teams to occupy a traditional office space and customize the fit-out according to their preferences. As mentioned by the interviewee:

“Generally, the business likes the flexibility of the serviced office. But a lot of them prefer traditional office lease because they can do their own bespoke fit-out. So, in many cases the business will push for a traditional office versus a serviced office.”—Interviewee C

Summary

The idea of incorporating co-working as part of the accommodation strategy of the company has been mainly driven by the restructuring of the organization. The role of co-working for the company is as a complementary space that, in combination with a core office location, forms a core and flex strategy. In this line, co-working contributes to the competitive advantage of the firm by enabling the flexibility of the portfolio to respond to business needs, supporting employee satisfaction, and enabling networking opportunities.

For the organization, co-working mainly provides flexibility in three terms: first, financial, the short-term lease agreement complements the long-term commitment of the core location and ensures flexibility in the property portfolio; second, functional or spatial, this refers to the fact that co-working provides varied workplace settings that align with the different user preferences; third, physical, co-working provides the flexibility to increase or decrease the office footprint according to the requirements of the business.

As seen in figure 4.06, the organization has faced three main challenges in relation to implementing co-working as part of the accommodation strategy of the organization, these relate to the quality of the space, the cost of the space, and the mindset of some teams in the company.

Fig. 4.06

Summary findings Case C; own figure

04 —

Case C Consumer Goods Company	Category	Type	Feature
	Co-working Strategy	·Core & Flex ·Temporary Projects / Staff	Complementary space solution
	Driver	·Restructuring of the organization	Downsizing to align with headcount
	Flexibility Provided	·Physical Flexibility ·Functional / Space Flexibility ·Financial Flexibility	Decrease footprint Variety of work settings Short-term contracts
	Contribution to Competitive Advantage	·Enabling Portfolio Flexibility ·Enhancing Employee Satisfaction ·Enabling Networking Opportunities	
	Challenges Faced	·Quality of space ·Costs of space ·Employee Mindset	

1.4 Case D—Energy Company

The fourth case is a multinational company from the energy sector with operations in about 70 countries and more than 85,000 employees around the world. The company is a top corporation listed in the Fortune Global 500 ranking of 2019 (Fortune, 2019).

The company's corporate real estate portfolio is built in three main layers. First, the core property, owned by the organization, basically composed by the company's headquarters. The core part of the portfolio is complemented by leased property that can be classified into first and second periphery. The first periphery refers to office locations with traditional leases, as well as few co-working locations that are committed in the short-term for about three to five years. The second periphery refers to temporary spaces used when entering a new market, or to accommodate staff for a temporary project, this layer is characterized by short-term real estate commitments which have occasionally been covered by co-working operators.

Across the corporate real estate portfolio, the company assesses the most suitable accommodation strategy according to the specific conditions of each location. Recently, in 2019, in one of its locations, the company has taken an important step where a team of about 200 employees has been relocated to a co-working space. (Source: case material and interview D)

04—

Co-working strategy

For the case D, the company has adopted co-working in a core and flex model. In this strategy, the co-working space is committed through a short-term agreement to accommodate 200 employees for the next couple of years. In this case, co-working is a complementary strategy that forms part of the first periphery portfolio and diversifies the real estate accommodation strategy of the organization, while providing versatility to cope with any future changes in the business. Figure 4.07, illustrates the changes in the global headcount of the organization over time, in relation to the co-working strategy.

Additionally, it has been mentioned that the company has also used co-working across the portfolio on a smaller scale as a temporary solution to accommodate staff for a temporary project, to support mobile workers, or when starting operations in a new market. Initially, these strategies would be acquired through really short-term agreements that form part of the second periphery property portfolio; but recently, as stated by the interviewee, the company has started to consider it as a suitable accommodation solution for certain parts of the portfolio.

“One or two years ago we saw serviced offices really like a flexible layer for where we would enter a new country, for example, or we had a project which was very temporary and we just, rented some spaces in a co-working space. But now, especially what we proved with some offices globally, is that it can also be seen as part of your leased portfolio.”—Interviewee D

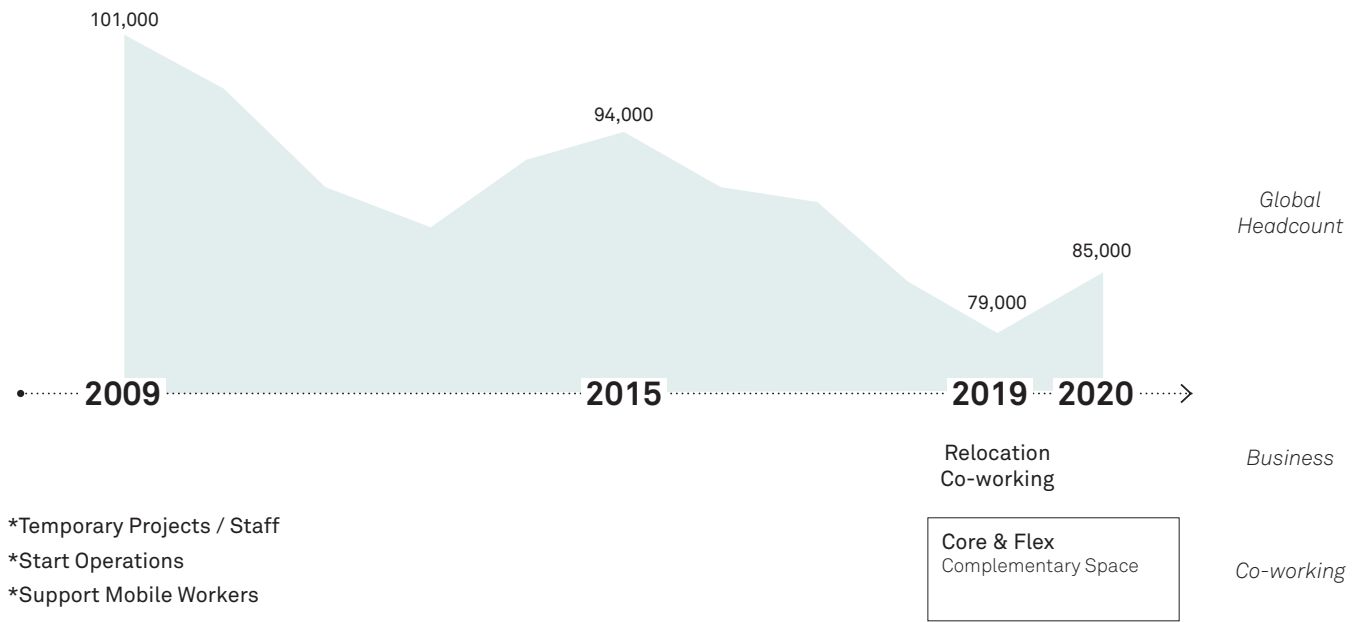


Fig. 4.07

Case D timeline in relation to co-working strategy; own figure

Drivers

In the case D, the need for competitive accommodation solutions that support the diversification of the corporate real estate portfolio has been the main driver for adopting co-working as part of the accommodation strategy. As stated by the interviewee, the company evaluates each particular case according to the business needs and the offers in the market, to determine whether co-working is the most suitable solution.

“We are also looking into this case by case, and see what’s the best solution for the business, and the requirements, and the demands, and that really depends on all these factors to make a selection. But I can say, from our search profile, if we go for a lease option, we always try to see whether there are co-working spaces or serviced offices around, and be that part of the comparison. [...] It’s more like having diversification on the portfolio, and if they are competitive in terms of the business case for the duration of a foreseeable project or the business operation. So let’s assume that we need an office for the next five years, then the business in this case is for five years, so we just need to understand the total cost of ownership for that period. So, that is actually how we look into this.”—Interviewee D

Advantages

In the case D, the company has adopted co-working as a competitive real estate strategy that supports the diversification of the corporate portfolio. In this line, the contribution of co-working to the competitive advantage of the firm mainly relates to three aspects, enabling portfolio flexibility, controlling occupation costs, and enhancing employee satisfaction.

First, in relation to enabling portfolio flexibility, co-working is a strategy that supports the diversification of the real estate portfolio and facilitates the responsiveness of the accommodation according to the business needs. The low entry barriers and short-term agreements facilitate the reconfiguration of the real estate resources in the face of changes in the business environment. As stated by the interviewee.

“I would guess we would be making more use of co-working spaces in the upcoming years. But I mean, it also depends on the market, over the last three weeks we have seen that things can change quite rapidly, and that’s also with our projects, so sometimes our projects have a very short duration, or it’s pretty uncertain in some countries, so it’s really helpful to have flexible leases in some cases. [...] So, it’s good to have your serviced office or this co-working space on your long lease to ensure that you also consider that, maybe in a first instance it might be more expensive, that could be, but you need to have the total cost of ownership approach to make a right comparison.”—Interviewee D

Second, the company evaluates different real estate strategies considering the total cost of ownership of each of the alternatives for a specific period of time. So, under certain circumstances, co-working proves to be the most competitive solution according to the business needs. In line with this approach, co-working contributes to controlling the occupation costs of the organization.

“We had other options, so we could have gone for a regular approach, leasing in a multi-tenant building the right number of square meters, and doing the fit-out ourselves. But on a long lease we also had this service provider

who could do, or deliver us, an office without having to do the fit-out ourselves, and we basically pay for the service, which is actually delivering the right number of workplaces, including facilities. So, it’s just a comparison and a business case for the duration that we plan for.”—Interviewee D

Third, in terms of employee satisfaction, two characteristics of co-working are particularly relevant in this line. On one hand, the variety of workplace settings offered at co-working spaces that allow users to choose their preferred work environment;

“We try to offer a variety of space vibes, where people can do a concentrated work, or having phone call in separate phone booths, and things like that. So, we really like to have some range, even sit-stand desks and soft seating, and all these kind of arrangements, just to make sure that you can find the best place for the task at hand. So, I think that’s really helpful, and I think that’s also what I see back in most co-working spaces, that they offer a variety, which is really helpful and really good.”—Interviewee D

While on the other hand, the attractive spaces focused on user experience offered at co-working spaces. As stated by the interviewee, these characteristics are often relevant for attracting the younger workforce therefore, the company also incorporates some of these elements in their own office locations.

“In general, I can say that we are basically very happy with the service that they provide in terms of catering, cleaning and the Internet, and some additional services. In some cases, particular project teams also really like the workplaces they provide; for example, the way WeWork has set up their office layout, very modern, very helpful in terms of collaboration and so on. So, for attracting also young people for particular projects, it’s sometimes even helpful to use that kind of space because people are used to it, or they like it, and of course we try to implement this kind of floorplan and designs as well in our own offices.”—Interviewee D

Challenges

In the case D, the main challenges that the company has faced in relation to adopting co-working as part of the accommodation strategy relates to three factors, company image and culture, security and mindset of the employees.

First, the company has faced the challenge of reflecting the image and culture of the organization in the co-working spaces. Therefore, the company prefers taking up the private offices offered by the co-working operators and customizing the fit-out to reflect the branding and identity of the organization, as explained by the interviewee:

“Reflecting the corporate identity is a challenge. So, for instance we take a private space that is branded even internally, not externally, just to make sure that people understand, perceive and experience that they are working for the company and they also see that in their office.”—Interviewee D

Second, for the company information security and employee security are essential factors to consider when defining an office location. In this line, as mentioned before, the company prefers to occupy the private offices offered at co-working to control the access to the space as often keycards, fobs and other security hardware are required for entering the spaces.

“We take up our own area and that is also for security reasons, information security, on our space there is only people from the company. [...] When we are selecting offices, we always would like to understand the location, is it a safe area, of course it needs to be accessible; but further down to the building itself and the infrastructure, we also need to understand the security indoors. So, if it has a reception and then there will be access control at the reception but also at our dedicated floors, then we can work with that as well, but if we need to implement our access control that will be more costly and time consuming, but that’s all very, very critical.”—Interviewee D

Third, changing the mindset of the employees in relation to working at multitenant spaces such as co-working has been one of the challenges faced by the organization. As stated in the interview, this challenge also refers to preparing the employees for handling sensitive information in public areas.

“A lot of people were used to the fact that we only had buildings where the company was the only tenant. So, moving, some years ago, towards multitenant spaces was already really a change; and moving towards serviced offices with common facilities, that is even further out. But I mean, our people travel that much, and so if you’re sitting on a plane or more in a public environment, you also need to be careful what you want to talk about, what you’re showing on your screen of your laptop and so on. So, it’s a total mindset that people need to have, where if you are out away, and even indoors in your office, but especially outdoors, you need to be careful what you talk about, and what to show, and what you share.”—Interviewee D

Summary

The company has adopted co-working as complementary space to the core property in a core and flex strategy. For the company, co-working has been a competitive accommodation solution that supports the diversification of the corporate real estate portfolio. Accordingly, co-working has contributed to the competitive advantage of the firm by enabling portfolio flexibility to respond to the business needs, and enhancing employee satisfaction.

In this line, co-working has responded to the flexibility demands of the organization and the employees in two terms. First, financial flexibility, the shorter lease agreements complements and diversifies the portfolio to ensure greater responsiveness of the accommodation strategy in face of changing circumstances. Second, functional of spatial flexibility, this particularly refers to the variety of work environments that co-working provides to cater to the preferences of the different users.

As seen in figure 4.08, the company has faced three main challenges in adopting co-working as an accommodation strategy. First, reflecting the company's culture and image in an outsourced space. Second, ensuring the security and privacy of the office space. Third, changing the mindset of the employees that are not used to working in multi-tenant spaces and sharing common facilities with users external to the organization.

Fig. 4.08

Summary findings Case D; own figure

Case D Energy Company	Category	Type	Feature
	Co-working Strategy	<ul style="list-style-type: none"> · Core & Flex · Touchdown Space · Temporary Projects / Staff 	Complementary space solution; Previously a temporary alternative
	Driver	<ul style="list-style-type: none"> · Diversification of the property portfolio 	Responsiveness to future changes
	Flexibility Provided	<ul style="list-style-type: none"> · Functional / Space Flexibility · Financial Flexibility 	Variety of work settings Short-term contracts
	Contribution to Competitive Advantage	<ul style="list-style-type: none"> · Enabling Portfolio Flexibility · Enhancing Employee Satisfaction 	
	Challenges Faced	<ul style="list-style-type: none"> · Company Culture & Image · Security & Privacy · Employee Mindset 	

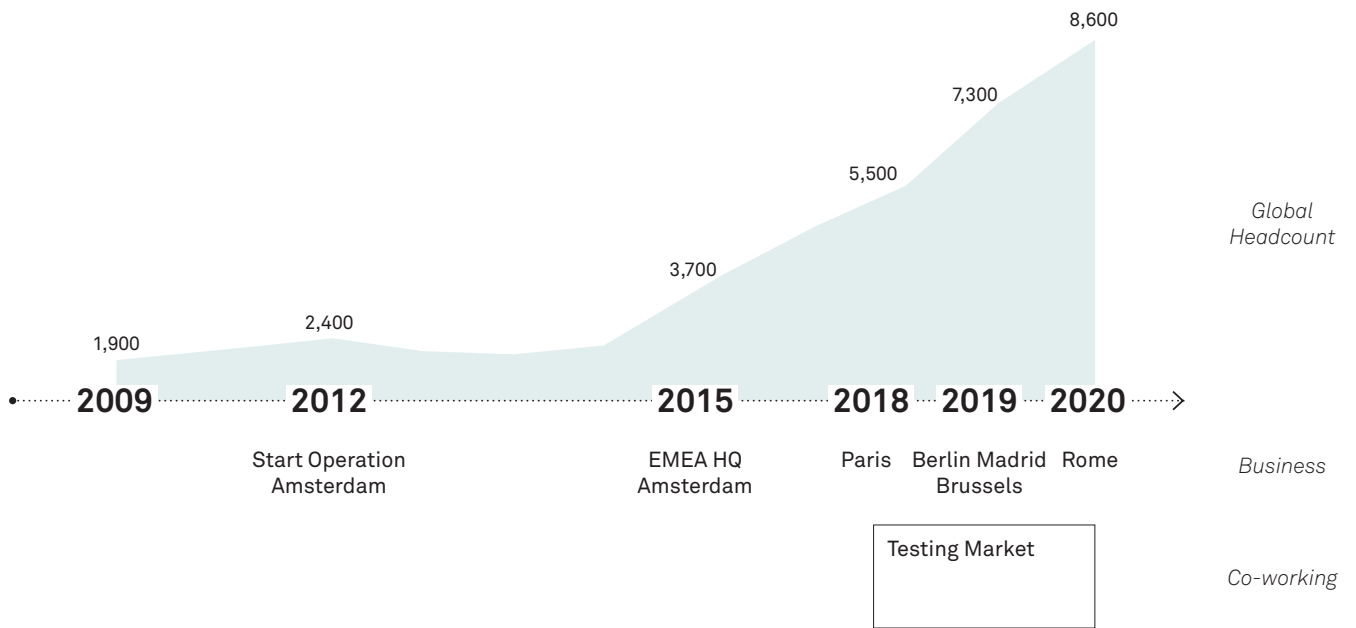


Fig. 4.09

Case E timeline in relation to co-working strategy; own figure

1.5 Case E — Entertainment Company

The fifth case is a multinational media-services and production company from the entertainment industry. The company offers streaming services and develops in-house entertainment productions. Currently, the organization has operations in 19 locations, including seven European cities, and about 8,600 employees across the world.

The company, founded in the late 90’s, has been expanding its operations internationally since 2010. In 2015, the company established its European headquarters in Amsterdam; with the continuous growth of the company, particularly in the EMEA region, the organization has started operations in five European cities—Paris, Brussels, Berlin, Madrid, and Rome—over the course of the last year and a half. Through the on-going fast-paced expansion plans, the company has used co-working spaces to start operations in some of these locations. (Source: case material and interview E)

Co-working strategy

In the case E, the company has used co-working to support the rapid expansion of the business operation across Europe, in this line, the strategy is mainly based on acquiring the private offices offered by the co-working operators to set up the operation in some of the new European locations. The rapid expansion plans of the organization have led to an exponential increase in the headcount of the company over the last years. As mentioned by the interviewee, co-working mainly represents a temporary solution, for about three to six months, when opening new markets (Fig. 4.09). In this strategy, the organization has adopted co-working as temporary space acquired in the short-term, which forms part of the second periphery part of the property portfolio.

“About 14 months ago, the company had two offices in Europe, and in the past 12 months, we have been building offices in Brussels, Berlin, Paris, we are building one in Rome, and Madrid. So, what usually happens is that we need to move into these markets pretty soon, and that doesn't give us enough time to find and fit-out an office for ourselves; so, we usually go to a temporary space, let's say, three to six months, so we find a temporary solution and that is usually through WeWork, or Regus, or Spaces, or IWG.”—Interviewee E

The company mainly uses co-working for the availability of short-term lease agreements. In this strategy, the company typically occupies a private office space and creates its own meeting rooms and amenities which are not shared with the other tenants; as explained by the interviewee, the community aspect of co-working is not a relevant factor for the company as it only represents a temporary space solution.

“We use in an enterprise way, so we take out short-term leases with all the amenities, but we always take our own space. We are not working together in the same space as other companies [...] we don't share the common areas, we even build our own meeting rooms and we also build our own café area. So, we mainly use them for the space, and then we do our fit out. Before, we used to lease their fit out, but to our own specs, and we used to change their layout a little bit. So, what it means, for example, for WeWork is that we usually do use their subscription models, so we do pay-per-desk, but the whole space, including amenities would be dedicated for us.”—Interviewee E

Drivers

The company's fast-paced growth has been the main driver for using co-working as an accommodation strategy in the new markets. As explained by the interviewee, the organization's dynamic environment requires quick access to real estate options to set up the operation in the new European locations. The company mainly requires speed-to-market to respond to the business growth and that has often been provided through co-working spaces as a temporary solution, while the organization defines a longer term real estate strategy.

Advantages

In the case E, co-working has been a means to quickly set up the business operation in new markets across Europe. In this line, the main contribution of co-working to the competitive advantage of the firm relates to enabling portfolio flexibility to quickly respond to the requirements of the business.

As explained by the interviewee, co-working is an alternative that is easily available to start operating in new markets, the short-term lease agreements and low entry barriers are the main factors that have enabled the flexibility of the real estate to respond to the dynamic business needs.

“For us, the only benefit that we see is very little capital investment. So, usually when you rent an office, it’s just the shell, and you spend a lot of money on this idea of designing and fitting out a new space, and that requires a lot of capital investments, while being depreciated for like 5 to 10 years. Whereas that isn’t the case in co-working or in this kind of serviced offices, many shared options. So, that’s a big benefit, I think, for us. So, it just gives us much more flexibility in the short-term.”—Interviewee E

Challenges

Based on the experience with co-working spaces, the challenges faced by the organization relate to five factors, first, the quality of the space; second, the cost of the space; third, the corporate image and culture; fourth, the mismatch with the employees’ profile; and fifth, the customization of the space.

First, the company has experienced difficulties in relation to the quality of the space. This specifically refers to three factors, the quality of the fit out, space metrics, and noise levels. In relation to the quality of the fit out, particularly, the finishes of the space and furniture, and the acoustics of the spaces are not optimal for the workplace standards of the organization. This is stated by the interviewee:

“Quality of the fit out, in general is not optimal, what I mean there is the finishes of all the materials, the furniture, etc. The look and feel. Usually it looks great on pictures, but it feels a little bit different when you’re in the space. The main complaint there is the acoustics and sound proofing in the conference rooms, and walls in general, that’s just very poor.”—Interviewee E

In relation to the high density of the space, as experienced by the company, the layouts are often based on a high concentration of workstations. These high densities are above the optimal for the company’s standard metrics. As mentioned by the interviewee, this can have a negative impact in the satisfaction of the employees and can affect their ability to concentrate at work.

“What we see usually is that traditional co-working suppliers like WeWork, like Regus, like Spaces, they work in a super high density. So, they have a lot of desks in a small space, so we usually take out a lot of desks as well, to give the employees a bit more space.”—Interviewee E

In terms of noise levels, the open workspaces and high density of desks often results in noisy environments that affect employee concentration and productivity. As stated in the interview, the amount of areas for concentration and enclosed spaces are not sufficient to complement the open plan areas.

“The workspace is too open usually. I think we do have pretty open workspaces, but we tend to create neighborhoods of like 30 to maximum 50 people in one area. In general, there’s not enough small enclosed spaces, conference rooms, office desk, concentration work, and that kind of stuff.”—Interviewee E

Second, it has been mentioned in the interview that the costs of the space are considerably high for the company. Particularly in this case, the payment structure of the space is based on the number of desks provided according to the providers’ space metrics; however, as the densities are not aligned with the company’s standards, the space layout accommodates less desks than what is actually being paid. As stated by the interviewee:

“For our company in particular, it’s a super high rent, and that obviously they are aware that they don’t need to do a capital investment that obviously outweighs the high rent pay. But it’s super high cost on a monthly basis for small spaces. And for us in particular, it’s about high cost because we usually pay per desk, and then we need to take out half of the desks so that it comes to an acceptable density of the workspace, that gets super costly.”—Interviewee E

Third, in terms of the corporate image and culture, for the company, the co-working space does not reflect the corporate identity. This can be challenging specially in new markets where the new workforce might not be as embedded in the culture of the company. Fit-out customization and branding have been some of the strategies pursued to tackle this issue.

“I think another downside for the company as well as for the employees is the lack of corporate identity. So, we do bring in another bit of customization with graphics and decoration, etc. But it still doesn’t feel like a space of the company. We have branding, so we like our space to reflect that as well, and if we go into a Regus or a WeWork they tend to get pretty generic.”—Interviewee E

Fourth, the company has faced a challenge in relation to a mismatch between the type of users of the co-working spaces and the profile of their employees. As explained by the interviewee, the company has faced community environments where the co-working population has a different profile that is not aligned with the corporate users, as mentioned in the interview, this particularly refers to younger users that results in noisy environments in the shared co-working spaces.

“In terms of our employees they tend to be little bit more senior than the average user of co-working. Let’s take WeWork as an example, for us, I think the main goal of the workplace, is that it should be productive and quiet and have enough space. Our experience when we did try to join like community and sharing benefits of WeWork for example, is that it gets super noisy, lots of young people, very creative as well and that’s fine, but it seems like their population doesn’t seem to match with what we are looking for.”—Interviewee E

Fifth, the company has faced difficulties when customizing the space to fit their special requirements. The company usually brings special fit-out or branding specifications that, according to the experience of the company, often take a long time to process or are rejected by the co-working operator.

“They should be little bit easier in terms of customization, for example, improving the process to fit-out the spaces, and I honestly understand that if it is only for six months that they are pretty hesitant to spend a lot of money on it. But even then, they can be much better at servicing our requests, and then if we need to pay for it, we will pay for it, but now, we often just get a no, so it’s always very difficult.”—Interviewee E

Summary

The strong and quick expansion of the organization has been the main driver for adopting co-working as a temporary accommodation strategy. For the company, co-working is mainly a short-term solution that facilitates starting the business operation in some of the new markets in the EMEA region.

In this line, co-working forms part of the second periphery part of the property portfolio and mainly provides flexibility in financial terms as the short-term lease agreements and low entry barriers facilitate the acquisition of the space to start the business operation. As seen in figure 4.10, in this strategy, the company has faced five main challenges in adopting co-working as an accommodation strategy, namely, the quality of the space in relation to the fit out, space density and noise levels; as well as the cost of the space, a lack of reflection of the corporate image and culture, the mismatch between the employees' profile and the co-working users, and difficulties with the customization of the space.

Fig. 4.10
Summary findings Case E; own figure

04 —

Case E Entertainment Company	Category	Type	Feature
	Co-working Strategy	·Testing Market	Temporary space to start business operation
	Driver	·Fast-paced business growth	Quick access to space to set-up business
	Flexibility Provided	·Financial Flexibility	Short-term contracts & speed-to-market
	Contribution to Competitive Advantage	·Enabling Portfolio Flexibility	
	Challenges Faced	<ul style="list-style-type: none"> ·Quality of Space ·Costs of Space ·Company Culture & Image ·Mismatch Employees ·Space Customization 	

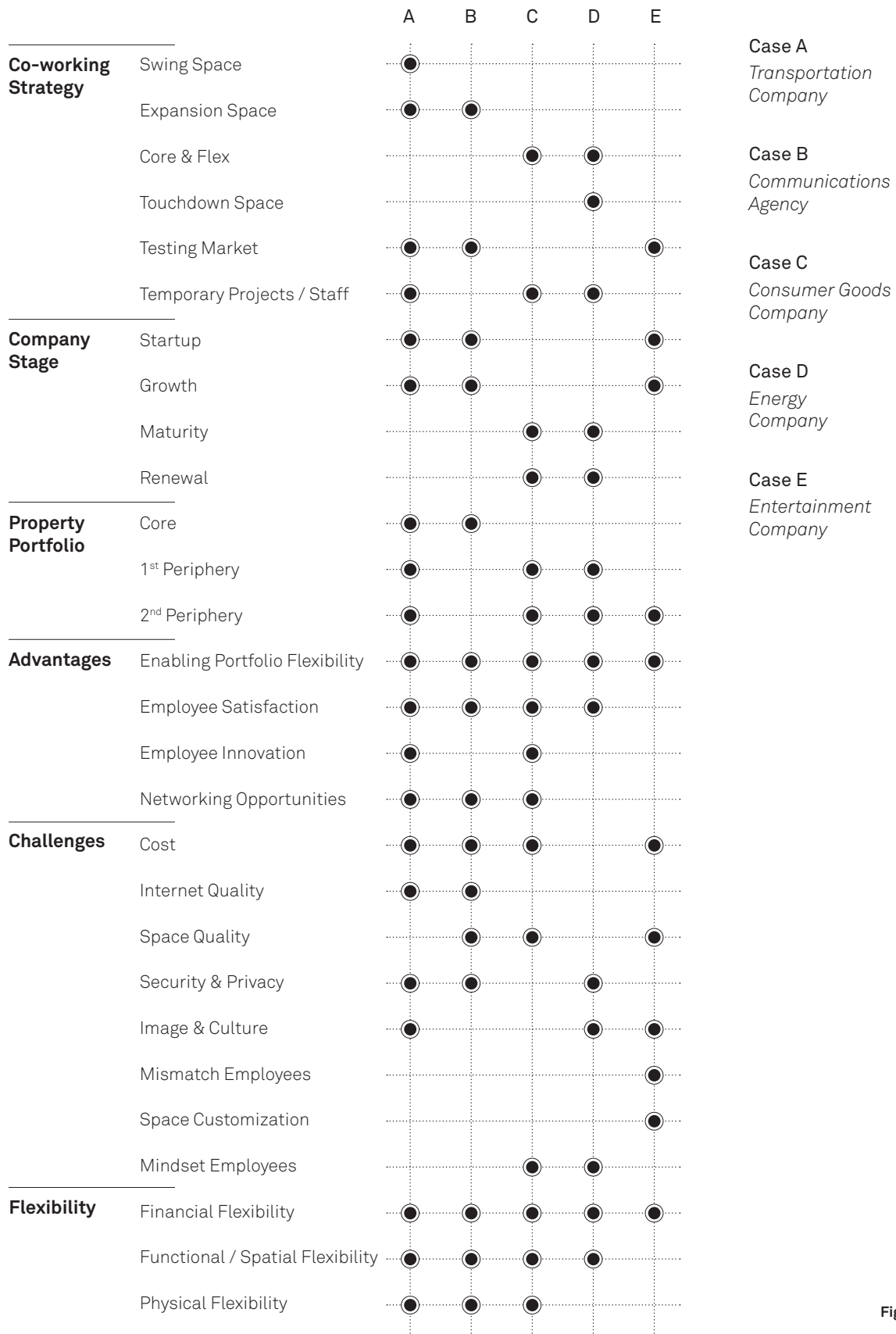


Fig. 4.11

Overview of cross-case analysis; own figure

2. Cross-Case Analysis—Demand Study

The cross-case analysis of the research is based on comparing the findings of the multiple cases and assessing the similarities and differences with regard to the main themes covered in the case studies. Figure 4.11 illustrates the main results of the individual analysis and provides evidence to support the findings of the cross-case analysis. In this section, the main findings from the cross-case analysis are presented in five categories, namely, approaches to co-working, connections with competitive advantage, challenges associated, co-working and flexibility, and additional observations.

2.1 Different approaches to adopting co-working as an accommodation strategy

Six strategies for adopting co-working in the corporate sector

The findings from the cases suggests that there is an array of strategies to adopt co-working as part of the accommodation strategy of the company. Based on the analysis, six different alternatives have been identified:

1. **Swing Space:** co-working is often used as a temporary space to relocate a team and continue the business operation while the renovation or construction of a new office space is being carried out. In this strategy, co-working mainly represents a bridge between the existing and the new work environment.

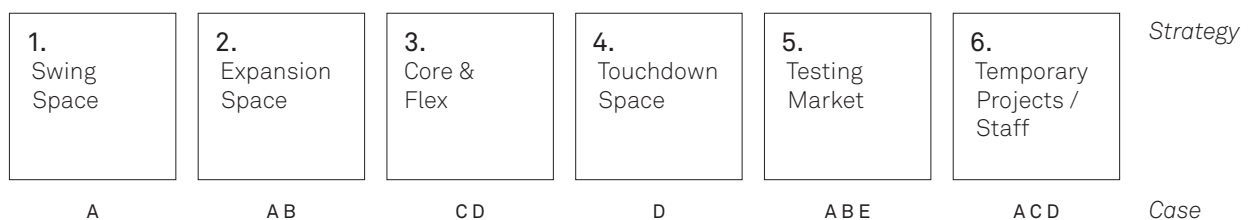
2. **Expansion Space:** co-working is used by some organizations as expansion space to support the growth of the company. In this strategy co-working can be used as the main office location, or as complementary space, the main premise is that it allows the company to take up more space when needed.
3. **Core & Flex:** in this strategy co-working is used as a complementary space in combination with a core location. The dual strategy is composed by a long-term agreement for the core space and a short-term lease with a co-working operator.
4. **Touchdown Space:** co-working is often used as touchdown space that provides a professional work environment for individual mobile workers. The multiple locations offered locally and internationally are particularly relevant to support satellite workers, salespersons, etc.
5. **Testing Market:** co-working is used as a platform to start operations of an organization or new business lines. The services and amenities provided, the low entry-barriers and short-term commitments are particularly attractive to set up a business operation at a low risk.
6. **Temporary Projects / Staff:** co-working is used as a temporary space to accommodate teams, internal or external to the organization, to work in particular projects or tasks.

Figure 4.12 illustrates the six different approaches to adopt co-working as part of the accommodation strategy of the corporation, as seen across the cases.

04 —

Fig. 4.12

Six co-working strategies; own figure



Different strategies according to the stage of maturity of the company

As seen across the cases, the different strategies for adopting co-working as part of the accommodation strategy of the corporation also relate to the stage of maturity of the company or business line for which co-working is being used.

As seen in figure 4.13, according to Sirmon, Hitt, Ireland and Gilbert (2010) and Jirásek & Bílek (2018) an organization's lifecycle can be defined in four stages: startup, growth, maturity, and renewal or decline.

As seen in the cases, the different stages relate to different levels of uncertainty about the business operation; in this line, the co-working strategies can also be associated with the stage of maturity of the company.

For instance, initially, at the start-up stage, the companies face a high degree of uncertainty over the future of the business; therefore, co-working is used as a strategy for testing the market. This supports the experimentation phase of the company with low risks and short-term real estate commitments. Second, during the growth phase, co-working is used mostly as expansion space. As the growth of the company is tangible, but accurate projections about the headcount and space requirements might be difficult to estimate, the aim of this strategy is to support the uncertainty of the business operation and the volatility of the headcount.

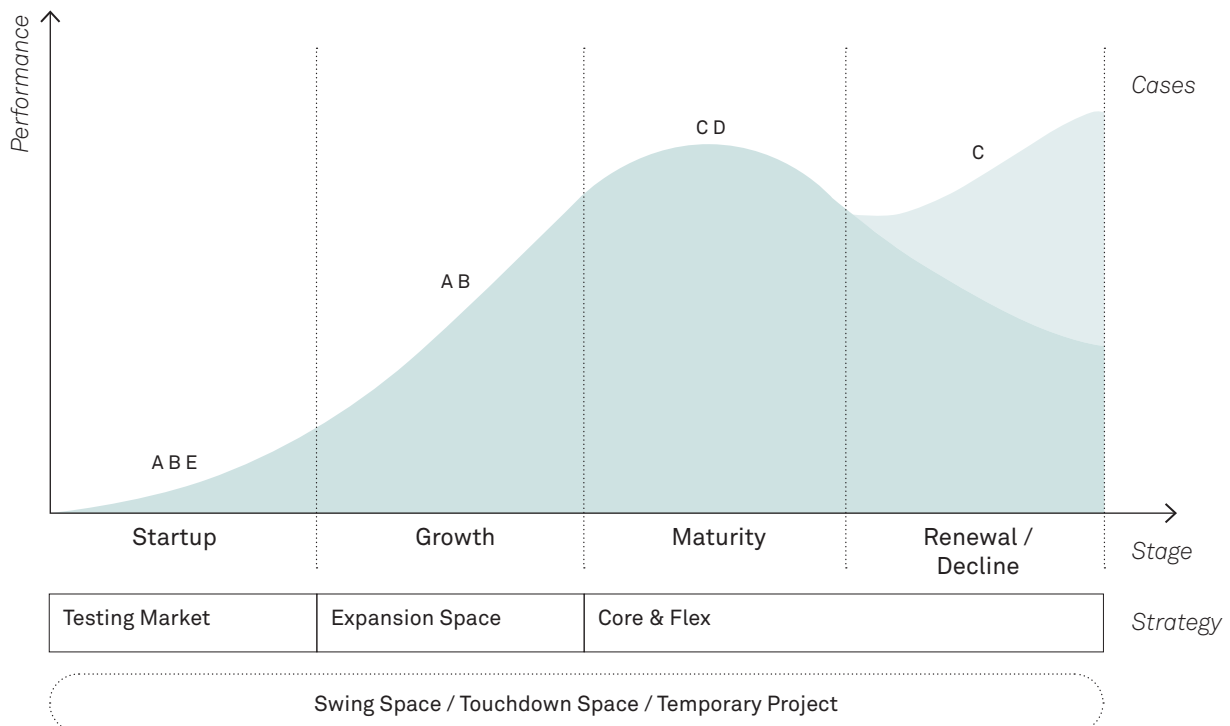
Third, in the maturity and renewal stages the business' projections can be more accurate, therefore, co-working is mostly used as complementary space in a core and flex strategy. During these phases, co-working provides additional flexibility in the corporate portfolio to buffer any changes during the business cycle, and provides an alternative platform out of the traditional corporate environment to bring new ideas to the organization.

In addition, three other alternatives are used sporadically regardless of the stage of maturity of the company. First, co-working is used occasionally as swing space to transition during the growth, maturity and renewal or decline phases. Second, co-working is used as a temporary solution to accommodate a specific team or to develop a specific project. Third, co-working is used as touchdown space to support mobile workers, this strategy is most commonly, but not exclusively, followed during the growth and maturity stages of the organization.

Figure 4.13 illustrates the different co-working strategies in relation to the organization's lifecycle, as seen across the cases.

Fig. 4.13

Co-working in relation to organization's lifecycle; own figure



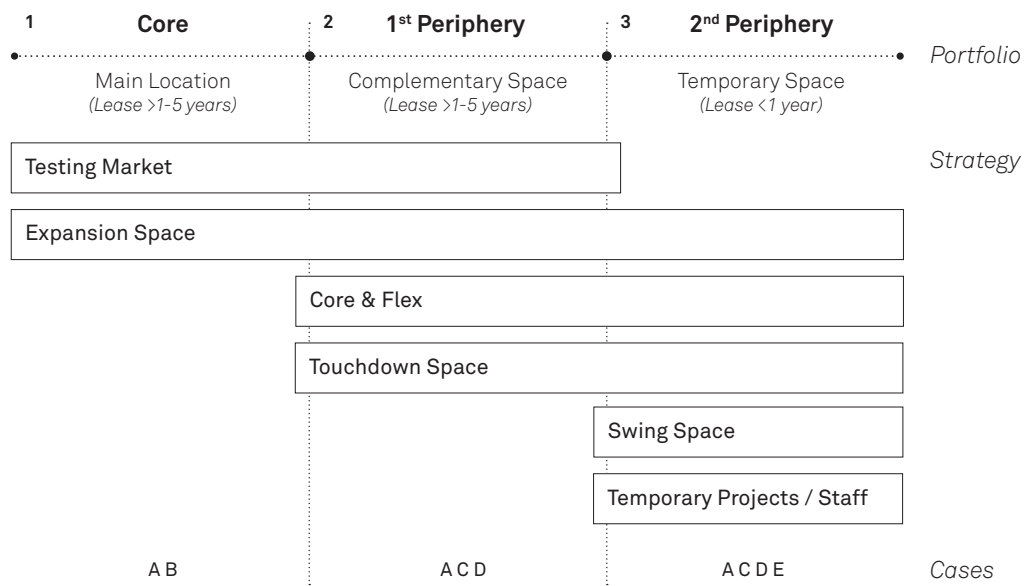


Fig. 4.14

Co-working throughout the portfolio layers; own figure

Co-working throughout the different layers of the property portfolio

Based on the analysis from the cases, co-working as an accommodation strategy plays different roles in the corporate property portfolio (Fig. 4.14). Accordingly, co-working can be classified as the core part of the property portfolio in the strategies where it is used as the main office location, for instance, when testing the market or when used as expansion space. Second, co-working can be classified as the 1st periphery layer of the property portfolio in the strategies where it is used as complementary space acquired in the short-term (between 2-5 years), this often applies to the Core & Flex, Expansion Space, Testing Market and Touchdown Space strategies. Third, co-working can be classified as the 2nd periphery layer of the property portfolio in the strategies where it is used as temporary space acquired for really short periods of time (less than one year), for instance as swing space, for temporary projects and staff or when it is used as touchdown space under a pay-per-use scheme—charged per hour, day, week or month.

Although co-working is an alternative that covers the different layers of the property portfolio, is possible to see a segmentation in the market where the small co-working operators often focus on providing core spaces for startups and small companies as well as touchdown spaces for mobile workers, while the larger co-working operators tend to cater more to the larger organizations looking for complementary and temporary space solutions.

Figure 4.14 illustrates the different co-working strategies across the cases in relation to the layers of the property portfolio of the organization as seen across the cases.

2.2 Connections between co-working and competitive advantage

Enabling portfolio flexibility

As seen across all the cases (Fig. 4.11), enabling portfolio flexibility is one of the main contributions of co-working to the competitive advantage of the firm. The low entry barriers, quick access to space, and flexibility in the lease agreements, facilitate and improve the responsiveness of the real estate portfolio to the changing circumstances in the business environment. In this line, co-working allowed the companies to reconfigure the real estate resources, by expanding or contracting the footprint, according to the needs of the company with minimum impact in the business operation.

Enhancing employee wellbeing and satisfaction

Enhancing employee wellbeing and satisfaction has been identified as a relevant source of competitive advantage in co-working, especially considering the association between satisfaction and productivity improvements, and talent attraction and retention. Across the cases A, B, C and D the organizations highlighted that the variety of workplace settings, attractive facilities, services provided and high accessibility were some of the factors that contributed to enhancing employee wellbeing and satisfaction. However, in contrast with that perspective, the case E—Entertainment Company—stated that in their experience, co-working had a negative impact on the employees' satisfaction, particularly in relation to noise levels and density of the space (Fig. 4.11).

Encouraging employee innovation

In terms of encouraging employee innovation, two cases—A and C—highlighted that co-working provided an inspiring work environment that offered the opportunity to interact with members outside of the corporate environment and enhance the creativity of the employees. These factors contribute to encouraging employee innovation and bringing new ideas to the business, as highlighted before (Chapter 2), innovation is one of the most significant sources of sustainable competitive advantage, as it involves continuous knowledge creation processes that allow firms to outperform the current and potential competitors.

Enabling networking opportunities

As mentioned in three of the cases—A, B, C—the co-location of a variety of tenants and the community environment created in co-working spaces enables networking opportunities for the companies and the employees to connect with other businesses or individuals outside of the corporation. By enabling networking opportunities, co-working contributes to the competitive advantage of the organization in relation to the enabling connections relevant at the personal and business levels, which contribute as well to the satisfaction of the employees and the innovation process of the organization.

In the case of companies in the startup phase, for instance the Communications Agency in Case B, the networking opportunities offered are fundamental to support the development of the company and open potential collaborations between businesses; while for others, as the Consumer Goods Company in Case C, the interactions with other users can be used as a tool for innovation. Particularly, the Transportation Company in Case A considers that co-working enables networking opportunities at the employee level, however, the possible connections are not seen as potentially significant at the company level.

On the contrary, as the Entertainment Company in Case E mainly uses private spaces and does not make use of any shared facilities provided by the co-working operator, the organization does not see networking opportunities emerging when locating at this type of spaces.

2.3 Challenges associated with co-working as an accommodation strategy

Cost of the space

The high costs of the space is one of the main challenges that the companies face when adopting co-working as an accommodation strategy. In this line, three factors are relevant in relation to the cost of the space, first, the flexibility provided; second, the services included; and third, the size of the team occupying the space.

First, as mentioned in the cases A, B, C and E (Fig. 4.11), the flexibility provided by co-working comes at a premium, therefore, the analysis of the business needs in relation to uncertainty of the business operation is fundamental to determine whether it is a suitable solution. Second, as mentioned in the cases B, and E, the services provided by the co-working operators—which come at a premium—are often not used by the corporations. This often results in paying additional costs for services that are not leveraged by the organization or the employees; these often include community services, access to different locations, amongst other available services. Additionally, the cases A, B, and C, highlighted that co-working is a cost-effective solution for servicing small teams, of about 10 to 20 employees approximately; but as the company scales, the costs of the space become considerably high when comparing other options in the market.

In contrast with this, the Energy Company—Case D—stated that their approach to real estate strategies considers the total cost of ownership of different alternatives for a specific period of time. In this line, the company analyzes the break-even point according to the location, services, provider, and business projections, and for certain circumstances co-working has proven to be a cost-effective solution for their business.

Security and privacy

Particularly, the transportation and energy companies—Cases A and D—face concerns in relation to the security and privacy of the office space. As seen across the cases, this issue is mainly tackled by occupying the private offices offered by the co-working operators to control the access to the spaces and to safeguard the company's sensitive information. As explained in both cases, even though keycards, fobs and other security hardware devices are required to enter private spaces, there is a vulnerability present in multi-tenant buildings and shared spaces.

In contrast with this, in the case B, the Communications Agency stated that the security measures in relation to security passes and hardware devices required to access the spaces can be impractical in the daily business operation. In this line, is important to highlight that the security standards of organizations of different scales can vary significantly, this could also explain the contrasting viewpoints between the cases A and D, with B.

Company culture and image

In terms of the company's culture and image, the cases A, D and E, referred to the difficulties of reflecting the corporate identity in co-working spaces (Fig. 4.11). The companies have highlighted the importance of transmitting the image and culture of the organization to strengthen the cohesion between the employees and the company. This challenge is also related to the fact that the different operators have their own look and feel that reflects the co-working brand.

As evidenced in case E, this challenge is particularly relevant when starting operations in new markets, as the new workforce might not be embedded in the company's culture, values and identity.

The different companies have tackled this issue in two ways, on the one hand, with change management and communication with the employees to maintain a corporate culture; and on the other hand, by customizing and branding the private spaces to reflect the corporate image.

Quality of the Internet service

In relation to the quality of the Internet service, two companies—Transportation Company (Case A) and Communications Agency (Case B)—have faced a challenge in relation to the connectivity, stability and bandwidth of the Internet connection. As stated in both cases, the Internet service is fundamental for the operation of the business; however, as the co-working operators often have agreements with particular service providers, the control of the company in terms of selecting the service provider is limited.

Quality of space

Particularly two organizations, the Consumer Goods Company and Entertainment Company—cases C and E—have experienced difficulties in relation to ensuring the quality of the space according to the standard levels of the organization. This challenge specifically relates to three factors: space metrics, noise levels and fit out quality.

First, in terms of space metrics, the high densities at the co-working spaces are above optimal for the companies standards [about 11m²/person (Deskmag, 2018) compared with the Dutch average of 20m²/person (NFC Index, 2019)]. Second, in relation to noise levels, the common areas and open spaces often result in noisy environments that affect the employees' ability to concentrate; this challenge was also faced by the Communications Agency—Case B. Third, the quality of the fit outs in terms of finishes, furniture and the acoustics of the spaces are not up to the company's workplace standards. As seen across the cases B, C and E, the challenge associated with these factors mainly relates to the impact in the employees' satisfaction, their ability to concentrate and consequently their productivity levels.

Employee Mindset

The Consumer Goods Company (Case C) and the Energy Company (Case D) have faced challenges in relation to the employees' mindset over working in co-working spaces and having shared common areas. In this line, two factors are particularly relevant; first, certain employees prefer occupying traditional office spaces to customize the fit out according to their own requirements; and second, some employees are not used to working in multi-tenant buildings and sharing common areas with other companies. Accordingly, change management and communication are fundamental factors to facilitate the transition for the employees.

Mismatch with employee profile

The Entertainment Company (Case E) faced a challenge in relation to the mismatch between the employees' profile and the type of users of the co-working space. This particularly refers to the difference in age and type of activities carried out by the co-working users in relation to the corporate employees. This challenge was not experienced in the other cases; however, it highlights the importance of selecting providers that align with the culture of the company to ensure the satisfaction of the employees.

Customization

As experienced in Case E, the Entertainment Company faced difficulties in customizing the fit-out of the space according to the specifications of the company as the process was often not facilitated by the providers. Although this challenge was not faced in the other cases, highlighting the importance of space customization is relevant as several companies use it as a mechanism to reflect the corporate identity; therefore, it is a factor that has to be considered by both, the companies and the providers.

2.4 Co-working and flexibility

Financial Flexibility

As seen across all the cases—A to E—the low entry barriers, short-term lease agreements and speed-to-market provide financial flexibility and facilitate the responsiveness of the real estate portfolio in face of changing circumstances. Additionally, co-working supports the diversification of the property portfolio; as seen in the cases C and D, when co-working is adopted as a complementary space in combination with a core location acquired in the longer term.

Functional and Spatial Flexibility

The variety of work environments and workplace settings offered at co-working spaces aligns with the functional flexibility demand of the organization, and the spatial flexibility demand of the employees. As seen across the cases A to D, the multiple settings provided offer choice and caters to the preferences of different users (Fig. 4.11).

The Entertainment Company—Case E—is the exception in relation to the functional or spatial flexibility. As explained before, the company mainly uses the private offices offered at co-working spaces and does not use the shared amenities or facilities provided, therefore, functional flexibility is not particularly provided.

Physical Flexibility

As seen in the cases A, B and C, co-working provides the physical flexibility to quickly react to the needs of the core business and expand or contract the office footprint accordingly (Fig. 4.11). The physical flexibility provided by co-working is also related to the stage of maturity of the company in relation to the volatility of the headcount, as organizations in the start-up and growing phases (Transportation Company in Case A and Communications Agency in Case B) might have more pressing needs to adapt the office space than those in the maturity stage (For instance, the Energy Company in Case D) (Fig. 4.13).

2.5 Additional Observations

This category relates to general observations that are relevant to consider in relation to co-working as an accommodation strategy for corporations as seen across the cases.

Importance of management style

As mentioned in various cases—A, C, D and E—the management style plays an important role in the success of co-working as an accommodation strategy. In this line, companies with a management style based on presence and control face more difficulties in implementing flexible workplace solutions, than those with a coaching approach and managing by results style.

Role of company and national culture

Co-working can be a suitable accommodation strategy for certain teams in specific locations; however, the different approaches can have varying results under changing circumstances. Meaning that, first, as mentioned by interviewees A, C and D, the national culture plays an important role in adopting co-working as an accommodation strategy, some countries might be keener to explore this alternative, while others can be more skeptical to this way of working.

Second, the company's culture also plays an important role, as some organizations are more open to exploring different workplace arrangements, while others are more averse and might prefer occupying traditional corporate spaces.

Co-working as testing ground

The experiences of the employees in relation to working at a co-working space, provide an opportunity to learn about the preferences of the employees and test workplace initiatives. As mentioned in the case D, the company has used the feedback from the employees to adapt their own office space, and adjust the workplace design guidelines according to the lessons learnt from the experience outside of the traditional corporate environment. This valuable interaction is an approach that can have significant implications in the development of the workplace, particularly in relation to the user experience, over the next years.

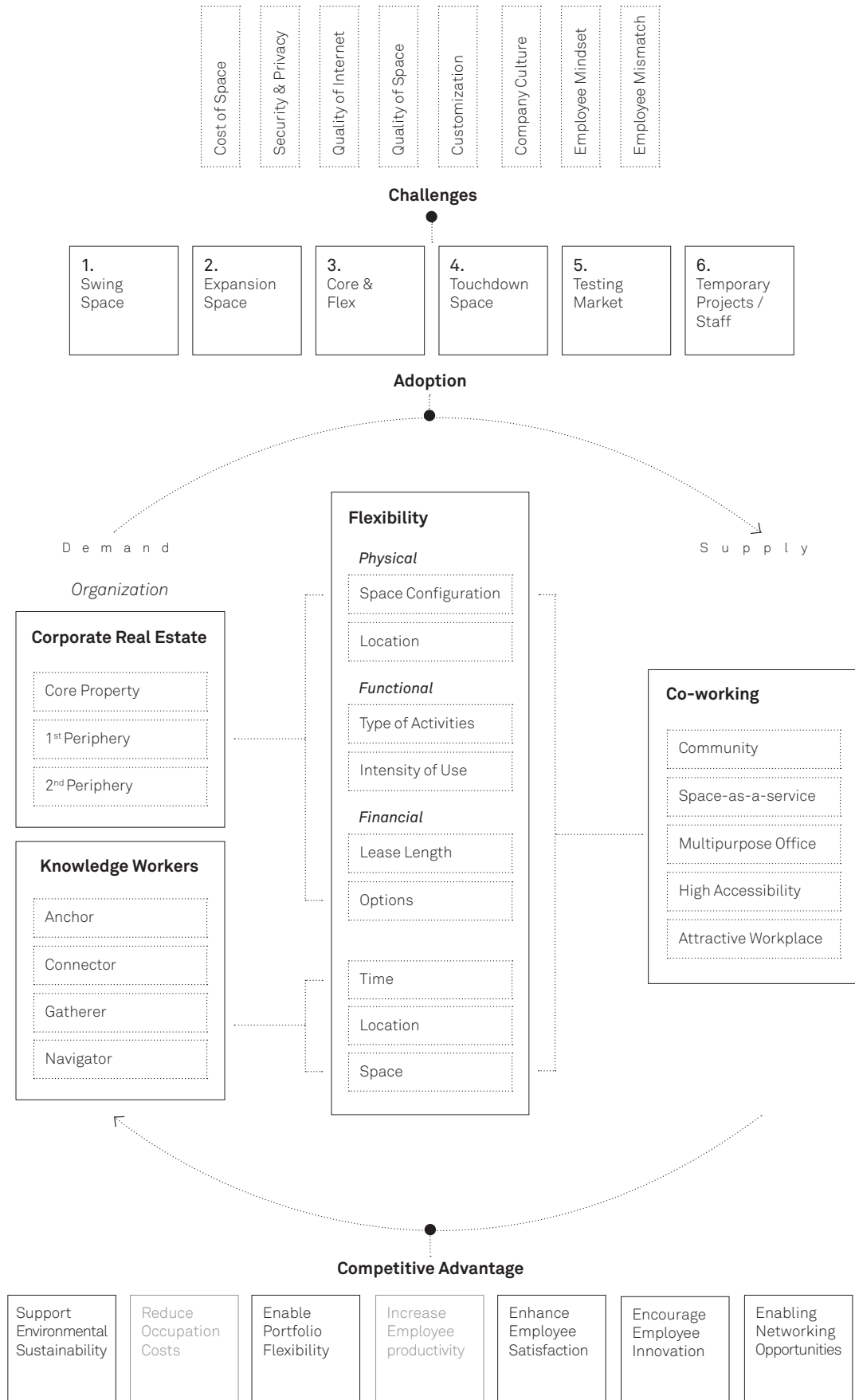
2.6 Cross-case Conclusions

Based on the cross-case analysis, the theoretical framework presented in the second chapter (Fig. 2.18) is further developed to illustrate the main findings from the demand side. As seen in the figure 4.15, there are six different strategies to adopt co-working as an accommodation strategy—Swing Space, Expansion Space, Core & Flex, Touchdown Space, Testing Market, Temporary Projects / Staff. According to the different strategies, co-working plays different roles in the corporate property portfolio, meaning that co-working is not only suitable at the 2nd periphery part of the property portfolio, as suggested in literature (Chapter 2), but it is often used as core portfolio in the strategies where it is used as main location, or 1st periphery in the cases where it is acquired as complementary space with lease agreements for 2 to 5 years—for instance in the Core & Flex, Expansion Space or Testing Market strategies. In the same line, co-working provides a work environment not only for the knowledge workers with more mobile profiles as the gatherer and navigator, in certain strategies, from the core or 1st periphery part of the portfolio, it also caters to other profiles such as the anchor or connector type of workers.

In terms of flexibility, as seen in the case studies, co-working mainly responds to the financial and functional or spatial flexibility demands. In the cases where it is used as expansion space or to support the volatility of the headcount, co-working responds to the physical flexibility demands of the organization in relation to expanding or reducing the space according to the business needs. As the cases reflected, most of the organizations do not make use of the network of locations offered by the co-working operators; therefore, co-working responds to the location and time flexibility demands mainly when it is used as a touchdown space to support mobile or satellite workers.

In relation to performance, co-working contributes to the competitive advantage of the corporation in five main ways. First, enabling the flexibility of the real estate portfolio to quickly react to the business needs. Second, enhancing employee wellbeing and satisfaction, this relates to the attractive facilities provided and variety in workplace settings that give users choice according to their preferences. Third, encouraging innovation by providing inspiring work environment and interaction opportunities with other members of the community. Fourth, enabling networking opportunities in relation to connections with the variety of tenants that can support the development of the organization, or that can result in potential business opportunities and innovation processes. Fifth, while supporting environmental sustainability is an aspect that was not directly evident in the cases, the shared facilities and reduced occupation footprint contribute to this aspect. In contrast with the findings from theory (Chapter 2), increasing employee productivity and reducing occupation costs are factors that were not directly present in the case studies.

Additionally, as identified from the cases, the companies face eight different challenges when implementing a co-working strategy. These refer first, to the high costs of the space considering that the services provided and the flexibility offered come at a premium. Second, concerns regarding security and privacy of the office space and sensitive information of the company. Third, issues with the quality of the internet service, particularly in relation to the connectivity, stability and bandwidth of the connection. Fourth, difficulties in relation to ensuring the quality of the space particularly relating the space metrics, noise levels and quality of the fit out. Fifth, difficulties in customizing the fit out of the space according to the specifications of the company. Sixth, difficulties in relation to reflecting the company's culture and image in the space. Seventh, changing the mindset of some employees in relation to working in co-working spaces and having shared common areas. Finally, a mismatch between the employee's profile and the type of users of the co-working space.



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Fig. 4.15

Theoretical framework adjusted to illustrate the findings from the demand study

3. Supply Study Findings

Based on the individual analysis, this section presents the main findings from the four interviews carried out with co-working suppliers. The findings are organized in three main categories, challenges associated, co-working and flexibility, and additional observations.

3.1 Challenges associated with co-working in the corporate sector

Limited capacity to meet corporate demands

As seen across the interviews, there is a limited number of operators with the infrastructure and capacity to cater to corporate users. Small or local operators have an interest in corporate occupiers, however, they often have limited physical capacity to accommodate larger groups from corporations. As mentioned by the interviewee W:

“So, we have setups that are a little bit smaller so for four to six people, and that’s a little bit too small for corporates but there is a lot of interest, and they would love to also grow with us. So, starting with a six-people office and then maybe they would like to double the size; and also, collaborations, they really want to be part of the TSH-Collab community. So, I do see the benefits, I do see big interest but at this point we are not set up yet to provide them the right service they are looking for.”—Provider W

Additionally, larger co-working operators often have stronger security measures, like private networks and hardware devices, as well as, more services available to the users, a wider range of spaces, and access to prime locations that match the standards of the larger corporations.

High occupation rates limit flexibility to grow

Various suppliers mentioned that the increasing popularity of co-working spaces has often led to high occupancy rates, especially in the most attractive locations. Some co-working operators strive for 90-95% occupancy rates, but in some cases there is even 100% occupation rates and waiting lists to access the space.

“In the offices, we strive for an occupancy around 90 to 95 percent, and for most of our buildings that is quite common. So, we always have some space available, so you can shift around, you can expand or grow into a larger room; but sometimes here we have buildings with hundred percent occupancy and then it’s difficult. Because you have very little space to maneuver, but ideally I would say 90 percent is optimum.”—Provider Y

The limited availability of space can be particularly challenging for organizations in the growing phase, as the possibilities of scaling up in the same location might be limited. Often, the providers offer the opportunity to relocate to other co-working locations, with lower occupancy rates, to support the growth of the corporate occupiers.

“At this moment, we are in this situation that we are completely full and that we have a very big waiting list, for over year, but we have other locations. [...] for example, one company that grew too big, we could not facilitate them here, and now they moved from here to Schiphol. So, we can still facilitate those growers, and we still give them another option, because we like to keep them.”—Provider X

Management style

Several providers highlighted the importance of changing the management style of some organizations, this refers to the traditional way of managing and expecting employees to be present in a specific schedule at the office, to managing by results, trusting the employees and encouraging their autonomy to carry out the tasks at hand. As illustrated by the provider W:

“The most difficult part for corporates is to let go of the misconception of the traditional way of having people at one location, because traditionally everybody went to the same place and you sat down from 9:00 to 5:00 and everybody could see that you were there and you were working. [...] But then the biggest problem is actually changing the mindset of people and saying you don’t need to see someone sitting in the desk the whole day to ensure that they’re actually doing their job, is

more maybe managing by results and trusting your employees and giving them the autonomy to carry out their job the best way they can. It's a management issue rather than a security issue."—Provider W

In this same line, the interviewees highlighted that adopting co-working as a mid-term accommodation strategy can be particularly challenging for companies that have a traditional way of working, as stated in the interviews there is a need for change, to give employees autonomy at work. This aligns with the observations made from the demand side as seen in the previous section 2.5.

"The main challenge especially for companies, always what I think is never pressure your employees to come to the office on certain hours, give them space. Then the job is done and the job is done good. People want to be or prefer to work in a flexible place. I think it's what people are looking for nowadays. They want to be flexible and also meet other people, open minded to all. I think that's a very important thing."—Provider Y

Corporate image and culture

The difficulties in relation to the company image and culture of the organization are also acknowledged by the different providers, particularly in relation to the cohesion of the company and the connection between the employees and the culture of the organization.

"I think the main challenge it's also a little bit regarding brand / employment, is this person still connected to us? Like the corporate? or is this person fully connected to the co-working space community. Is that a challenge or is that a benefit? I think a benefit; but I can see it as maybe where should I go? and how connected am I with my employee at this moment."—Provider W

As mentioned by the provider Z, the company's culture and image can be a challenge specially in the cases of mobile workers that use co-working mainly as touchdown space, as they often have less contact with their corporate peers.

"Another challenge could be the connection of the employee with the company, but I think it really comes down to the company for this pit-fall, so I think for remote work for example, you would need to have a sort of team cohesion and a very strong emphasis on that culture and also a way to meet up in person every now and then. So, it's quite, I wouldn't say difficult, but you really have to think as a company about getting it right."—Provider Z

3.2 Co-working and flexibility

Financial Flexibility

In line with the findings from the demand side, the suppliers highlighted that co-working provides financial flexibility in relation to the short-term lease agreements that facilitate the access to the space and increase the responsiveness of the accommodation of the firm to react to business changes.

"From the beginning, there were a lot of larger companies that were looking for flexibility, and for a more inspiring work environment, that were already interested in the co-working concept. And why? Well there was not so much flexibility offered in the market. So, you either had a traditional real estate with 10 year lease contract, or you had Regus, and there was nothing else basically. And then there's the Spaces and the WeWork concept they were in the middle, so flexibility, but also inspiring environments, and not the traditional 10 year lease contracts."—Provider Y

Functional and Spatial Flexibility

Co-working offers a variety of work environments and settings that aim at catering to the different preferences of the users. Both large and small operators have different structures in place to provide collaborative environments, areas for concentration or individual work, informal areas, meeting rooms, etc.

"The building is kind of structured in that way, so down here it's more serendipity and connection; the first floor is a bit more working, still in a very cozy setting; and a second floor is actually a silent space. So, you can grab a book, meditate, do some yoga, you can also just do some work there, but in complete silence."—Provider Z

The dynamic office environment provided offers choice and flexibility that meets the flexibility demands of the users in spatial terms. As highlighted by provider Y:

“We said we want to have a hospitality function, with F&B, combined with office, home. We provide dynamic office environments where companies can meet other people where you can have different atmospheres and different surroundings during the day. Because that fits your needs better than being in the office, at one place, at your desk the full day. And we also thought that most office environments were quite uninspiring and un-dynamic and we were looking for something more creative, that inspires you and that energizes you.”—Provider Y

Physical Flexibility

Co-working provides the opportunity of increasing or decreasing the office footprint according to the needs of the organization. In line with the findings from the demand cases, the providers highlighted the versatility provided by co-working to scale or downscale the space according to requirements of the business. Particularly, the easy accessibility to the space and the short-term commitments are key features related to the physical flexibility provided to the organizations. As highlighted by various providers, organizations are increasing the flexibility of their real estate by adopting co-working as a peripheral layer in their property portfolio.

“For corporations, especially it gives a great term of flexibility and flexibility in use, flexibility in the length of use, flexibility to scale, flexibility to downscale [...]. I think that it’s especially the corporate sector that has seen now the possibility to create a flexible circle of space around a number of square meters that they call their head office or the fixed squared meter base. Especially co-working operators are providing that flexible part. But I think the corporate sector is now becoming used to having a flexible skin. Insurance companies, banking, larger software companies. They all now are getting used to having one, or more, flexible operators in their portfolio. They usually tend to have about 10 to 30 percent of their total square meters with an operator.”—Provider Y

Location Flexibility

As seen across the interviews, most of the operators—W, X and Y—offer a network of locations, locally and internationally, that are available for the co-working members. This feature mainly responds to the location flexibility needs of the mobile workers.

“You see a lot of companies using the office as the place where they come together, have a meeting or work together, and then combine that with more space here, depending on their day. And either they start in the morning upstairs and come down in the afternoon, or the other way around, or in other buildings; like they have a meeting in The Hague but an office here, so they go to The Hague and use the building there and then come back in the afternoon.”—Provider Y

3.3 Additional Observations

Corporate occupiers provide long-term stability and certainty

Corporate occupiers are attractive for co-working operators as they often stay for longer periods than independent workers or freelancers. As mentioned by the providers, corporate users are an interesting opportunity to reduce the risks related to volatile occupation rates as they provide certainty in the long-term.

“Well I think in co-working, the largest group of companies is small-medium sized companies, but the corporates are the group of companies that is still has the lowest percentage of use of co-working space. So, I think in the corporate sector there is a lot to win. Of course you have the group of freelancers, that is so large that they will always come, but the largest part of that group are people who can stay for six months or for 12 months and then they leave, because they have a fixed job or they go elsewhere, it’s just a very fluid group. While corporates, once they are in, they stay in; so, in that sense they’re very interesting for companies like us, they are very stable, they don’t change too much. So, it costs a lot of time to get them in, but once they are in, they will stay.”—Provider Y

As this suggests, there are interesting opportunities to cater to the corporate sector and possible partnerships that can be beneficial for both the corporation and the co-working operator.

“It demonstrates the partnership that you can have with you tenants in terms of offering them an option to grow; and it also reduces our risk. So for them is flexibility, and for us it’s risk reduction. It works very good for both.”—Provider Y

Larger corporations less interested in community aspect

The providers highlighted that corporations are interested in the flexibility and services offered by co-working spaces; however, often the larger organizations are less connected with the co-working community environment. As stated by the provider Z, larger corporations often have a strong corporate culture, and therefore, their need of connecting with other users might be less compelling than for smaller companies or freelancers. In this line, interviewee X stated:

“We don’t organize many events because we found out that in the end people are not really looking for it. Every month we organize a breakfast meeting, but what we see is that the bigger companies are not interested in them because they have their own internal problems and questions and they will find solutions together. So, our breakfast meeting is more for individual entrepreneurs who face the same challenges. So that we can brainstorm and they don’t have colleagues to talk about this, so here they find each other.”—Provider X

Services offered not leveraged by users

Co-working operators offer a variety of services focused on user experience and providing flexibility. However, often, the services offered are not leveraged by the organizations. Particularly, the providers W and X highlighted the case of the network of locations offered locally, in the case of provider X, and internationally, in the case of provider W; as explained by the interviewees, this is often a feature that is offered, but not exploited by the users.

“So actually, when you are a flex member then you can use the flex spots in other locations. If an employee from a bigger company wants to do that, then of course they are free to do so. It’s funny, but sometimes these things are available but then people are maybe not so aware, or they are just used to work at the same place, or maybe they are not allowed to go somewhere else, they need to come to the office.”—Provider X

Although the variety of locations offered is an attractive feature to most of the users, this might be an attribute mainly used by the mobile type of knowledge workers that use co-working space mainly as touchdown space.

“They definitely see it as a benefit, but people are actually quite location based. No matter what. Maybe the sales guys use it, so also that really depends on your profile. They really see it like wow we can work wherever we want, ‘Oh I will go to Florence’; but I think 10 percent in total of them end up going to Florence, it sounds very nice but they usually use the same location.”—Provider W

Exponential growth of some suppliers has compromised the image of co-working

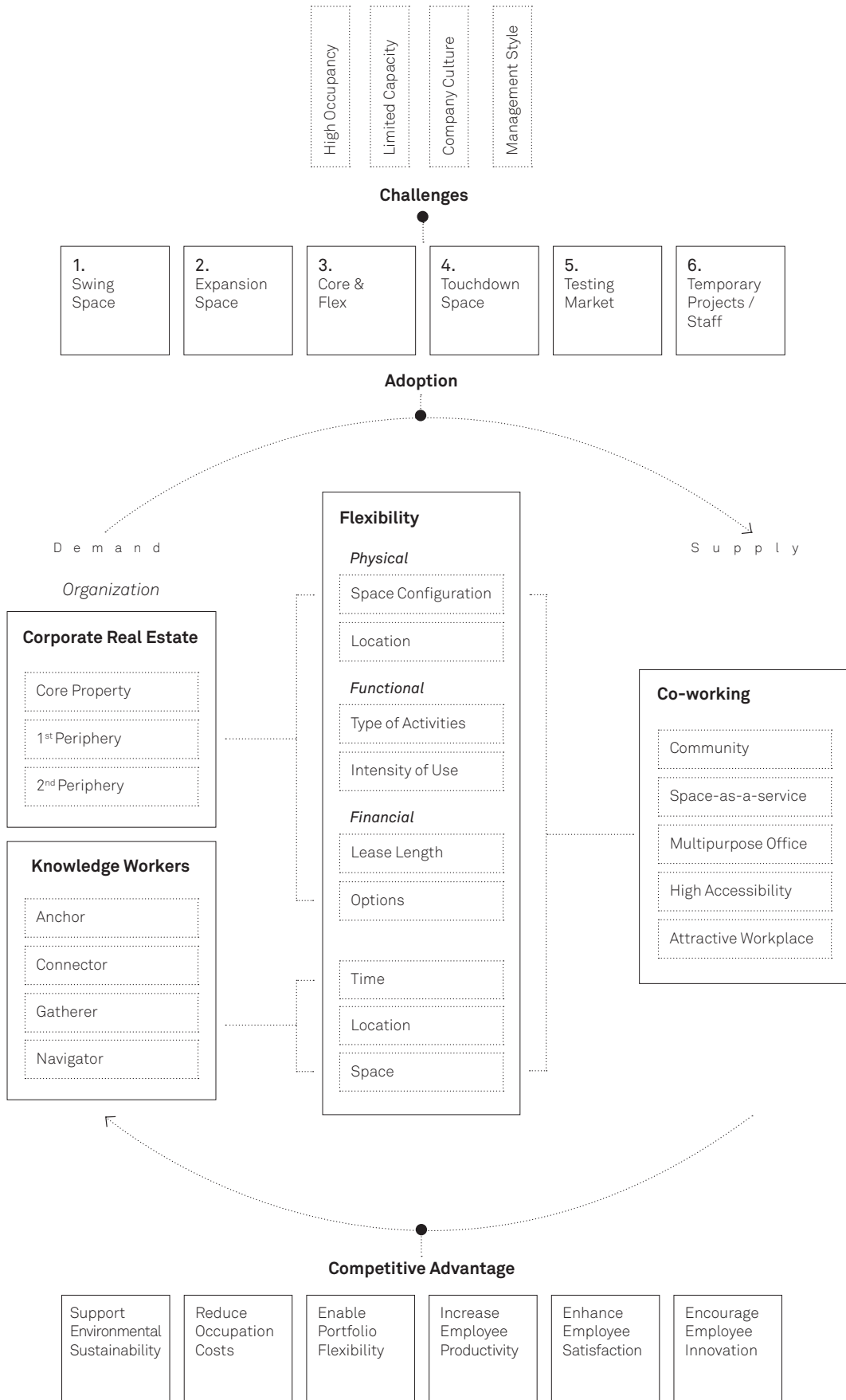
As mentioned by interviewees Y and Z, some co-working providers have grown exponentially by cutting corners and compromising the quality of the fit outs, space metrics and community environment. This has had an impact in the image of co-working, often leading to a misconception of the spaces and services provided.

3.4 Supply Study Conclusions

Based on the analysis from the interviews with the providers, the theoretical framework is further developed to illustrate the main findings from the supply study (Fig. 4.16). In line with the findings from theory (Chapter 2), co-working provides flexibility in different ways, first, physical flexibility in terms of giving the opportunity to increase or decrease the office footprint according to the business needs and providing a network of locations available for the users. Second, functional or spatial flexibility in relation to providing varied workplace settings that cater to different types of users. Third, financial flexibility, in relation to the low entry barriers and short-term agreements provided. Finally, although time flexibility was not particularly brought up during the interviews, most of the co-working spaces provide access 24/7 to its users, therefore meeting the time flexibility demands of the employees.

According to the supply perspective, co-working as an accommodation strategy for corporations faces four main challenges. First, the limited availability of operators with the capacity to meet the demands of corporate occupiers, particularly in relation to the physical space, security standards and service levels. Second, the high occupancy rates of co-working spaces that can limit the capacity to grow of corporate occupiers. Third, the management style of the organization—as highlighted from the demand side as well—managing by results and trusting the employees is fundamental for the success of co-working as an accommodation strategy. Finally, in line with the findings from the demand side, there are difficulties in relation to projecting the corporate identity of the organization and ensuring a strong cohesion between the company and its employees.

Additionally, in relation to the limited availability of operators, there is an apparent segmentation in the co-working market. Particularly, the large co-working operators provide services and infrastructure that aligns with the preferences and standards of the corporate occupiers; while the smaller (local) co-working operators provide work environments targeted to freelancers, satellite workers, entrepreneurs and SME's.



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Fig. 4.16

Theoretical framework adjusted to illustrate the findings from the supply study

4. Expert Study Findings

Based on the analysis from the interviews, this section presents the main findings from the expert perspective, and their relation with the supply and demand studies. This section is structured in four main parts: approaches to co-working, connections between competitive advantage, challenges associated, and additional observations.

4.1 Different approaches to adopting co-working as an accommodation strategy

In line with the findings from the demand study, the experts have acknowledged that co-working can play different roles in the accommodation strategy of the organization, as mentioned by expert 2, Kay Sargent, co-working provides a professional setting for satellite workers that use it as touchdown space; it can also support high risk areas where uncertainties are considerably high, as in the cases where the company uses co-working to start an operation or as expansion space. Additionally, co-working provides a temporary accommodation solution as in the cases of swing space, or for temporary projects and staff.

“As people are working remotely, or if you are hiring people, you want the best people regardless of where they live, but you may not have an office there, so, co-working allows them to go into a space that feels more like a professional setting, that they can get the kind of services, community and connection that they need, and we think that is actually one of the benefits. We say for corporations for satellite work, for emergency preparedness, for high risk areas, and for back of the house temporary solutions, those are really kind of the primary reasons why you would want co-working to be part of your portfolio.”—Expert 2 Kay Sargent

In the same line, expert 1, Wim Pullen, indicated that the approaches to co-working relate to the different drivers and perspectives of the organization and the end user. Meaning that, as seen in the cases, some organizations choose co-working because of the community environment, while others because of the low entry barriers to the space, amongst other factors. Co-working can be approached in different ways according to the requirements of the organization.

“[...] So, if you are having a certain purpose of testing something, or finding out ideas, or just finding out who are the guys coming there, it might be interesting. Or if you are looking for some serendipitous interaction, so let’s see what happens, that it might be interesting. And if you go there because your space at home doesn’t allow you to work from home, then you have to have special reason not to go to your own organizational environment your own offices; which could be traveling distance, location and schedules. It could be something like in-between meetings and I go there just as a touchdown area. So there are a lot of different perspectives from the end user that could be the reason to go there. Are they looking for community? Are they not looking for it? Are they looking for space? And are they just looking for a number of settings?”—Expert 1 Wim Pullen

4.2 Connections between co-working and competitive advantage

Enabling portfolio flexibility

Co-working contributes to the competitive advantage of the firm by enabling the flexibility of the real estate to quickly respond to the business needs. In alignment with the findings from the demand and supply studies, the experts highlighted that the low entry barriers of co-working facilitate the access to space and the short-term agreements enable the possibility to reduce the footprint when needed.

“The benefit for a corporation for having co-working space is that it allows to accommodate people in high risk areas, quickly, it allows you to quickly get up and running, easy access, quick access in areas where there is uncertainty or high risk. And it allows you to have a distributed workforce. Real estate is expensive and you have to start paying the second you sign a lease, so you want to get people in the space as quickly as possible.”—Expert 2 Kay Sargent

Enhancing employee satisfaction

In relation to employee satisfaction, two factors have been highlighted by the experts. First, working at a workplace outside of the corporate environment can be an attractive and refreshing experience for some employees, particularly considering the service offering and community environment provided by the co-working operators. In this line, Interviewee 2 stated:

“What we are finding is that a lot of employees like it initially, because for them it’s a different experience, it’s kind of an exciting experience and they feel like they are kind of being catered to [...] they like this choice and they like having the curated environment, they like having somebody that is curating the community and creating those kinds of shared experiences.”—Expert 2 Kay Sargent

Second, in line with the findings from the demand study, employee satisfaction relates to the variety of workplace settings offered at co-working spaces, that cater to the preferences of different types of users.

“For co-working spaces, or corporate spaces, we always say that it’s important to make sure that you are creating a variety of settings that people have to choose from and those should be able to accommodate different personality types and different work styles.”—Expert 2 Kay Sargent

As stated by the Expert 1, offering a variety of settings and enhancing employee satisfaction in relation to their workplace, has also a connection with the perceived productivity of the employees.

“There is this demand, evidence-based, that we communicated from the Center for People and Buildings in which we found out that to be productive as an individual, it requires privacy, concentration, diversity of settings, functionality of the space in the sense of ergonomics. So, if diversity of spaces is offered but the ergonomics are bad, then I don’t feel productive. So, diversity of spaces and settings is one of the things that we’ve been sending out as a message in the last ten years, because in what we have been researching, this is a constant set that keeps coming back in the data over the years. [...] Then the mix of open an enclosed, the mix of flex and fixed is important, truth is in the middle.”—Expert 1 Wim Pullen

Encouraging Innovation

In line with the demand study, the experts highlighted that the refreshing experience that co-working represents for certain employees, and the co-location with a variety of companies, startups, freelancers, etc., along with the possibility of interacting with other types of occupiers, offers interesting opportunities for innovation and bringing new ideas to the organization. The contribution to the competitive advantage of the firm in relation to innovation is especially strong when the co-working communities are specialized in specific sectors.

“[...] companies creating their own co-working spaces and incubators, if you think about it really probably started in Silicon Valley. If you think about all the big companies in Silicon Valley they have had incubators or accelerators for probably four or five years, and so they quickly realized that having those kinds of spaces could have a huge benefit.”—Expert 2 Kay Sargent

Enabling Networking Opportunities

The co-location of tenants and the community environment created at the co-working spaces enables networking opportunities at the individual and business level. As found in the demand study, co-working offers the possibility of connecting with other users, which can support employee satisfaction and can potentially result in business collaborations.

“Serendipitous means you never know what happens. So, if you have people who are open to interact with others. Who are kind of extrovert people, and not the introverts that go there sit down and do their things and go, then nothing happens, then it’s just space. But if they’re open to interaction it might be interesting, you can find out that there are other organizations looking to find partners for certain things. Sometimes the organization doing the exploitation of these co-working offices they offer a kind of matching between the demands of the end users, they have meetings, clubs or whatever, which are really focused on this type of things and find out just what happens. They try to do a lot of events so that the other communities know each other, there’s informal meetings, these things are resulting in some sort of connections.”—Expert 1 Wim Pullen

“One of the negative things about co-working for corporations is that you lose your corporate identity, that your people start to take on the culture and the identity of the group that they are in, not necessarily your corporate culture [...] So, in that sense what we always say is that co-working tends to be really successful for emerging companies, start-ups, but the problem is that once you get to about 10 to 15 people you really need to start formulating your own personality and your own culture. So, we’re finding that a lot of companies are really struggling when they’re in a shared space with other people, to create their own individual culture, and that’s really important to help a company be successful. So, we see a lot of those companies either wanting their own dedicated space, so that they can cultivate that culture, or leaving out. And then once you get to be even larger than that, it’s really hard to do in smaller spaces. So, if you’ve got a small group of people that you’re trying to manage, that’s great, otherwise not so much. So, it’s just more difficult to control.”—Expert 2 Kay Sargent

4.3 Challenges associated with co-working in the corporate sector

Corporate image and culture

In line with the findings from the supply and demand studies, the experts highlighted the difficulties related to projecting the culture and image of the organization when working at a co-working space. In face of this challenge, the organizations usually respond by taking a more traditional approach to co-working, and occupying the private spaces offered by the operators; this facilitates customization, branding and ensuring cohesion between the employees of the same company, especially for larger groups—more than 20 employees. As stated by interviewee 2:

Limited capacity of high quality co-working operators

As seen in the supply study, there is a variety of co-working providers in the market, however, as stated by the experts, there is a limited availability of co-working operators with the capacity to cater to the corporate occupiers, both in terms of physical space and service levels, according to the standards of the different organizations.

“Not a high percentage of co-working spaces offer those high-quality services, it’s really the bigger ones that do, not the smaller ones. Large companies tend to offer those things, and that tend to do it much better. [...] But you know a lot of co-working spaces are not necessarily built out to the same degree. Often, they don’t have the same type of ergonomic considerations that you might have in the office. I think a lot of research has to be done in ensuring that at least your employees would have the same, or a similar quality, that you would have at your own office.”—Expert 2 Kay Sargent

Security & Privacy

In line with the findings from the demand perspective, security and privacy is often seen as a major challenge by corporate occupiers. Particularly, considering the management of sensitive information of the organization, and the shared facilities with varied tenants. In response to this, as seen across the cases and as highlighted by the experts, corporations often choose to occupy the private areas offered by co-working operators to control the access to the space and safeguard the company's information.

"[...] Privacy can be an issue, that's why I mentioned the organizations saying we want our own space here, and maybe have the keys of these spaces and the owners are not wanted here in this space."—Expert 1 Wim Pullen

Cost of Space

The experts highlighted a challenge in relation to the cost of the space; as stated in the demand study, co-working is often considered an expensive solution considering the flexibility and the services offered by the providers. In this aspect, the experts stated that, considering a certain number of employees, the costs of the space can seem to be lower than in a traditional lease; however, co-working providers usually work at higher densities than the traditional corporate spaces, therefore, the organization would be occupying less footprint, at a similar or higher cost than other solutions in the market.

"The co-working community has done a really great job of making it seem like it's a cheaper solution, but at the end of the day it's more expensive if you're comparing apples to apples. Most people in corporate space are sitting in about one 122-200 sqf per person, and in co-working spaces they're bragging about getting people to 50-60 sqf per person. So yes, it's cheaper, but you're getting about half the space, so you can't compare that. So, if you were to give them the same amount of space, or the same amenities, it's actually more cost per square meter than in a traditional office space."—Expert 2 Kay Sargent

In this line, a total cost of ownership (TCO) approach is recommended to determine more precisely under which conditions co-working is a cost-effective solution in relation to the business needs and the services provided by the operator.

In this line, Expert 3, Jordy Kleemans, highlighted that when talking about occupation costs at co-working, considering the goal of the organization and the certainty of the business operations under dynamic economic conditions is fundamental to define the right strategy.

"A company knows their own business the best. So if they know that the business is a very volatile and there is a lot of dynamics in their business, then you have to choose partly for flexible office spaces. But if your business is still going strong and stable when the economy is declining, then it's much, much more beneficial to go for your own office. [...] It depends on the strategy of the company, and then there is also a link with culture. If you have companies that are focusing on declining costs and being very conservative with expenditures, then you see that a lot of companies say, 'okay, we don't want to be flexible'. On the other hand, as I mentioned, I'm driving back from one of our clients, and they use an office building and over 50% is empty. So, then you can say, that's a normal office building owned by the company and because of the vacancy it's very, very expensive for them. So, it depends 100% on the goal.

So, yes it is more expensive per year, but if you have five very good years, and then at that moment you hire extra flexible offices; and if five years later, your business is not doing that well, you can give that flexible office back, I think then it's cheaper to do it, to be flexible. And it is also a choice, and there is no truth."—Expert 3 Jordy Kleemans

Mismatch with employee profile

In line with the challenge faced by one of the organizations of the demand study (Case E), experts 1 and 2 highlighted the importance of ensuring that the type of co-working community matches the profile of the employees and the values of the company. As mentioned in both, demand and expert studies, ensuring this match is key to support the satisfaction of the employees.

“I can imagine if a co-working space wants to build its own community, then you ask yourself as an employer sending your people there: What type of community is that? What are the values there? And are they exposed to values that I don’t like? It’s the same as sending your kids to this school or that school, it influences you and maturity, and being critical at your own behavior and decisions is very important I would say. So that could be a potential conflict too.”—Expert 1 Wim Pullen

Quality of space

In line with the findings from the demand study, the experts have highlighted that ensuring the quality of the space is one of the challenges faced by the organizations, especially in relation to the high densities often found in co-working spaces, and the noise levels that can be present close to social areas. This point emphasizes the importance of ensuring that the co-working space meets the workplace standards of the organization to ensure the support and productivity of the employees.

“Distractions are going to come from movement, visual distractions, people walking by you, sound, etc. So, having a more remote location where you can work from, or a space that’s maybe off to the side, is one of the things that’s important and in a lot of co-working spaces there are social areas and then there’s the workspaces and the workspaces often tend to be incredibly densely packed and that’s not good for introverts. [...] I think a lot of times in the co-working spaces what they do is they get people smaller pods, or spaces that they can go into, but those tend to be very confined and most people don’t necessarily want to work in a very confined space for an extended period”—Expert 2 Kay Sargent

Management style and communication

The management style plays a significant challenge in adopting co-working as an accommodation strategy. As demand, supply and experts concur, managing by results instead of managing by presence is fundamental to ensure the success of co-working as an accommodation strategy for the organization. In this line, interviewee 2 stated:

“We always say that managers have to manage by performance, not presence. So, you need to assess the readiness of managers and the workforce, not everybody can work from home, not everybody can work in a co-working space, not everybody can work remotely. Some people need constant feedback and reassurance. And some managers need to be able to connect with their people in a different way. So, there are profilings that you can do, to determine your readiness to work remotely and a manager’s readiness to work remotely; and then once you’ve done that and understand where are the issues potentially, either you make the decision to do it or not, or you get additional training to support you and ensure that you’ll be more successful.”—Expert 2 Kay Sargent

In this same line, expert 1 highlighted the importance of communication between the managers and the employees, to support their work, understand their needs, and overcome any challenges that could be faced in relation to working at a co-working space.

“If a manager is developing as the coach, it goes from the control freak ‘did you do your tasks?’, ‘What did you do today?’ to ‘I’m going to help you to achieve your outcomes’. [...] A lot of the success of these type of environments deals with creating transparency about the pluses and minuses, and the trust that the bosses give to the employees and if they see something happening like it’s going the wrong way to say well we stop paying for these types of things. So, it’s this maturity of trust and autonomy and development, which requires good talks every now and then, not every day of course. But you know it’s depending on the quality of the relationship between the employer and employee, very much. And that is not a given thing, because it requires managers and managers to develop in the qualities of having this type of chats. The key is balancing trust and go, giving space it’s important.”—Expert 1 Wim Pullen

4.4 Additional Observations

Temporary employee satisfaction

Co-working can be an attractive workplace for many employees, especially because it creates a refreshing experience outside of the corporate environment. However, as mentioned by Expert 2, Kay Sargent, the attraction to this alternative often decreases over time, and therefore, the satisfaction of the employees can be temporary. Co-working, according to the interviewee, proves to be a stimulating environment for short periods of time or when used in combination with other strategies.

“What we’re finding is that a lot of employees like it initially, because for them it’s a different experience, it’s kind of an exciting experience and they feel like they’re kind of being catered to, but over time they tend to have a higher level of dissatisfaction. And part of that is because it’s no longer new and fresh, and the kind of the newness wears off a little bit. [...] So, for shorter term duration, about less than 3 months, and for shorter engagements, and if you’re going there occasionally, it can provide you a stimulating environment, a connection to a group, a curated experience, and a sense of community. For extended periods of time, it can have an adverse effect, it’s not as effective. That’s what we’ve been finding.”—Expert 2 Kay Sargent

Services provided might be limited to uptight economy

There is a lot of uncertainty regarding the performance of co-working in an economic downturn. In relation to this, Expert 1—Wim Pullen—highlighted that the high-quality services often associated with co-working can be related to the economic cycle, meaning that under less favorable conditions, the services might be cut back. This aspect is relevant to consider, especially when doing a cost-benefit analysis of accommodation strategies.

“[...] is it just a moment in an uptight economy? when there is quite an economic growth which was the case in the first Internet bubble, there was about all kinds of services and all kind of funny stuff. But as soon as the money went down, those are the first things that are cut, services away, let’s go back to basics, be productive, earn our money. So, it depends very much on whether we are an economic uptight or we’re going down. So, it depends very much on the economic tide the demand for services etc. Actually, what I believe is if it is going up and down in the economy, we are somewhere here [up] and some people are saying with the virus now, we will go down, and I think we will end up with a lot less services and a lot less co-working spaces, formal co-working spaces, and people who will go to hotel lobbies or restaurants where they pay for their coffee and not pay for the space.”—Expert 1 Wim Pullen

National culture plays a role in the adoption of co-working

Co-working is an interesting accommodation alternative for different companies. However, strategies that might prove successful in certain contexts, might fail under similar circumstances in other countries. As mentioned by Experts 1 and 3, it is important to consider that the national culture plays an important role in the applicability of the different strategies across varied contexts. This highlights the importance of evaluating the different alternatives in relation to the preferences of the employees in the different contexts, to determine the right strategy for the organization.

“Culture plays an important role. For instance, in France, or French companies, have a different view on these co-working spaces, they want them dedicated for themselves, people might be less keen on doing this. International comparison doesn’t mean anything if you don’t consider culture. And it also comes the question of who in the company is saying let’s do this. Let’s try co-working. Is it then the top level? And here in the Netherlands, people are more adventurous, they say yeah let’s give it a trial, if my boss doesn’t know where I am, I’m just going to sit there for an opportunity to find out what it is. So, national culture is very important to explain also variety across cases.”—Expert 1 Wim Pullen

As highlighted by Expert 3, is relevant to consider that the differences of context might even apply at a regional level within the countries.

“So the cultural differences is not only between companies or countries, but also within the Netherlands, so you see that different parts have different rules to adapt this innovations.”—Expert 3 Jordy Kleemans

Company’s strategic goals play a role in the appeal of co-working strategies

The appeal of implementing a co-working strategy as part of the property portfolio is also related to the strategic goals and culture of the organization. Particularly, the flexibility provided and the opportunities offered are not necessarily relevant for all types of corporations; as mentioned by Expert 3, certain organizations are more attracted to the

attributes of co-working—especially in relation to flexibility—while others are more averse to implementing this type of solutions, and might prefer traditional corporate environments.

“One thing to add is that in my opinion, it’s also related to the culture of the company, because you see for instance some companies had only owned offices, and now they are trying to do this sell-and-lease-back transactions, and wanting to be more flexible. So it also depends on strategic decisions, because the culture at some companies is very risk averse. But they are taking a big step, to say ‘OK, we want to be more flexible, so, this will be our future, so we make the choice for more flexible offices.’ So yes, there is a link with the maturity of companies for sure, and in addition, cultural and strategic decisions are also very important.”—Expert 3 Jordy Kleemans

Combined solution is key to support satellite workers

As stated by Expert 2, in the cases where co-working is adopted as touchdown space for satellite workers, the recommendation is to have a strong structure to ensure that the employees spend certain time at the main office location and combine it with the touchdown space at co-working. Ensuring the flexibility needed by these type of workers, while strengthening the cohesion and ties with the organization, is fundamental to support the productivity and satisfaction of the employees.

“So, what we always say is that people that are the happiest are the ones that are given some choice and some options. So, people that work from home one to two days a week tend to be the happiest, if you work from home all the time or on a co-working space all the time you tend not to be as happy, because you feel more disconnected. So, we believe that it’s good to allow people some flexibility up to one or two days a week; and if you do more than that then it’s really important that you have some kind of structure so that the team comes together. Because if everybody has the flexibility to work wherever they want whenever they want, what happens is the team never comes together and those casual collisions start to disappear, and then you have a cultural erosion.”—Expert 2 Kay Sargent

Along the same lines, Expert 3, highlighted the importance of a core location, representative of the identity and values of the organization, to bring the company together. This is particularly relevant in complementary space solutions such as when using co-working as Touchdown Space for mobile workers or in the Core & Flex strategy. Accordingly,

“In my opinion, every company has advantages of working in a core area. So that’s not a real disadvantage of working in a flexible office, but bigger corporates need, in my opinion, one spot to come together. Where they can brand, give their own brands to their office, and that’s less possible in flexible offices.”—Expert 3, Jordy Kleemans

Larger corporations less attached to co-working community

In line with the findings from the supply study, the experts indicated that the larger corporations often have a strong social cohesion within the organization, therefore, these companies are less dependent on the co-working communities and are more inclined to internally strengthening their own corporate culture.

“What I always think is that social cohesion in a bigger organization it’s just there. And here you have to create it, and if you have to create your own production, your own marketing, your own acquisition, and sales, or whatever, then it’s another thing that comes on my to-do list. So, if I have to put a lot of effort in interaction or collaboration, but what will it bring to me?”—Expert 1 Wim Pullen

Co-working strategy conditioned by different corporate actors

The success of different accommodation strategies is often associated as the responsibility of the corporate real estate manager, however, as stated by the experts, other actors in the organization play an important role. Therefore, there is a need for aligning fundamental actors, such as Human Resources and managers, with the accommodation strategy to ensure the support and productivity of the employees according to the business needs.

“[...] you have to find out where and what the role of the manager is in creating the flexible co-working space as a resource for the knowledge worker; it is limited and conditioned by the manager; not only provided by the corporate real estate person. So, these two functions are very much into my type of reasoning as conditioner for the success of the knowledge worker and the success the use of co-working spaces. This function might be influenced by the top management, but it’s not the corporate real estate management that makes it a success, it’s a combination of the actors.”—Expert 1 Wim Pullen

Corporate environments adopting features of co-working

Over the last years, the corporate environments have started to adopt features of the co-working spaces, especially with regard to creating attractive work environments with high-quality services, offering multipurpose settings that cater to different users, and enhancing a sense of community. As explained by Expert 2, this highlights the relevance of the service offering in the corporate environment, and indicates a closing gap between co-working and the corporate environment, in terms of service offerings and workplace design.

“The gap between what’s being offered and co-working spaces and corporations is going to close; the corporations are starting to up their game as far as services and creating better employee experiences. [...] A lot of our corporate clients are asking us to design a space that looks more like co-working, they’re asking this about creating that curated experience, that environment where people feel more tailored, where they have choices, they have options, just a little bit less corporate-looking, a little bit more like a ‘garagification’ of space and that they have the ability to get the services that they need when they need it. And also a more focus on collaboration areas and different types of settings. We’re creating spaces that are less corporate, more kind of like high touch spaces, we’re incorporating different elements like someone who is there to really create a good sense of community and who is there to really focus on the individual people, to give them the service and the sense that they’re being serviced, that often has been lacking quite frankly in the corporate world.”—Expert 2 Kay Sargent

4.5 Expert Study Conclusions

Based on the analysis from the interviews with the experts, the theoretical framework is further developed to illustrate the main findings (Fig. 4.17). According to the experts, and in line with the findings from the demand study, co-working can play different roles in the accommodation strategy of the organization. Whether it is as Swing Space, Expansion Space, Core & Flex, Touchdown Space, Testing Market, or for Temporary Projects / Staff, co-working provides an accommodation alternative for companies in different circumstances—looking for a temporary space, a business network, a quick solution, amongst others. Accordingly, co-working can be considered an accommodation strategy that fits into the core, or 1st and 2nd periphery of the property portfolio; and depending on the strategy, co-working can accommodate different profiles of knowledge workers, from the mobile gatherer and navigator types, to the more location based, anchor and connector types.

In terms of competitive advantage, according to the experts' view, co-working mainly contributes in five different ways. First, enabling the flexibility of the property portfolio to quickly respond to the business needs, this particularly refers to the low entry barriers to the space and short contractual agreements. Second, enhancing employee satisfaction in relation to the variety of workplace settings offered, the services and the community environment that results in an attractive and refreshing experience for the employees. Third, encouraging innovation; and fourth, enabling networking opportunities. The former and the latter mainly refer to the co-location of a variety of tenants, and the community environment that opens the possibility of connecting users and creating potential business collaborations. Fifth, supporting environmental sustainability through resource sharing and higher space densities.

According to the expert perspective, seven challenges are associated with adopting co-working as an accommodation strategy in the corporate sector, namely: difficulties in relation to reflecting the corporate image and culture, limited capacity of high-quality co-working operators that can meet the standards of the corporate occupiers, vulnerabilities that can affect security and privacy of the company, high costs associated with the use of the space and services, mismatch between the employees and the co-working community, quality of the space which includes noise levels and space metrics, and the management style of the organization referring to managing by results instead of presence.

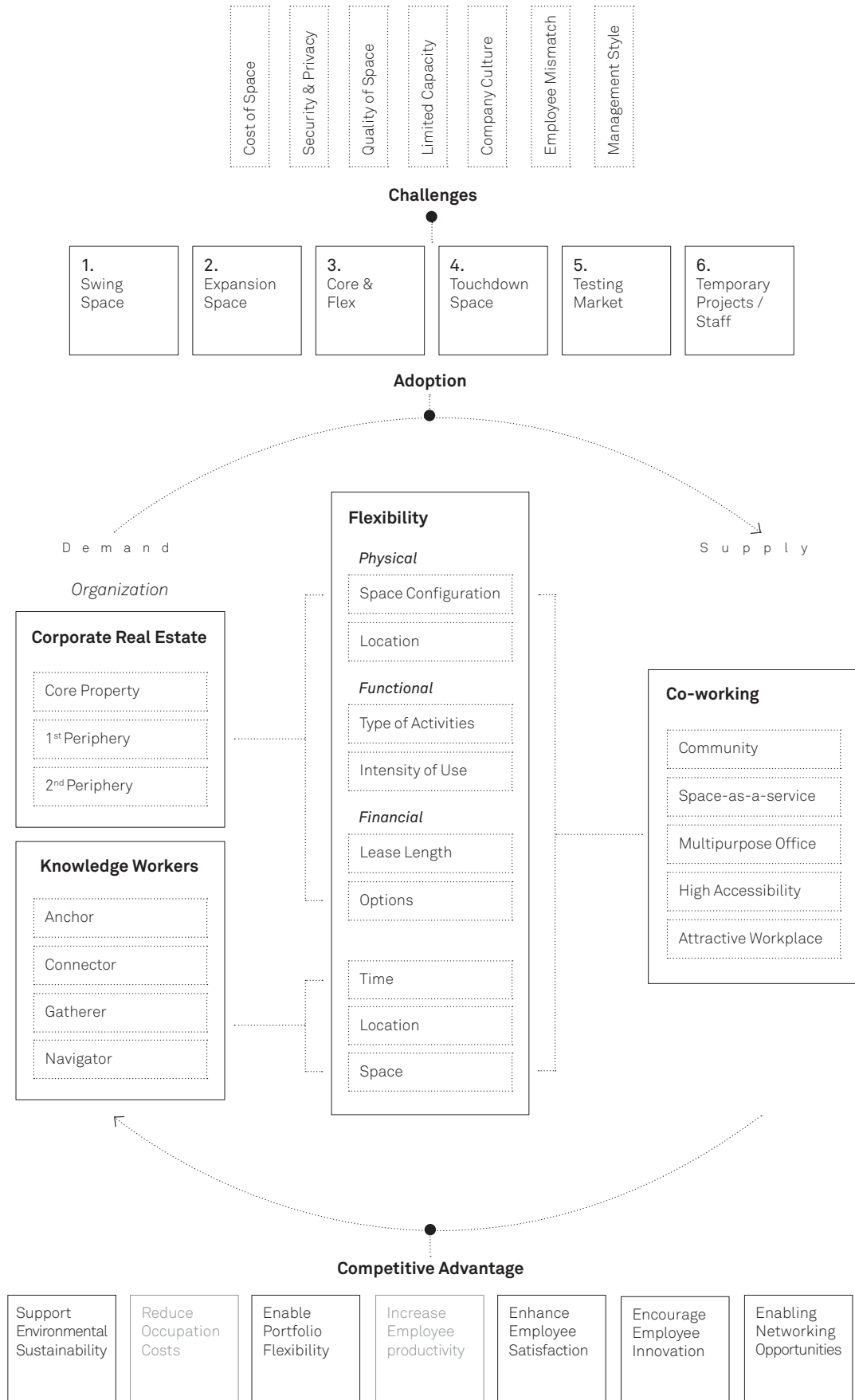


Fig. 4.17

Theoretical framework adjusted to illustrate the findings from the expert study

5. Empirical Research Summary

Based on the empirical research, figure 4.18 illustrates the main findings of the demand, supply and expert studies. The graphic representation shows the different perspectives around the main concepts of the study and provides evidence that allows supporting the conclusions of the study.

Accordingly, as seen in the graph, the identification of the different co-working strategies is an interesting finding that emerged from the demand study; although these concepts were not explicitly mentioned by the suppliers, the experts did acknowledge the notion of a variety of approaches to co-working that aligned with the findings from the demand study.

Similarly, in relation to the structure of the property portfolio, demand, suppliers and experts strongly supported the idea that co-working not only represents a temporary space solution of the second periphery layer of the property portfolio, but it is actually implemented as a complementary space solution or as the main office location depending on the strategy pursued by the organization.

In relation to the sources of competitive advantage found in co-working, demand, supply and experts coincided in five different aspects. However, these findings are mainly based on the perceived contributions of co-working to the performance of the organizations. Even though this provides a significant insight, a further quantitative study would be necessary to determine with more precision the extent of the contributions of co-working to the competitive advantage of the firm, and the sustainability of those advantages over time.

With respect to the challenges identified in the empirical research it is important to notice that the demand study evidenced different challenges that relate to more technical aspects of the co-working space, for instance in terms of the quality of the space, security and privacy or even the quality of the internet service, based on the experiences of the organization in implementing a co-working strategy. However, these aspects were not highlighted in the supply study, instead, other challenges that referred to the capacity of the supply, for instance in terms of the limited availability of operators with the infrastructure to cater to the corporate occupiers, and the high occupancy rates of some co-working locations, emerged from the study. Within the multitude of aspects mentioned by the supply and demand studies, the expert perspective provides an overview of the most evident challenges of implementing a co-working strategy, as seen in the graph, these include the costs of the space, the difficulty of reflecting the image and culture of the organization, the importance of the management style, amongst others.

Finally, the findings from the three studies strongly acknowledge the different sources of flexibility in co-working, and support the idea that flexibility is a concept that involves multiple definitions that can converge in the workplace.

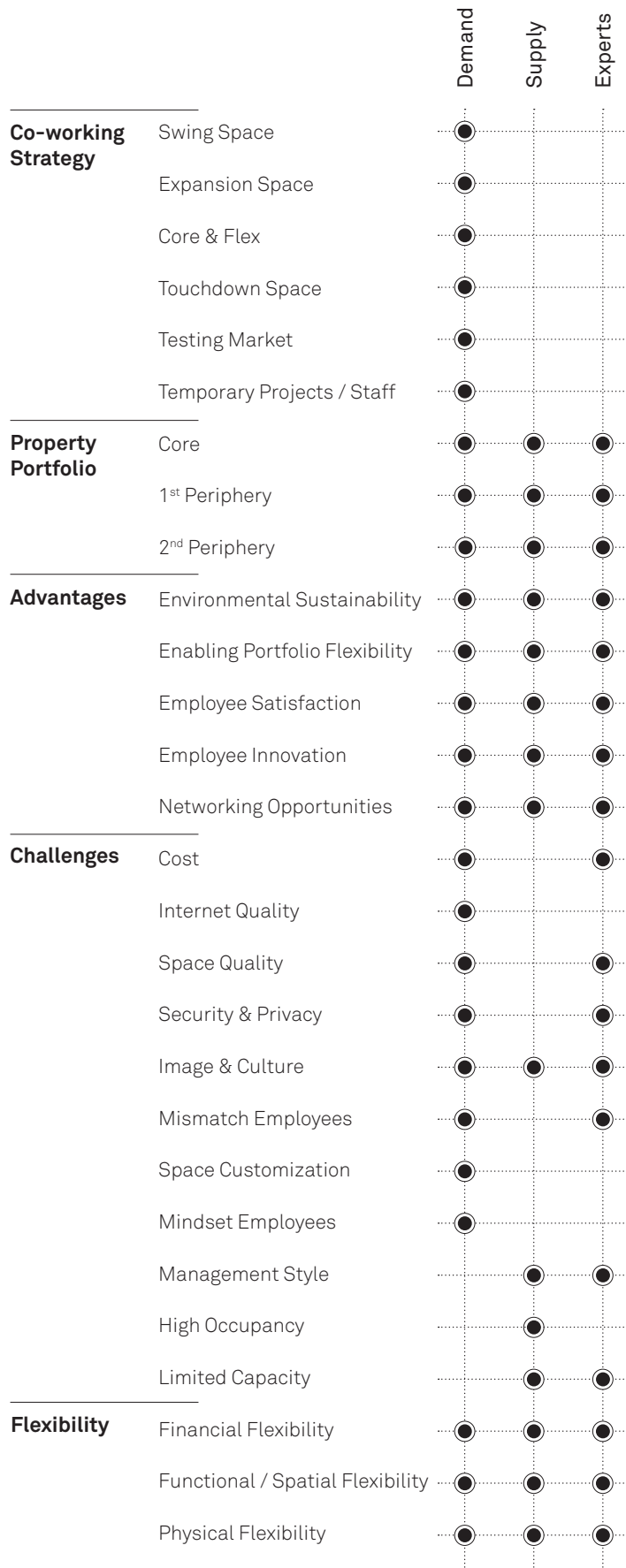


Fig. 4.18
Overview of demand, supply and expert studies; own figure

05

Findings & Recommendations

1. Findings

Based on the results from the empirical research, the theoretical framework presented in Chapter 2 (Fig. 2.18) has been adjusted and complemented to reflect the main findings of the study (Fig. 5.01). Accordingly, the findings are presented in relation to the main research topics and compared with the theory.

Co-working and the different sources of flexibility

Figure 5.01 (p.119) illustrates how co-working provides flexibility in different ways, according to the demands of the corporate real estate portfolio and the knowledge workers. As a start, co-working meets the flexibility demands of the corporate real estate portfolio of the organization in three main ways; first, in relation to the physical flexibility two factors are relevant: the space configuration and the building location. Regarding the former—in contrast to the assumptions based on the theory—co-working offers the possibility of quickly expanding or decreasing the office footprint according to the business needs; as seen across the empirical research, this aligns with what Blakstad (2001) referred to as the demand for “extendibility” of the building to adjust to changes in use, ownership or environment. Regarding the latter, as seen in the empirical supply study, some co-working providers offer a network of locations available to the users, which responds to the demands of the organization (Gibson & Lizzieri, 1999a; Halvitigala, et al, 2019). However, demand and supply sides coincide that location flexibility is an attribute that is mainly required for mobile workers when using co-working as a touchdown space, as stated by one of the supply interviewees: *“They definitely see it as a benefit, but people are actually quite location based. No matter what. Maybe the sales guys use it, so also that really depends on your profile”* (Interviewee W).

Second, functional flexibility mainly relates to the multipurpose attribute of co-working. In this line, demand, supply, and experts coincide that co-working usually provides a variety of workplace settings that cater to the preferences of the different users, this aligns with the prepositions identified in theory in relation to the need for a variety of areas—from individual spaces, concentration areas, to teamwork rooms and communal spaces—to support different work tasks of the employees (Blakstad, 2001; Gibson & Lizzieri, 1999b). As stated by one of the interviewees: *“We try to offer a variety of space vibes, where people can do a concentrated work, or having phone call in separate phone booths, and things like that. So, we really like to have some range [...] just to make sure that you can find the best place for the task at hand. So, I think that’s really helpful, and I think that’s also what I see back in most co-working spaces, that they offer a variety, which is really helpful and really good”* (Interviewee D). Additionally, co-working provides functional flexibility in relation to the intensity of use of space, as higher densities and shared communal areas reduce the footprint of the organization, and improve the efficiency of spaces that are used sporadically such as meeting and conference rooms.

Third, in terms of financial flexibility, two factors are relevant: lease length, and options. Regarding the lease length, it has been widely acknowledged by the demand, supply and expert perspectives, that the short-term agreements, low entry barriers and speed-to-market offered are some of the main reasons why companies choose to locate at co-working spaces, as reflected in the demand study, “[...] you could sign a short-term contract and they’re usually readily available at short notice as they are fitted out the agreement is quick to conclude, they’re problem solving in that way” (Interviewee C). In line with the theoretical research (Bouncken & Reuschl, 2016; Halvitigala, et al., 2019; Van Meel, 2015), co-working presents an alternative to traditional leasing models that facilitates the responsiveness of the portfolio to match the assets with the business requirements in face of changing circumstances. Regarding the availability of options, as seen in the demand and supply studies, co-working is an alternative to diversify the property portfolio and control the risks associated with real estate commitments.

From the perspective of the knowledge workers, co-working responds to the flexibility demands in three main ways. First, in line with the findings from theory (Brown, 2017; Kojo & Nenonen, 2016; Sankari, 2019) and according to the demand, supply and expert views, co-working meets the space flexibility demand—which overlaps with the functional flexibility demand of the corporate real estate portfolio—by providing a variety of settings that accommodate for the different user preferences. Second, as mentioned before in the relation to the physical flexibility demands, according to the supply study, co-working provides access to multiple locations available at the local and international level, however, these are often only used by the mobile type of knowledge workers, such as the gatherer and navigator profiles. Third, as seen in the supply studies and in line with theory (Sankari, 2019; Spreitzer et al., 2015), the high accessibility of co-working in relation to the opening hours responds to the time flexibility demands of the knowledge workers. However, is important to highlight that the autonomy and control of the employees over their working schedule is also conditioned by the employer; therefore, even though the co-working spaces are often open 24/7, the flexibility provided is mainly leveraged by the mobile type of workers that use co-working as touchdown space and are less attached to traditional working schedules.

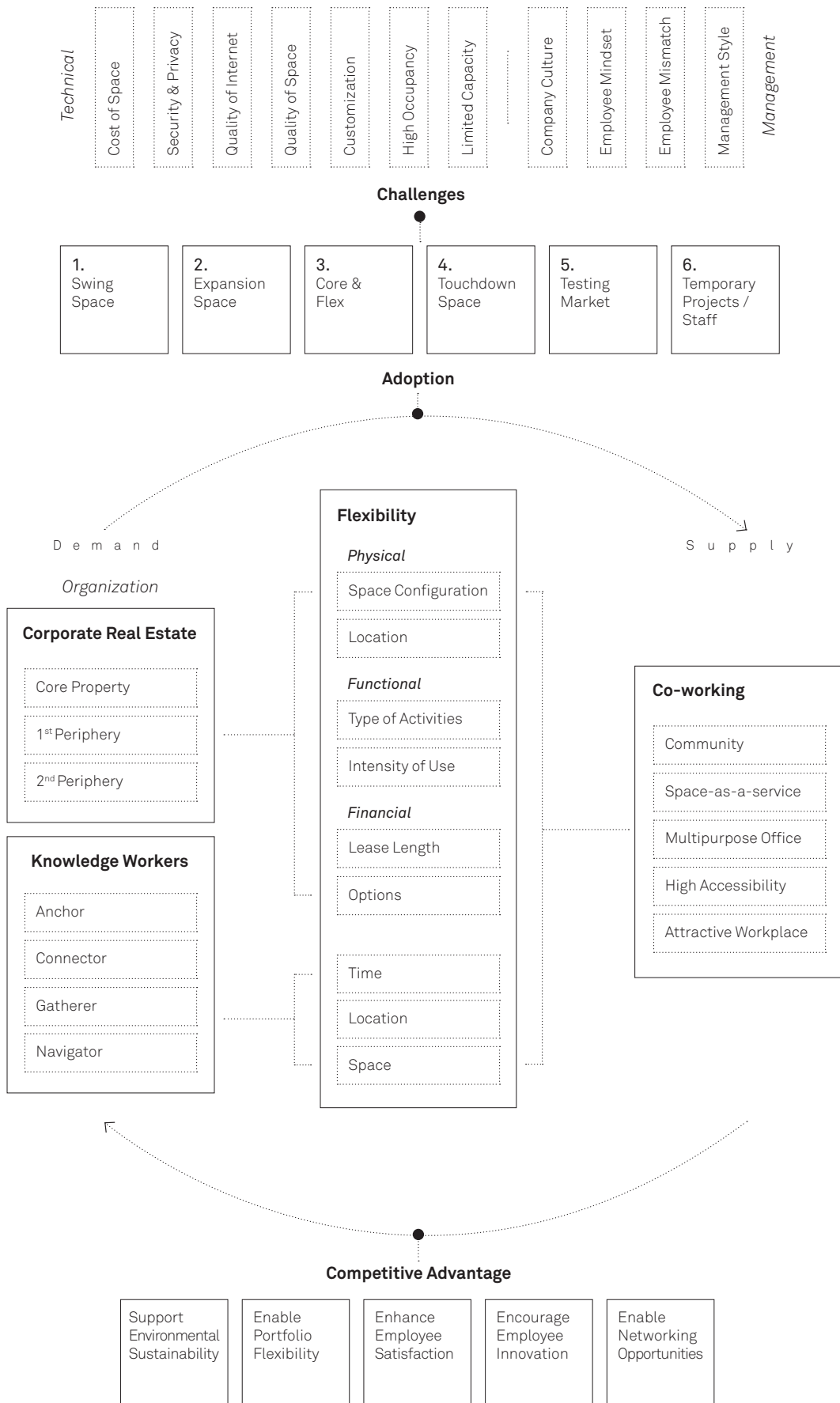


Fig. 5.01

Framework illustrating co-working as a corporate real estate strategy; own figure

Sources of competitive advantage in co-working

According to the findings from the study, co-working possesses certain attributes that have the potential to contribute to the competitive advantage of the organization (Fig. 5.01). In this line, five sources of competitive advantage have been identified in co-working.

First, enabling flexibility of the real estate portfolio, as demand and experts agree, the low entry barriers and short-term commitments in co-working facilitate the responsiveness of the accommodation strategy in relation to the business needs; this aligns with the findings from theory that highlighted the versatility of co-working to quickly expand or contract the office footprint according to the requirements of the organization (Halvitigala et al., 2019).

Second, enhancing employee wellbeing and satisfaction, in line with the findings from theory (Gillen & Cheshire, 2015; Kojo & Nenonen, 2016), the attractive facilities, variety of settings that cater to the preferences of different users, and the possibilities of social interaction offered at the co-working community are the main factors that, according to the demand study and experts' opinion, enhance employee satisfaction.

Third, encouraging innovation, in line with the findings from theory that highlighted that the relationships and interactions between people from heterogeneous backgrounds in co-working are highly relevant for value creation and innovation in the knowledge economy (Capdevila 2013, 2014; Jakonen et al., 2017), one of the interviewees of the demand study stated “[...] we expect also this kind of social, collaborative area where people can collaborate, not just within the company, but with the other occupiers” (Interviewee C). This reflects the relevance of interactions outside of the corporate environment to facilitate the exchange of knowledge.

Fourth, enabling networking opportunities, this mainly relates to the community attribute of co-working that, as stated in theory, has the potential of strengthening professional and social ties that can be relevant at the personal or professional level (Jakonen et al., 2017; Orel, 2019). Although the concept of enabling networking opportunities was not present in the theories of sources of competitive advantage in corporate real estate (Chapter 2, Section 5.2), the concept emerged throughout the demand and expert views and has a strong relation with encouraging innovation. As highlighted by one of the interviewees of the demand study, “Co-working spaces can really help small service businesses establish themselves to be able to operate and service clients, it is great for networking and being part of a community of like-minded individuals and teams where you can connect and bounce ideas off one another” (Interviewee B). In line with this statement, and as found in the demand study, enabling networking opportunities is an aspect that is particularly relevant for companies in the early stages of the organization's lifecycle—such as in the startup and growth phases.

Fifth, supporting environmental sustainability; in line with the findings from theory (Roth & Mirchandani, 2016; Yu et al., 2019), this aspect relates to two factors that contribute to lowering the carbon footprint; on one hand, the high accessibility of co-working in relation to the location and proximity to transportation hubs; and on the other hand, the high space densities and resource sharing often found at co-working. As stated by one of the interviewees of the supply study, “we often rent less space, roughly 25-30 percent less space than people usually would need. Why would you do that? Because we say you can use a smaller office and then you have all these other facilities that you can use throughout the day, that you normally would have in your own office, like meeting rooms, like a reception, like pantry. So all these things you can share with other tenants, and that’s why you can use less office space” (Interviewee Y).

In contrast with the preposition of the previous theoretical framework (Fig. 2.18), there is no strong evidence found in the empirical study that supports the direct contribution of co-working to increasing employee productivity and reducing occupation costs.

In line with the theoretical findings (Chapter 2), the contribution of co-working to the competitive advantage of the organization lies in the combination of tangible and intangible aspects and the extent to which the advantages can be sustained over time.

Accordingly, the tangible aspects, which involve the physical space, relate to supporting environmental sustainability and enabling the flexibility of the portfolio to respond to business changes; these sources mainly provide temporary advantages which can be easily replicated by other firms implementing the same co-working strategy (Fig. 5.02). While the intangible aspects refer to supporting the workers in the knowledge creation and transfer processes and involve enhancing employee satisfaction, and innovation and enabling networking opportunities; the tacit nature of these sources provide extended advantages that are not easily accrued by the duplication efforts of other firms implementing the same strategy. This highlights the increasing importance of focusing on innovation as a continuous source of competitive advantage that allows outperforming competitors by rendering their positions obsolete.

Additionally, it is important to highlight that as found in theory (Barney, 1991), the first-movers—first wave of companies implementing co-working in the property portfolio—are more likely to leverage the resource advantages associated with co-working. However, as these strategies are adopted at a wider scale, and co-working becomes commonplace in the corporate sector, the contribution to the competitive advantage of the firms is likely to deteriorate over time, especially considering the temporary advantages offered by the tangible sources.

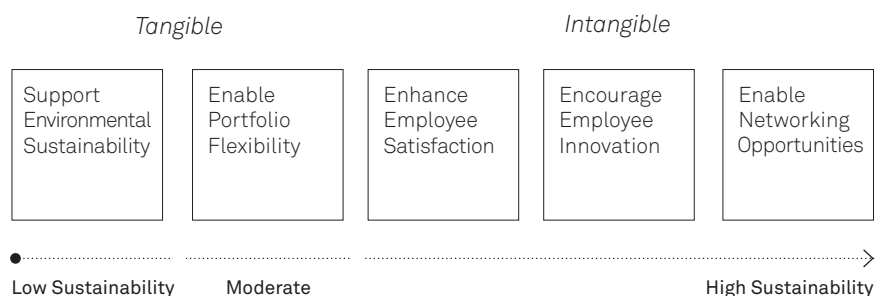


Fig. 5.02

Sustained competitive advantage in co-working; own figure

Challenges associated with co-working as a corporate accommodation strategy

The challenges associated with adopting co-working as an accommodation strategy emerged from the empirical research. These mainly refer to implementation barriers that can be classified in two categories, technical challenges which relate mainly to the co-working providers (supply side); and management challenges which mainly relate to the organization (demand side) (Fig. 5.01).

Technical challenges

In terms of the technical challenges, seven aspects have emerged. First, as agreed by the demand and expert perspectives, the costs of the space are considerably high as the flexibility and services offered come at a premium. As stated by one interviewee of the demand study *"If in the end you compare apples with apples it is definitely more expensive. And if you take the non-financial ones that are still in there, because you have to understand that flexibility also has a price, if you did not have it you would be investing in a space for five years and without even knowing what will happen. Obviously, there is a cost issue that is not seen there, that you cannot easily estimate, but you know that it exists, and that it is a significant cost that you have to bear if you did not make the decision to use co-working"* (Interviewee A). Accordingly, under certain circumstances co-working can be a cost-effective solution, particularly in the stages of the organizations' lifecycle or for the parts of the portfolio where uncertainty is high and flexibility is fundamental. Therefore, the suggestion is to take a total cost of ownership (TCO) approach in the decision-making process, to estimate, according to the particular business needs and services offered by the operator, the optimal conditions under which co-working is a cost-effective solution for the business.

Second, security and privacy is an issue that has been exposed by both demand and experts, particularly in relation to the vulnerability of handling sensitive information in multi-tenant spaces. This issue highlights the importance of ensuring that the co-working operator provides a safe and secure environment that supports the business operation according to the needs of the organization. As seen in the demand study and as noted by the experts, companies tackle this challenge by approaching co-working in a traditional way, by occupying the private spaces offered by the co-working operators. This is a form to control the access to the space and safeguard the privacy and security of the information of the company and the employees.

The third challenge relates to the quality of the Internet service. As seen through the demand study, organizations often struggle with the connectivity, stability and bandwidth of the Internet connection; as mentioned by the interviewees this is a crucial factor that can affect the business operation. Often, the challenge also lies in the fact that, as co-working operators usually have agreements with particular Internet providers, the control of the organization over the particular service is limited.

Fourth, as identified in the demand and expert studies, the companies often experience difficulties in relation to ensuring the quality of the space according to the standard levels of the organization in terms of space metrics, noise levels and fit-out quality. In relation to the space metrics, co-working spaces are commonly associated with high densities that are often above the optimal workplace standards of certain organizations. In terms of noise levels, the open spaces and collaboration areas are often associated with environmental noises that affect employees' concentration and satisfaction. In relation to the quality of the fit-out, for some organizations the finishes, furniture and acoustics of the spaces are not up to their quality standards. In line with the response of the organization towards other challenges, the companies tackle this issue by taking up private offices and customizing the spaces according to the organizations' workplace standards.

Fifth, as mentioned before, the demand and expert studies revealed that organizations have a preference for space customization, however, they often experience difficulties in the process with the providers to fit out the private spaces according to the requirements of the company. Additionally, in certain occasions, these requirements can be seen as conflicting with the aesthetic principles of the co-working space.

Sixth, the supply study revealed that co-working operators often have high occupancy rates in the most attractive locations. Although co-working operators usually strive for 90-95% occupancy rates, with the increasing popularity of co-working, it is not unusual to find locations with 100% occupancy and waiting lists. This is particularly challenging for organizations in the early stages—startup and growth phases—that are planning to implement co-working in the property portfolio, as the possibilities of scaling up in that space might be limited. As discussed with the providers, this issue is commonly tackled by offering space in other branches, with lower occupancy rates, within the network of locations to facilitate the growth of the organizations.

Seventh, although there is a variety of co-working concepts available locally and internationally, as highlighted across the empirical study—demand, supply and expert components—there is a limited availability of co-working operators with the capacity and infrastructure to meet the demands of the corporate occupiers. This particularly relates to the availability of physical space, security measures, and service levels. As seen in the supply study, often the larger co-working operators are more equipped to meet the requirements of the larger corporate occupiers—through stronger security measures, as private networks and hardware devices, a wider range of spaces and services available to the users, and accessibility to prime locations.

Management Challenges

In terms of management challenges, four aspects have emerged. First, difficulties in relation to reflecting the company's culture and image in the space and ensuring a strong cohesion between the company and its employees. As demand, supply and experts agree, the organizations can face issues in terms of projecting the company's identity when locating in spaces external to the corporate environment. As seen in the empirical research, the companies usually respond to this by branding and customizing the private offices offered by co-working operators, and strengthening the communication with the employees.

Second, changing the mindset of some employees in relation to working in co-working spaces and sharing common areas. As evidenced in the demand study, some employees are reluctant to working in premises outside of the traditional corporate environment and sharing facilities with other types of users. This challenge also relates to the importance of preparing the employees for handling sensitive information in multi-tenant spaces and public areas.

Third, some organizations experience a challenge in relation to a mismatch between their employees and the members of the co-working community. As seen in the demand study, this mainly relates to the differences in age, type of activities, and values between the co-working users and the employees. In that sense, ensuring that the co-working community is aligned with the culture and values of the organization is fundamental to support the satisfaction of the employees.

Fourth, demand, supply and experts, agree that the management style is often a significant obstacle in adopting co-working as an accommodation strategy; this particularly refers to a management style based on control and expecting the employees to be present at a specific time at the office. In this line, experts and suppliers suggest that managing by results, trusting the employees and encouraging their autonomy to carry out their tasks is a more suitable approach to successfully adopt co-working.

Six strategies to adopt co-working in the property portfolio

According to the findings that emerged from the demand study, there are six different strategies that organizations can pursue to adopt co-working as part of the corporate accommodation strategy—as Swing Space, Expansion Space, Core & Flex, Touchdown Space, Testing Market, or Temporary Projects / Staff. Accordingly, organizations in different stages of maturity can implement different co-working strategies according to the requirements of the business (Fig. 5.03). As suggested in the demand and expert studies, and in line with theory (Termaat et al., 2014), the aim of corporate real estate is to support the core business activities of the organization; therefore, the co-working strategy pursued by the organization must be aligned with the company’s strategic goals and the corporate functions—what Jylhä (2019) referred in theory as the vertical and horizontal alignment in corporate real estate.

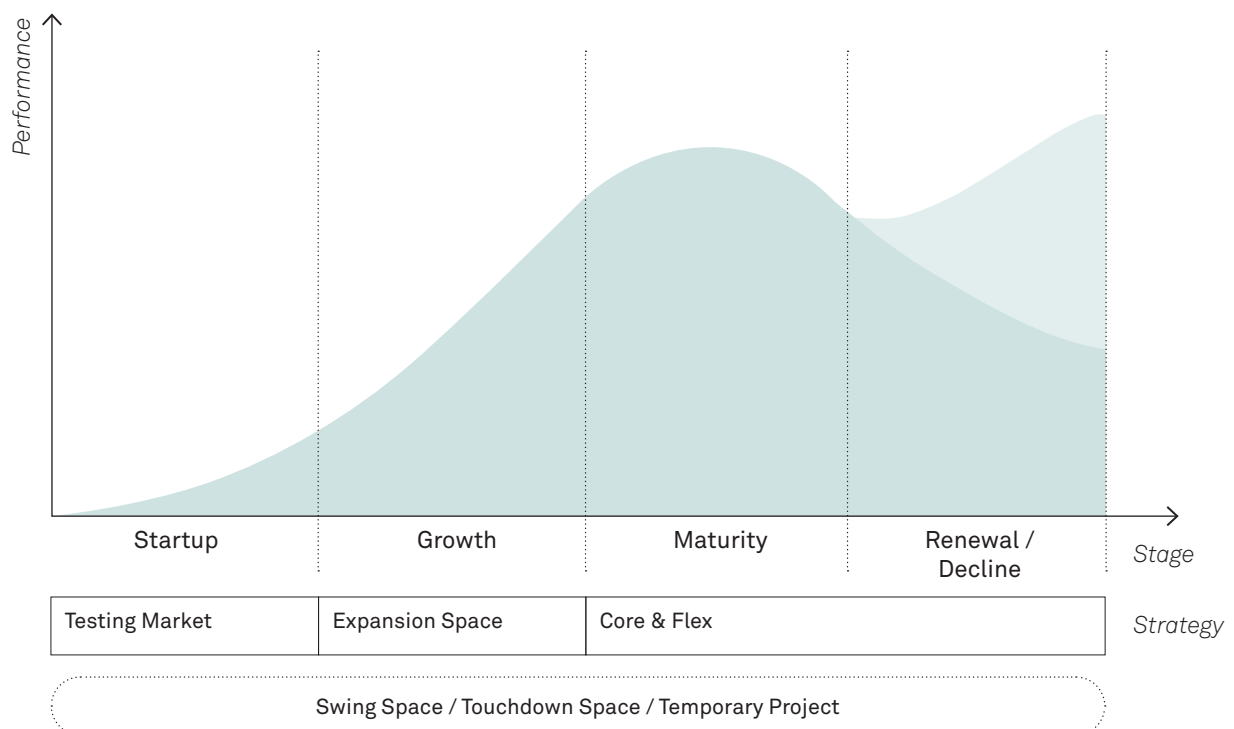
As reflected in the study, each of the approaches plays a different role in the corporate property portfolio; meaning that, in contrast with the assumption of the previous theoretical framework (Fig. 2.18), co-working not only corresponds to the 2nd periphery layer of the portfolio, but also to the core and 1st periphery layers, depending on the strategy pursued by the organization. In this line, co-working can be approached as a temporary space solution, a complementary space solution or as the main office location.

Accordingly, each of the strategies is explained in further detail in relation to the main concepts of the research.

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Fig. 5.03

Co-working throughout the organization’s lifecycle; own figure



Swing Space

Organizations can adopt co-working as Swing Space, a temporary workplace solution to relocate a team or part of the organization during renovation or construction works of the office space (Fig. 5.04). This strategy facilitates the continuous operation of the business and provides a professional business environment for all types of knowledge workers by offering functional (or spatial) flexibility through a variety of workplace settings that cater to the different user preferences.

In this alternative, co-working mainly represents a bridging space between the existing and new work environment; therefore, Swing Space is usually a strategy that is incorporated as the second periphery layer of the property portfolio, the short-term contractual agreements—that vary from a week, up to 6 months or even a year in the most extreme cases—provide financial flexibility by offering a temporary space solution that supports the business operation. This quick access to space presents a temporary competitive advantage by enabling the flexibility of the portfolio to respond to a requirement of the business for a short period of time.

In this line, for organizations implementing this strategy, three characteristics offered by the co-working provider are particularly relevant: first, space-as-a-service in relation to the short-term commitments; second, multipurpose office in relation to the workplace settings and environments offered to the workers; and third, high accessibility in terms of the location of the co-working space, to minimize the inconvenience of a temporary relocation for the workers.

As a transitory solution, organizations face different implementation barriers, mainly technical aspects, that are relevant to consider when selecting the co-working provider. These include safeguarding the security and privacy of the company and the employees, ensuring the quality of the Internet service—in terms of connectivity, stability and bandwidth—according to the business needs, and ensuring the quality of the space in terms of noise levels and space metrics to support the satisfaction and productivity of the employees.

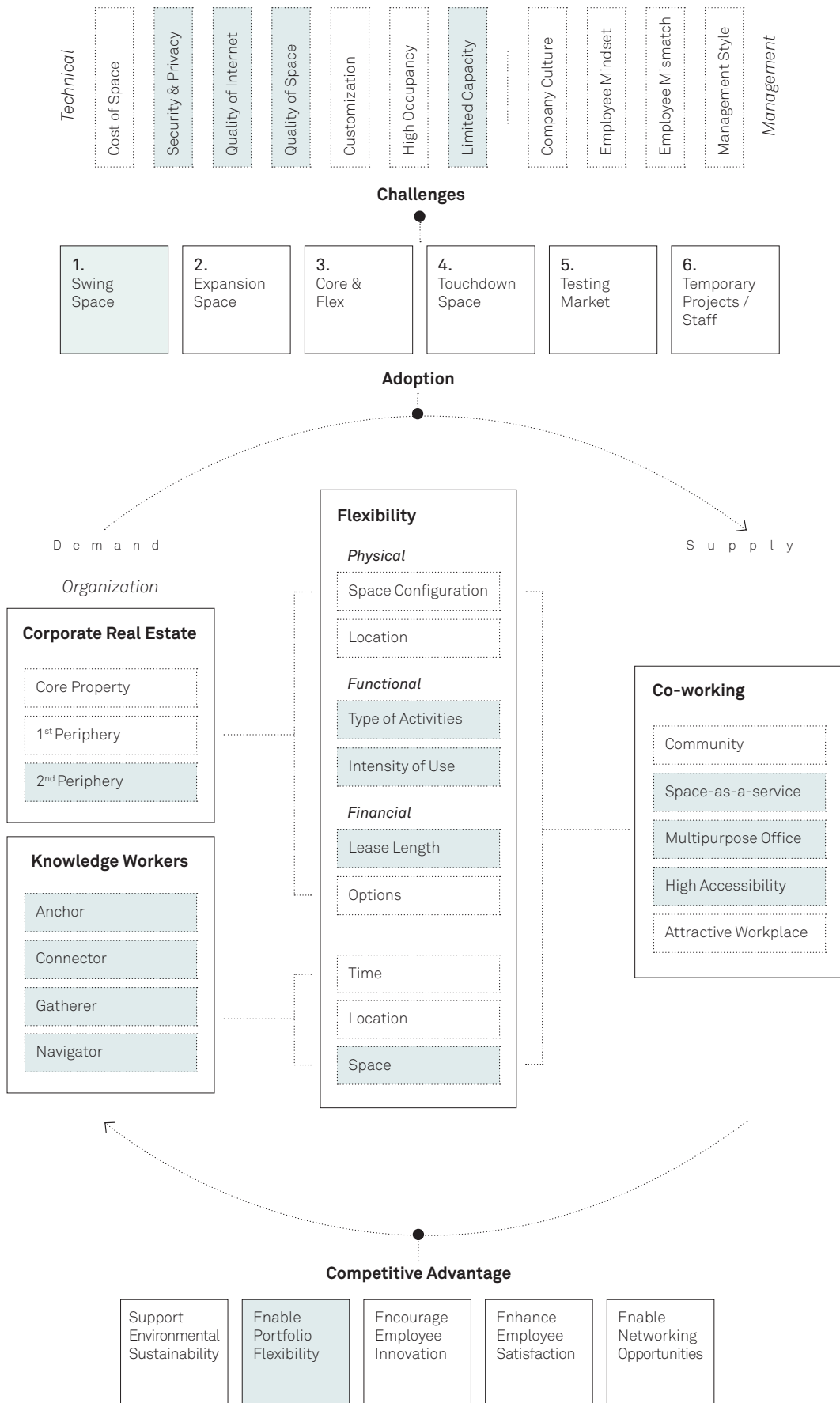


Fig. 5.04

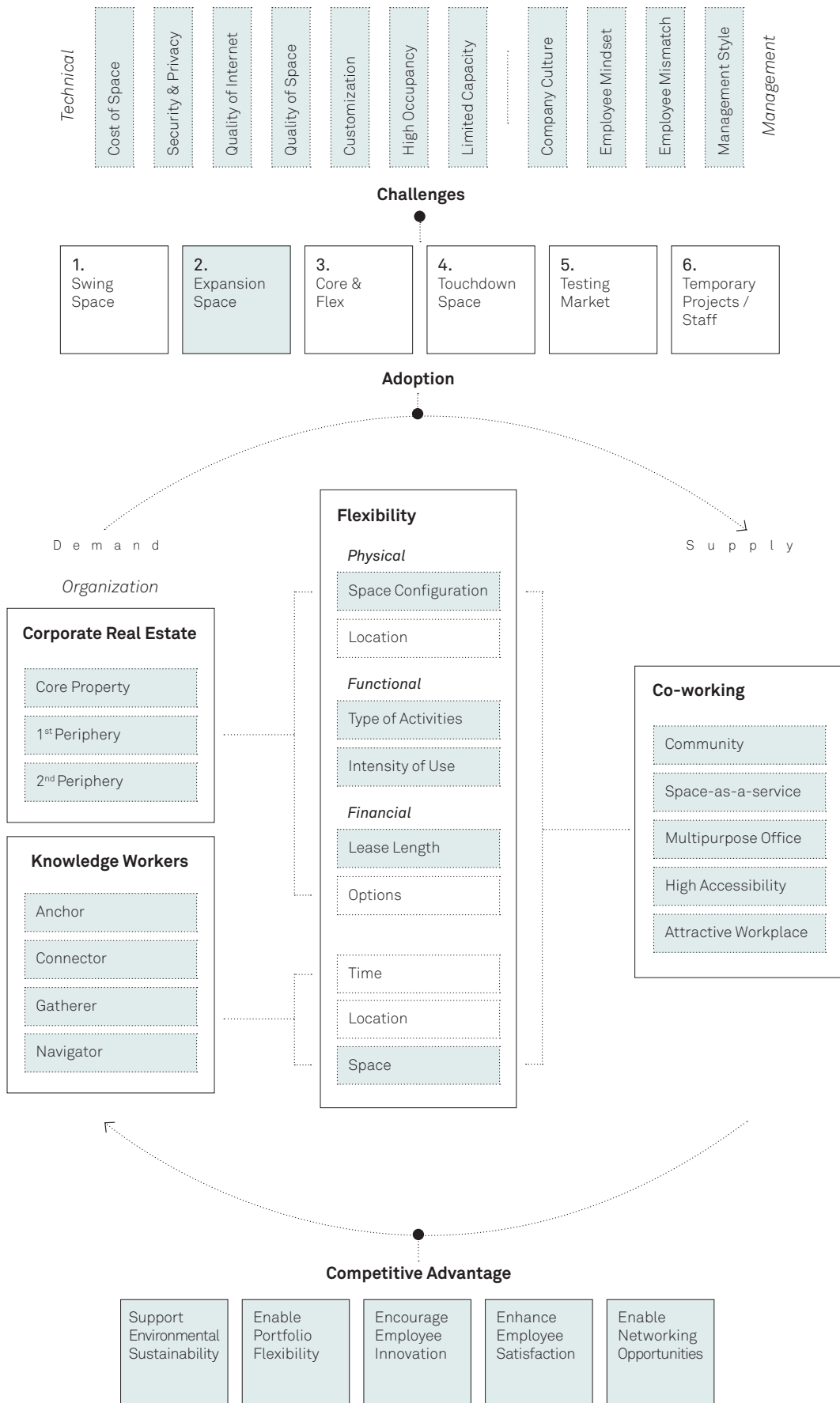
Co-working as Swing Space; own figure

Expansion Space

Organizations can adopt co-working as Expansion Space to support increases in the headcount, especially for companies in the growth phase (Fig. 5.05). This strategy allows the organization to take up space incrementally to accommodate all types of knowledge workers according to the needs of the core business. As Expansion Space, co-working can be used as the main office location (core property), or as complementary space (peripheral), the main premise is that it provides physical flexibility to increase the office footprint in the face of volatility in the headcount, financial flexibility in relation to speed-to-market and quick lease agreements, and functional or spatial flexibility in terms of the variety in the work environment provided to the workers.

In this line, Expansion Space is a strategy that provides different resource advantages that can be leveraged by the organization at the strategic business level. These include, on one hand, temporary advantages in relation to enabling the flexibility of the portfolio to expand the office footprint according to the business growth, and supporting environmental sustainability through higher space densities and shared facilities. While on the other hand, extended advantages, which can be sustained over a longer period of time, include enhancing employee satisfaction in relation to the variety of settings and community environment offered, encouraging innovation in terms of the interaction opportunities provided, and enabling networking opportunities at the business and personal level.

Organizations implementing an Expansion Space strategy in their property portfolio, face different technical and management challenges that are important to consider. In relation to the technical aspects two, amongst others, are particularly relevant: first, the growth possibilities might be limited by the high occupancy rates often found in co-working spaces; and second, the high costs of the space, especially considering the premium that comes with the flexibility provided, has to be evaluated in relation to the business needs to determine under which conditions the strategy is affordable and sustainable for the organization. In terms of the management challenges, the difficulties of reflecting the company's culture and image in the space, and the obstacles of a management style based on control, instead of results, are the two most significant implementation barriers.



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Fig. 5.05

Co-working as Expansion Space; own figure

Core & Flex

Organizations can adopt co-working as a complementary space in a Core and Flex strategy. This strategy is particularly suitable for companies that have reached the maturity or renewal stages of the organization's lifecycle as it provides versatility to adapt to any changes in the headcount and respond to the uncertainties of the business operation in the mid and long terms (Fig. 5.06). This dual model consists of combining a long-term—lease or freehold—agreement for the core space, with a short-term lease agreement in a co-working space. This strategy allows organizations to diversify their property portfolio and respond to uncertainties or changes that affect the business operation. As a complementary strategy, co-working corresponds to the first or second periphery layers of the property portfolio; the contractual arrangements vary from less than one year and up to three to five years in certain cases. In this line, the main premise is that co-working provides financial flexibility in relation to the length of the lease agreements and diversification of the property portfolio, functional or spatial flexibility in terms of the variety of settings provided to the users, and physical flexibility in relation to the possibility of increasing or decreasing the office footprint according to the needs of the core business.

In a Core and Flex strategy, co-working contributes to the performance of the organization in five different ways. These include, on one hand, temporary advantages that involve: enabling the flexibility of the portfolio through low entry barriers and short-term commitments that facilitate the responsiveness of the real estate in relation to the requirements of the business; and supporting environmental sustainability through resource sharing and higher space densities. While on the other hand, extended advantages that can be sustained over a longer period of time that involve: encouraging innovation in terms of the interaction opportunities offered outside of the corporate environment which could result in value creation and knowledge transfer; enhancing employee satisfaction in relation to the variety of settings and inspiring workplaces provided; and enabling networking opportunities at the personal and professional level within the co-working community.

However, is important to consider that implementing a dual strategy involves various technical and management challenges. First, the technical barriers include, amongst others, ensuring the quality of the space in terms of noise levels, space metrics and fit out quality; and the high costs of the space considering the premium related to the flexibility provided. Second, in relation to the management challenges, the two most significant barriers involve the difficulty of reflecting the corporate image and culture in the space, and the management style in relation of managing by results and trusting the employees.

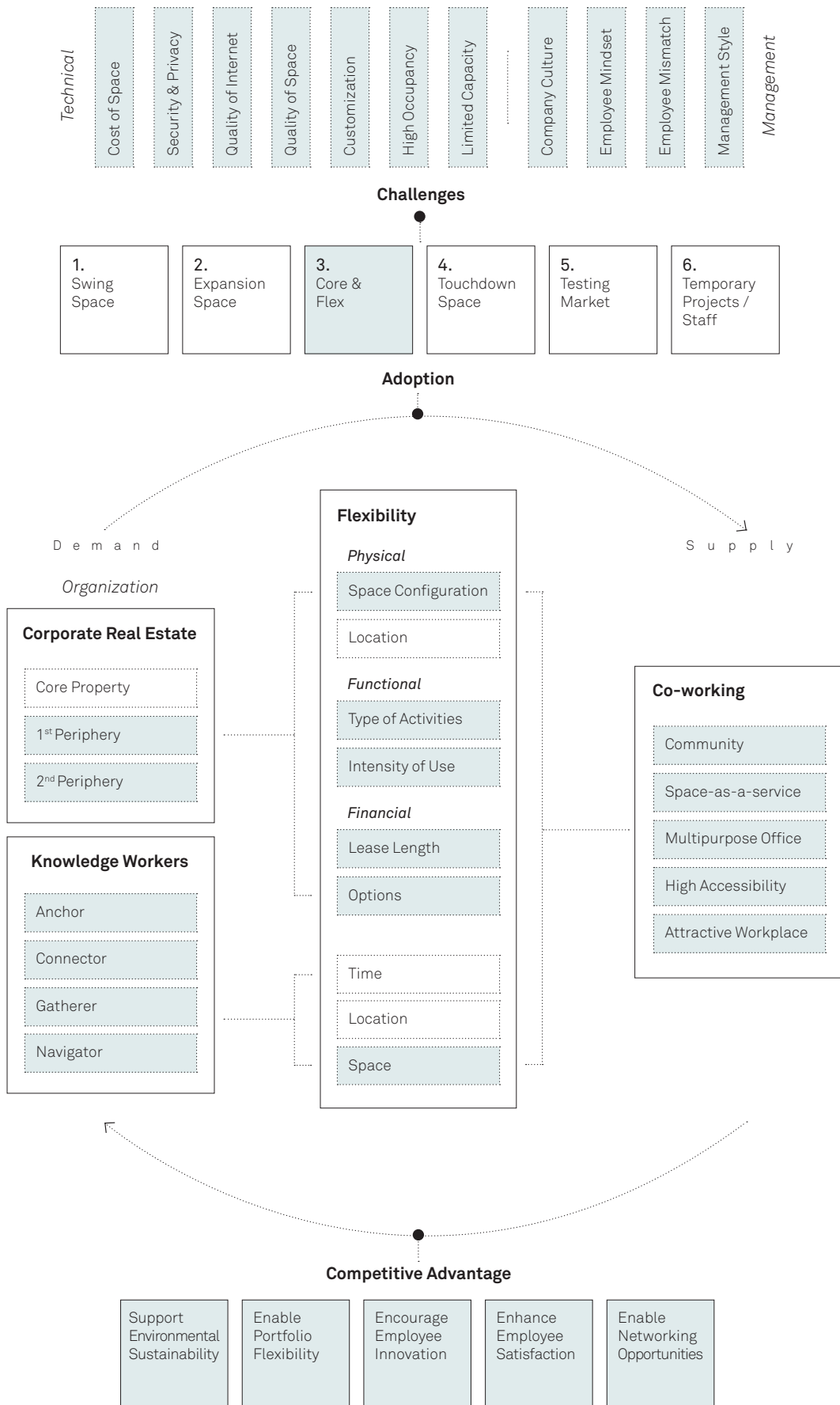


Fig. 5.06
Co-working as
Core & Flex; own
figure

Touchdown Space

Organizations can adopt co-working as Touchdown Space to support mobile workers, such as those similar to the gatherer and navigator type of knowledge workers. This strategy provides a professional work environment and a network of locations available for employees that are constantly working outside of the traditional corporate premises, for instance managers, sales teams, employees working remotely, employees traveling for business, amongst others. Co-working as Touchdown Space is usually incorporated as part of the second periphery layer of the property portfolio, as the lease agreements often include memberships for one year. In this line, as seen in figure 5.07, this strategy provides locational or physical flexibility in relation to the network of locations available at the local or international level, spatial or functional flexibility in terms of the variety of work environments and settings that cater to the different preferences of the workforce, and financial flexibility in relation to the short contractual agreements.

In this line, by providing a workplace for mobile workers, co-working as Touchdown Space provides different temporary and long-term competitive advantages to the organization. The temporary advantages relate to supporting environmental sustainability in relation to reduced commuting times for the workers, and enabling the flexibility of the portfolio to react to any changes in the business. While the longer term competitive advantages relate to enhancing employee satisfaction through the variety of settings offered and the high accessibility of the space, enhancing innovation in relation to the interactions outside of the corporation which can result in valuable contributions at the business level, and enabling networking opportunities through the community environment.

Nevertheless, implementing co-working as Touchdown Space involves particularly two management challenges that are especially relevant to consider to ensure the success of the strategy, these involve: first, managing by results and having a coaching approach to support the mobile workers; and second, reflecting the image and culture of the organization through communication and face-to-face interaction with the team of the organization to maintain the cohesion of the employee and the company, as the traditional strategy of space customization is not viable when using the shared desks in co-working. Alongside, ensuring that the technical aspects, such as the quality of the space and the internet service, are aligned with the business requirements is key to support the business operation and satisfaction of the employees.

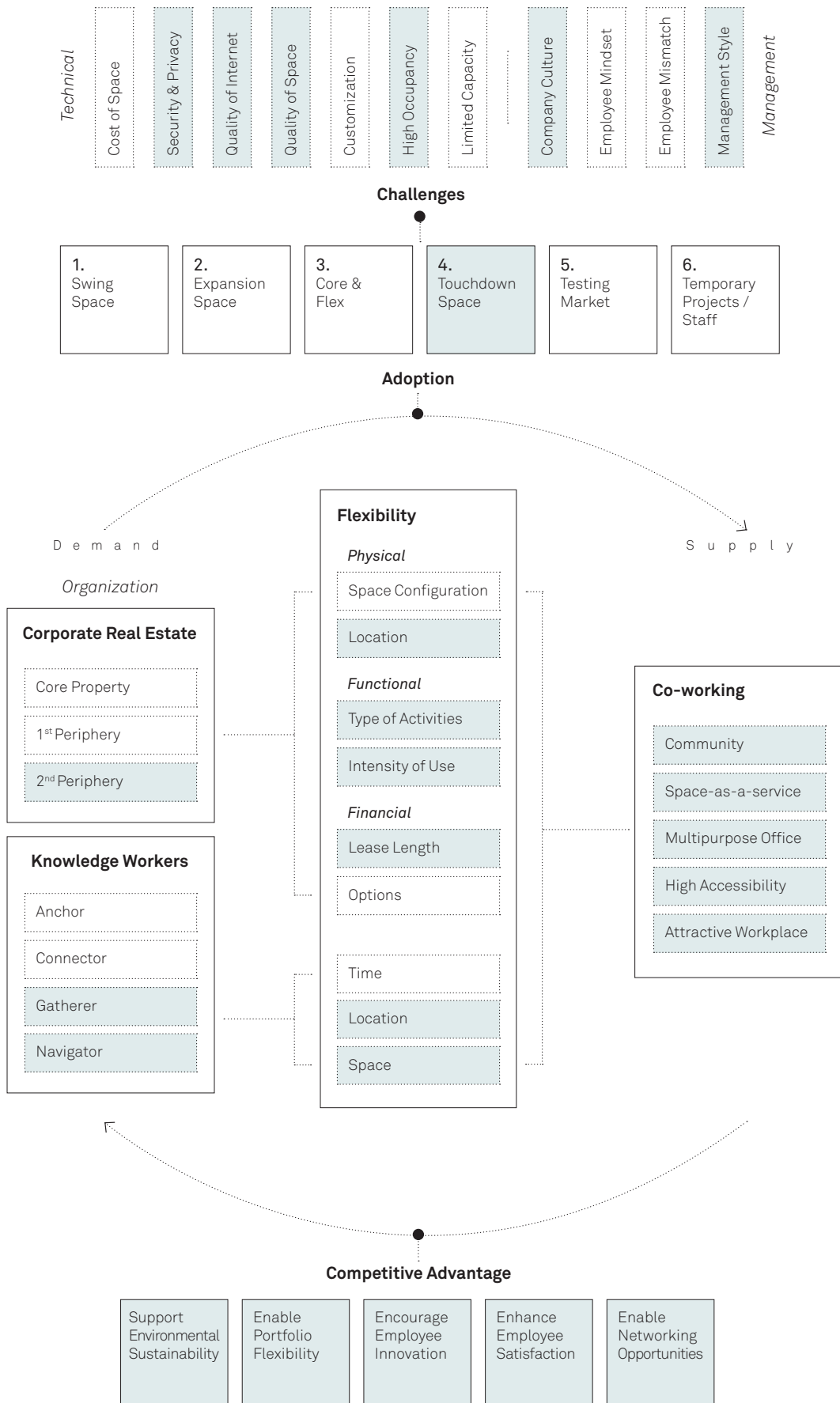


Fig. 5.07

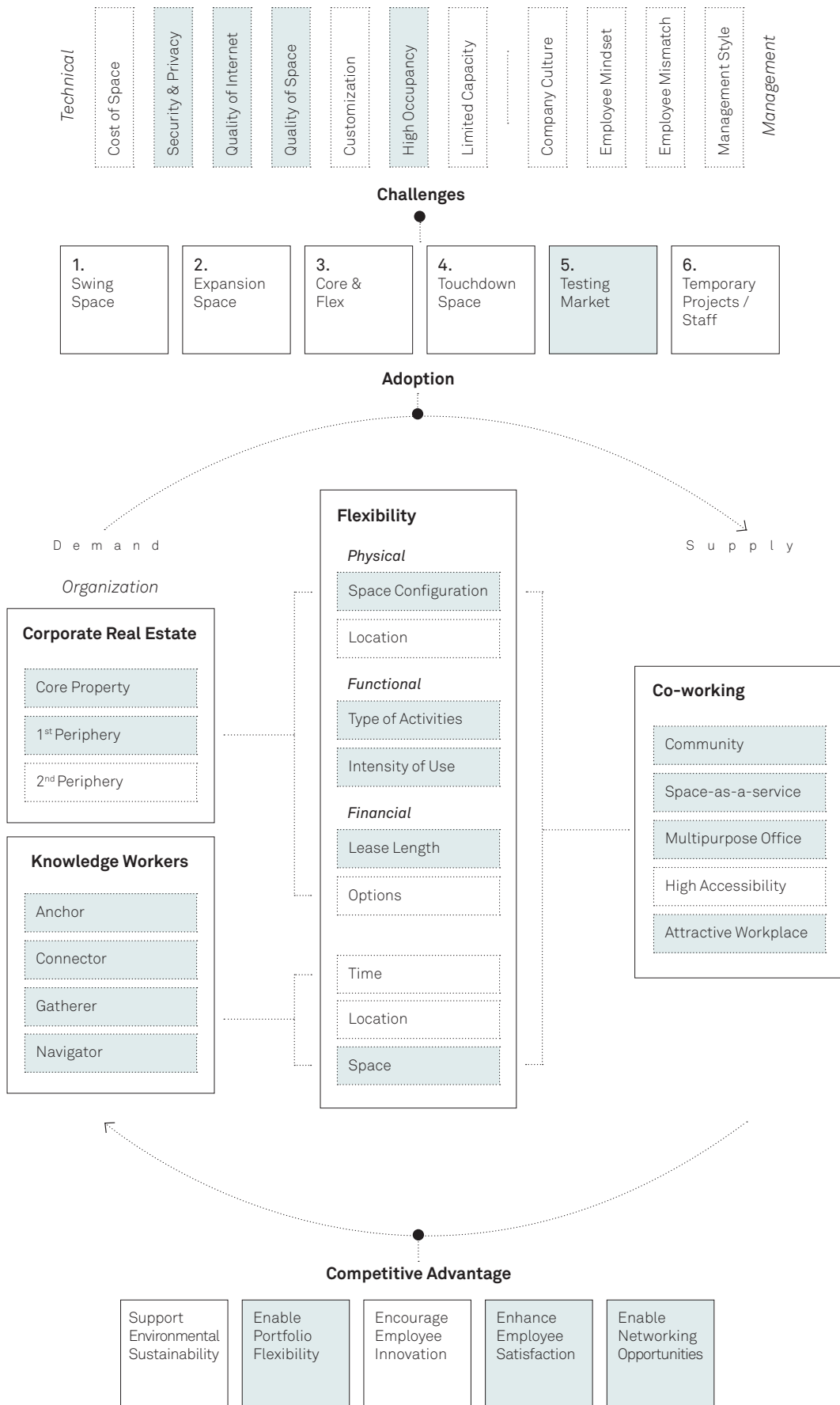
Co-working as Touchdown Space; own figure

Testing Market

Organizations starting operations or opening new lines of business can use co-working for Testing the Market. In face of the high uncertainties, the services and amenities provided, the low entry-barriers, the speed-to-market and short-term commitments are particularly attractive to set up a business operation at a low risk; therefore, this strategy is particularly suitable for companies in the startup phase. As a Testing Market strategy, co-working is usually adopted as the main office location (core) or as complementary space for new branches of the organization (peripheral) (Fig. 5.08).

In this strategy, co-working mainly provides financial flexibility in relation to the space-as-a-service attribute and short-term lease agreements that are essential to face the high uncertainties of the first phases; physical flexibility to increase or decrease the office footprint; and functional or spatial flexibility to cater to the varied preferences of the workers. Accordingly, co-working not only enables the flexibility of the portfolio to respond to changes in the business operation, but also provides significant contributions to the competitive advantage of the organization by providing an attractive workplace environment that contributes to enhancing the satisfaction of the employees, and enabling networking opportunities within the co-working community which can be essential to support an organization in the early stages of development.

As a strategy for starting business operations, co-working involves mainly technical challenges that refer to considering the high occupancy rates—commonly seen in the most attractive co-working locations—in relation to the future growth possibilities of the business; and ensuring the security levels, quality of the internet service, and quality of the space—in terms of noise levels, space metrics and fit-out quality— according to the requirements of the organization.



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Fig. 5.08

Co-working for Testing Market; own figure

Temporary Projects / Staff

Organizations looking for a space to accommodate temporary projects or staff—internal or external to the organization—can adopt co-working as a transitory solution for a determined period of time. As a strategy for Temporary Projects or Staff, co-working involves short-term contractual agreements—for less than one year—of the second periphery layer of the property portfolio. In this line, this strategy mainly provides financial flexibility in relation to the speed-to-market, short-term leases, and low entry barriers, and functional or spatial flexibility in relation to the variety of settings that cater to the different preferences of the employees (Fig. 5.09).

In this line, as a temporary space solution, co-working only provides a temporary competitive advantage for the organization, in relation to enabling the flexibility of the portfolio to quickly respond to the business requirements and offering a short-term accommodation alternative. Within this temporary solution, organizations face technical implementation barriers that relate to safeguarding the security and privacy of the employees and the organization, ensuring the quality of the Internet—in terms of connectivity and bandwidth—and the quality of the space in terms of noise levels and space metrics.

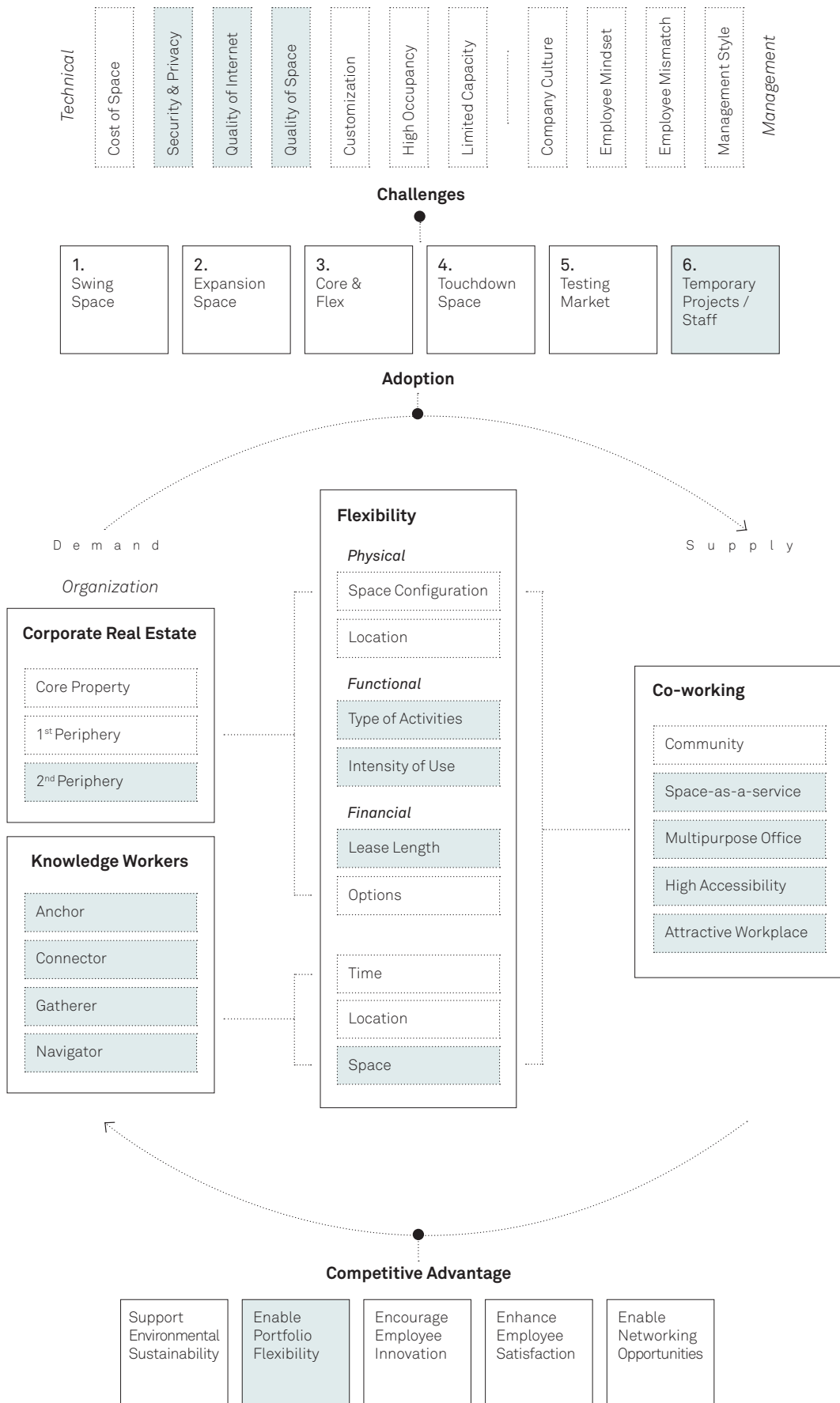
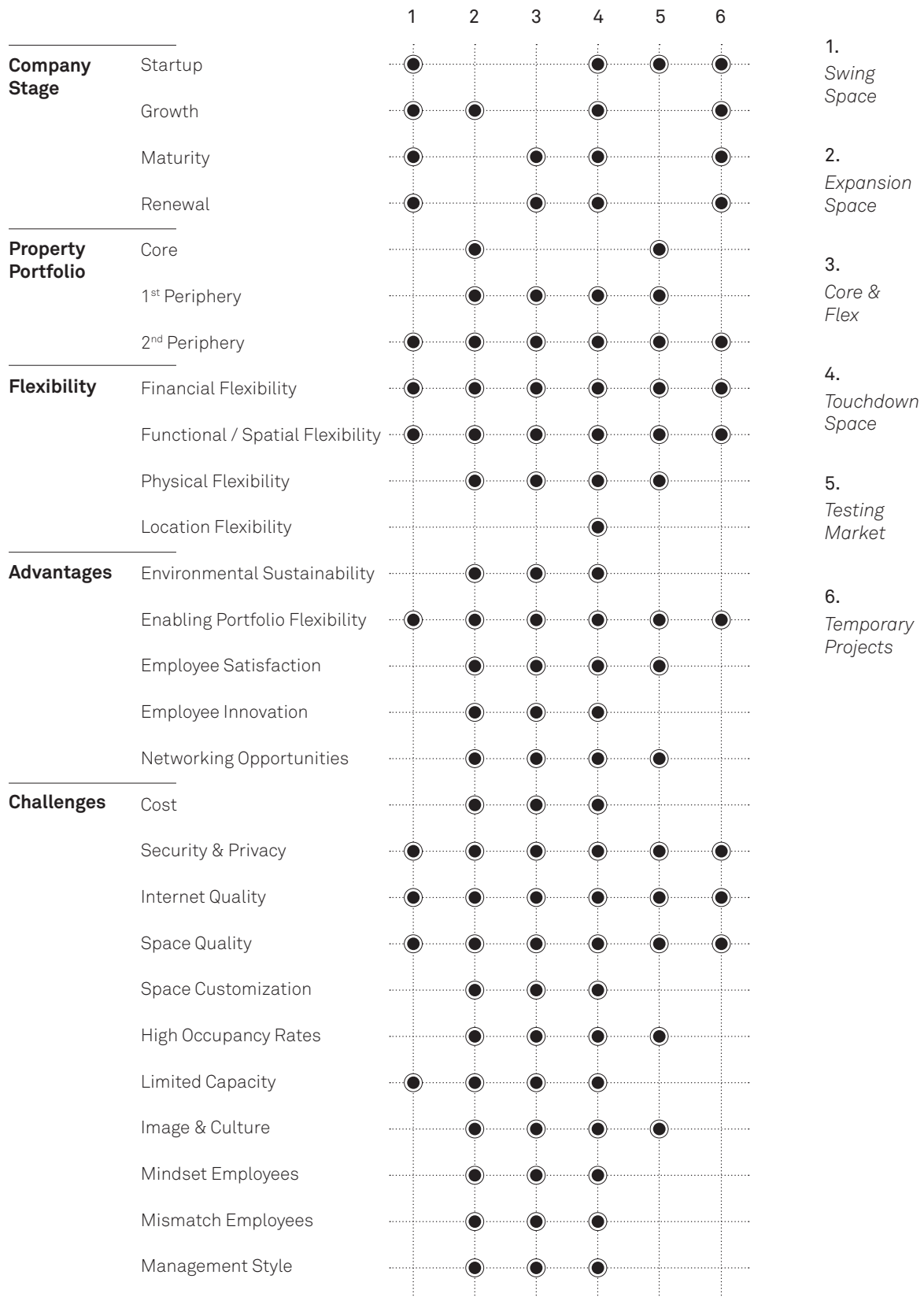


Fig. 5.09

Co-working for Temporary Projects / Staff ; own figure



- 1. *Swing Space*
- 2. *Expansion Space*
- 3. *Core & Flex*
- 4. *Touchdown Space*
- 5. *Testing Market*
- 6. *Temporary Projects*

Fig. 5.10

Co-working strategies in relation to main research concepts; own figure

2. Recommendations

Figure 5.10 summarizes the main features of each of the six co-working strategies and the connections between the concepts of flexibility, competitive advantage and implementation challenges. Based on this information, a series of general recommendations are laid out to facilitate the implementation of co-working in the corporate sector.

1. Align co-working strategy with the company's strategic goals: Real estate is a supportive function of the organization, in this, co-working can play many roles for the business, whether it is to support the growth of the organization, buffer fluctuations in the headcount, or establishing a new business operation, evaluating the co-working strategies in relation to the corporate goals is fundamental to define the most suitable approach to leverage the contributions of co-working to the performance of the organization.
2. Consider multiple flexibility requirements: As found in the research, flexibility is a multifaceted concept that involves the demand to achieve work-life balance and control from the side of the knowledge workers, and the efficiency in the use of resources from the side of the organization. Therefore, organizations implementing a co-working strategy in their property portfolio must consider the different flexibility requirements of the organization, in terms of the location, the physical space and the function of the space, rather than only focusing on the financial aspect; this is fundamental to select the co-working strategy that best aligns with the demands of the business and the knowledge workers.
3. Estimate occupation costs with a Total Cost of Ownership approach: Defining a TCO for a defined period of time is fundamental to compare the different co-working strategies with other options available in the market. Additionally, considering different scenarios and their impact in the business operation is fundamental to define the most suitable strategy and define the importance of flexibility in relation to the organizations' projections.
4. Monitor employee perceptions: As the aim of real estate is to support the value-creation activities of the business (Termaat et al., 2014), ensuring that the employees feel satisfied and supported to carry out their activities at the co-working space is fundamental to contribute to the competitive advantage of the organization. In this line, having a feedback and monitoring process in place to systematically collect information about the employees' perception of the workplace is fundamental to adjust the co-working strategy to the particular needs of the workers.
5. Select co-working providers that are aligned with corporate values: There is a variety of co-working brands available in the market, which are based on different concepts and set of values. In this line, corporations considering implementing a co-working strategy must focus on those providers that match the values of the company and the employees, to ensure that the work environment and infrastructure provided align with the requirements of the organization.
6. Acknowledge the role of the different corporate actors in the decision-making process: The success of implementing co-working as an accommodation strategy requires the involvement of different strategic actors in the process; these include not only the CFO and the Corporate Real Estate Manager, but also the Human Resources department, and the top management of the organization. The involvement of the different stakeholders results in a more comprehensive decision about the most suitable strategy for the organization and allows leveraging the resource advantages provided by co-working.

06

Conclusion

1. Conclusion of the Research

As seen across the theoretical and empirical studies of this research, in face of the dynamic conditions of the business environment, organizations are looking into alternatives to incorporate flexibility in their corporate real estate portfolio to respond and adapt to changes; in this line, co-working has been one of the alternatives available in the market that has progressively caught the attention of the corporate occupiers.

As mentioned in the first chapter, the goals of this research are first, to understand the ways in which co-working spaces support the flexibility requirements of organizations and its knowledge workers; and second, suggest alternatives to facilitate the adoption of this workplace model to contribute to the organization's performance in today's competitive environment. In line with these objectives, the research provides an answer to the following research questions:

Q1) How does the co-working space concept meet the flexibility needs of corporations and users?

According to the study, flexibility is a multifaceted concept that involves many definitions; in this line, co-working aligns with the needs of the organization and the employees by providing flexibility in three different ways. First, co-working provides physical flexibility by allowing the organization to expand or decrease the office footprint according to the needs of the business, and by providing a network of locations for the mobile workers that need a professional workplace outside the traditional corporate boundaries.

Second, co-working provides functional flexibility by offering a variety of workplace settings that cater to the different user preferences, these include individual desks, concentration areas, shared desks, collaboration spaces, private offices, amongst others. In this same line, co-working provides functional flexibility through higher space densities and resource sharing which allows the organization to improve space efficiency and reduce the office footprint.

Third, co-working provides financial flexibility in relation to the short-term lease agreements, low entry barriers and speed-to-market offered which facilitate the responsiveness of the property portfolio to the changes in the business requirements. Additionally, co-working provides an opportunity to diversify the property portfolio and control the risks associated with real estate commitments.

Q2) How can co-working be adopted by corporations to achieve competitive advantage?

Companies in different stages of maturity can adopt co-working as a temporary space solution, a complementary space solution, or as the main office location, depending on the requirements of the organization. Accordingly, by aligning the strategic business goals with the approach to co-working, organizations can find five different sources of competitive advantage that can be leveraged to contribute to business performance.

These include temporary advantages that involve: first, enabling the flexibility of the portfolio through low entry barriers and short-term commitments that facilitate the responsiveness of the real estate to the dynamic business requirements; and second, supporting environmental sustainability through resource sharing and higher space densities. As well as extended advantages that can be sustained over a longer period of time, which include: first, encouraging innovation in terms of the interaction opportunities offered outside of the corporate environment which result in value creation and knowledge transfer; second, enhancing employee satisfaction in relation to the variety of settings and inspiring workplaces provided; and third, enabling networking opportunities at the personal and professional level within the co-working community.

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Main Question: How can co-working as a real estate strategy contribute to the performance of a corporation while meeting the flexibility demands of the organization and the users?

According to the study, organizations have an array of six different strategies to incorporate co-working as part of the corporate real estate portfolio according to the business requirements. Each of the strategies has different implications in terms of the role in the property portfolio, the advantages provided, and the barriers of implementation associated with them. These include:

First, Swing Space, a temporary bridging space to relocate a team and continue the business operation during renovation or construction works of the office space. Second, Expansion Space, a space solution to support the growth of the organization by allowing the company to incrementally take up additional space according to the needs of the core business. Third, Core & Flex, a dual strategy composed by a long-term agreement for the core space and a short-term lease with a co-working operator, that provides versatility to adapt to any changes in the headcount and respond to the uncertainties of the business operation. Fourth, Touchdown Space, a complementary strategy that provides a professional work environment for mobile workers that are constantly working outside of the traditional corporate premises. Fifth, Testing Market, a strategy with low entry barriers that provides a platform for organizations starting operations or opening new lines of business. Sixth, Temporary Projects or Staff, a transitory solution to accommodate a team internal or external to the organization for a determined period of time.

2. Contributions of the Research

This thesis contributes to the field of corporate real estate management and workplace strategy by providing knowledge about the value of co-working spaces as an accommodation strategy for corporations. The main contribution of this research relates to the identification of six strategies that organizations, in different stages of maturity, can pursue to incorporate co-working as part of their real estate portfolio. In this line, the research proposes a framework that illustrates the different relations between each of the strategies and the concepts of flexibility and competitive advantage.

Additionally, the study has revealed different technical and management challenges that the organizations face when implementing co-working as part of their corporate real estate portfolio. This information is particularly relevant for co-working providers as it highlights certain points for improvement that have emerged from the empirical research; and gives a broader idea of focus points for organizations that are considering to implement a co-working strategy in the foreseeable future.

This research contributes to the exiting body of knowledge and closes a gap in literature by studying co-working from the concept of flexibility in relation to the perspectives of both, the organization and the knowledge workers. This creates a more comprehensive view of the topic, as previous studies have focused either on the perspective of the organization (Garret et al., 2017; Harris, 2015; Roth & Mirchandani, 2016; Leclerq Vandelandoitte & Isaac, 2016), or the knowledge workers (Orel 2019; Subramaniam et al., 2013; Weijs-Perrée et al., 2018).

The research provides valuable theoretical and practical information that can assist corporate real estate managers in taking strategic decisions and leverage the attributes of co-working in relation to the requirements of the organization.

3. Evaluation of the Research

According to Yin (2009), the quality of a research can be evaluated through four tests, construct validity, internal validity, external validity, and reliability. Internal validity is an assessment that applies only to explanatory or causal studies (Yin, 2009), as the nature of this study is mainly exploratory, this test is not considered in the evaluation of the research.

Construct Validity

As defined by Yin (2009) construct validity relates to the correct identification of operational measures for the concepts being studied. In this regard, and as suggested by Yin (2009), two tactics have been used to improve construct validity of the study; first, using multiple sources of evidence to encourage convergent lines of inquiry, the study is based on cross-checking and triangulating the data collected from three data sources—demand, supply and expert—this increases the objectivity of the findings related to the concepts studied. Second, establishing a chain of evidence to substantiate findings, with this regard, thick quotations are used throughout the text to illustrate and support the findings, and the sources of evidence are always referenced in the text to increase the transparency of the evidence.

External Validity

External validity refers to the generalizability of the findings of the research beyond the context studied (Yin, 2009). In line with the suggestions of Yin (2009), three techniques have been employed to strengthen the external validity of the study; first, according to the replication logic, the demand study research has been replicated across five case studies of organizations from different industrial sectors and in different stages of development. Second, the preliminary findings of the research have been discussed with experts from different contexts, this allows validating the findings beyond the particular context studied and enhances the credibility of the research. Third, the findings from the empirical research have been compared with the theoretical framework, this allows identifying the alignment between the findings of the research and the existing theories, which results in either corroborating theoretical concepts previously identified, or contributing with new concepts that emerged in the study.

Reliability

The reliability of the findings refers to the extent to which the research can be replicated and yield the same results (Yin, 2009). This, as stated by Yin (2009), requires documentation of the procedures followed in the researcher; accordingly, the data collection process has been widely described in Chapter 03; additionally, the interview protocols can be found in Appendices A-C; and confidential material such as audio recordings and transcripts of the interviews, and data analysis assisted by the ATLAS.ti software, have been archived by the researcher.

4. Impact of COVID-19 on co-working

With the current state of affairs, it is evident that the COVID-19 pandemic will have an impact in different spheres of life. Although there is uncertainty about the extent of the consequences of this situation, some possible effects in relation to co-working are worth discussing in this section.

In the short-term, the physical distancing measures that discourage gatherings of sizable groups of people is likely to affect the community environment of co-working. Different providers are already adjusting to the current measures by taking stricter hygiene and distancing measures that involve the reconfiguration of the interior layouts, an increase in individual workstations, and lower space densities that comply with the norms. However, for the time being, the appeal of co-working spaces—especially considering corporate occupiers—is likely to decrease.

Nevertheless, the long-term perspective is likely to be more favorable for co-working spaces. The abrupt changes in the economy and increased volatility of the financial markets given the current conditions, have demanded further responsiveness of the organizations towards external shocks. In this line, organizations will be more reluctant to having long-term commitments, and instead, the demand for flexibility in the corporate real estate portfolio is likely to increase; therefore, co-working offers interesting opportunities that can be appealing to corporate occupiers. In this regard, hybrid strategies that balance a fixed office location with flexible space at co-working—such as the Core & Flex model—will potentially be an attractive approach for organizations, particularly, because this facilitates the adaptation of the accommodation strategy in face of changing conditions. Accordingly, this research provides valuable insights about co-working, for organizations aiming to incorporate flexibility in their real estate portfolio.

Additionally, considering the supply side, co-working operators will certainly need to adjust to the new conditions that involve first, lower space densities; second, changing preferences; and third, decreased demand for space, particularly considering the economic conditions that affect freelancers and independent workers. In this line, in the foreseeable future, suppliers are likely to incline towards attracting corporate occupiers that bring stability and lower risks to the co-working operators; amid these conditions, there are interesting partnering opportunities in co-working which can be beneficial for both, providers and organizations.

5. Future Research

The findings from this thesis are bound to certain limitations in relation to the context, timing, methodology and scope, which are important to take into consideration. These limitations provide opportunities for future research.

First, as the empirical research of this study is mostly based on information from organizations and individuals based in the Netherlands, the findings are, to a certain extent, influenced by the Dutch social, political and economic context. Therefore, further developing the research with an international comparability study would contribute to taking into account the differences between contexts.

Second, co-working as an accommodation strategy has only recently been adopted at a wider scale in the portfolios of corporations; therefore, the research is limited by the information available at the time of the study, which mainly reflects the short-term effects as experienced by the organizations involved in the demand study. However, many of the effects, specially relating to the contributions of co-working to the competitive advantage of the firm, are likely to develop over time. In this line, future research could focus on a follow-up of the cases presented in this study as a way of longitudinal case design, which could bring interesting observations and further insights considering a retrospective analysis.

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Third, in relation to the methodology, this research is based on a qualitative study of demand, supply, and experts; this approach has provided significant insights in relation to co-working as an accommodation strategy for corporations. However, further quantitative research is necessary to determine more precisely the extent of the contributions of co-working to concepts such as competitive advantage, and flexibility of the organization; this would also facilitate the comparability between co-working and other options available in the market.

Fourth, this research focuses studying co-working within the context of flexibility in relation to the demands of the organizations and the knowledge workers. Due to time constraints and difficulties relating to the current COVID-19 contingency measures, the study focused on holistic case studies with a single unit of analysis, mainly represented by the corporate real estate managers of the organizations; however, further research should expand the scope of the study by incorporating the perspective of the knowledge workers as an embedded unit of analysis within the cases. This can potentially yield deeper insights regarding the perception of the employees in relation to the different co-working strategies.

Finally, this study focuses specifically on two resources of the organization, capital, in terms of the physical assets that are part of the corporate real estate portfolio of the organization; and labor, in terms of the knowledge workers of the organization. However, is important to acknowledge that these are only two resources that are part of the wider context of the firm. Therefore, future research can widen the scope of the study by analyzing co-working in relation to the other corporate resources that contribute to the competitive advantage of the organization.

07

Reflection

1. Position within the Master Track

This study is part of the Management in the Built Environment track of the MSc Architecture, Urbanism and Building Sciences program at TU Delft. The research has been developed within one of the core disciplines of the track, the Real Estate Management department, which focuses on studying the alignment between Corporate Real Estate (CRE) accommodation strategies with the needs of the core business, in order to contribute to the overall performance of the organization. In this line, the research focuses on the value of co-working spaces as an accommodation strategy for corporations within the context of flexibility. Particularly, this research provides information to support the decision-making process of corporations in relation to their real estate portfolio to meet the workplace flexibility demands of both, the knowledge workers and the organization.

2. Relevance

The findings of this research are particularly relevant at the academic and practical levels. In relation to the academic relevance, the study fills a gap in knowledge by providing an overview of the relationships between co-working and flexibility from the perspective of the knowledge workers and the organization. The study adds to literature by contributing with empirical research that evidences the contributions of co-working to the competitive advantage of the firm; and provides new insights about strategies that corporate occupiers can pursue to incorporate co-working as part of their accommodation strategy.

Additionally, the research has practical contributions regarding first, the overview of technical and management challenges that organizations face when implementing the different co-working strategies in their property portfolio; second, information about the contributions of co-working to the competitive advantage of the firm, which can be used by the organization to leverage their resources and drive business performance; and third, an outlook of the strategies that organizations in different stages of maturity can incorporate in their decision-making process according to the requirements of the core business.

The study is also valuable for co-working providers and investors as it provides information that is relevant to consider for catering to the demands of the corporate occupiers.

3. Research Method and Approach

Literature Review

The thorough literature review carried out in the first stage of the research was fundamental to set the basis for the empirical research. The literature review formed the theoretical framework and broadened the concepts of co-working, flexibility, corporate real estate, knowledge work, and competitive advantage, initially proposed in the conceptual framework of the research. The literature review included different sources such as academic journals, commercial reports, books, and online websites; the main ideas of each relevant source were abstracted and organized in an excel matrix according to the main concepts of the research, this facilitated the identification of the existing theories supported by different authors and ensured the consistency of the theoretical research.

The theoretical framework, that resulted from the literature review, was progressively complemented and adjusted throughout the different stages of the research, and resulted in a comprehensive figure that reflects the findings from the study.

Empirical research

The empirical research was initially planned to be based on three case studies of organization using co-working spaces; however, starting the empirical research early in the process, gave room to extend the study to include the supply and expert perspectives. Consequently, the empirical research resulted in five case studies, four interviews with co-working operators, and three interviews with experts. This additions to the research resulted in a more comprehensive view of the concepts of the research.

The empirical study was based on a qualitative research methodology that involved semi-structured interviews with the different actors. This method provided in-depth insights about the concepts of the research, and contributed to identifying emerging concepts highly relevant for the study. Reflecting back, this qualitative methodology proved to be valuable in this research, as a quantitative approach would have limited the study to the concepts found in the literature review, rather than exploring new concepts that emerged from the semi-structured interviews.

Although a qualitative method is quite time-consuming, especially considering the transcription and coding process of each of the interviews, the data collected yielded significant information that contributed to the quality of the research.

4. Research Process and Planning

The research was developed according to the schedule, each of the phases was completed on time. The theoretical research was an extensive task that was completed in a short period of time, this required practicing time management skills to ensure the quality of the study while committing to the assigned deadlines. The challenge however, was different in the empirical part, this required contacting a high number of potential participants, a low response rate, amongst other timing difficulties. In this regard, contacting the potential participants in the early stages of the empirical research facilitated the process, especially, considering the timing of the COVID-19 restrictions.

As explained before, the empirical research required some adjustments in the process to include additional material and align the data collection methods to the purpose of the study; therefore, including buffer time in the planning process to adapt to changing circumstances was crucial to completing the research according to the milestones set initially.

To conclude, a research process requires discipline to determine and achieve the personal goals in terms of content, quality and timing of the study; in this line, the recurrent meetings with the tutors, and detailed feedback on the research, provided fundamental guidance to further develop each of the components of the study and ensure an alignment between the initial expectations and the final result.

08

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09

Appendices

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Appendix A—Interview Protocol Demand Case Study

Graduation Project
DD/MM/YYYY

Interview Protocol

Research: Co-working as an accommodation strategy for corporations

Institution: Delft University of Technology

Interviewers: Natalia Echeverri Agudelo

Interviewee: Name (Company)

Introduction

First of all, I would like to thank you for agreeing to participate in this interview. As I have mentioned before, this is part of a research carried out for my graduation project at the Faculty of Architecture and the Built Environment at the TU Delft. As I explained before, the research focuses on the value of co-working spaces for corporations; particularly the aim of the study is to understand how co-working can contribute to the performance of a corporation by meeting the flexibility demands of the organizations and its employees and suggest alternatives to facilitate the adoption of this workplace model in the corporate sector.

The outcome of the interview will be used to adjust the propositions that have resulted from my theoretical framework and give new insights into the topic of co-working as a corporate accommodation strategy. The interview consists of five main sections, I would like to remind you that there are no right or wrong answers and that the information provided would only be used for academic purposes. Accordingly, I would like to ask for your consent to record this interview, with the sole purpose of transcribing it, after this, the recordings will be deleted. Your answers in this interview will remain confidential.

Please keep in mind that you can refuse to answer any of the questions and you can withdraw from the study at any time.

Part 1. General

As a start, could you briefly explain your position at the company and the scope of your job?

Part 2. General aspects on co-working

According to literature, with the exponential growth of co-working spaces in the last years, organizations are increasingly considering it as part of a range of solutions for their accommodation strategy.

- Is [company] currently using co-working spaces as part of the accommodation strategy for the company?
- Since when did [company] first start using co-working spaces?
- Could you explain what has sparked this interest?
- What are the main things that [company] is looking for at a co-working space?

As a reference,

- Could you give me an approximate idea of the size of co-working at [company]? (For instance, in terms of % of the total portfolio; and % or number of employees that are working or have the possibility to work from a co-working space)

Part 3. Co-working and flexibility

According to literature some companies have started to use co-working as their main office location, while others use it as secondary supportive space either for mobile workers, business meetings, temporary projects or special events.

- How does this work at [company]? (is it an extension of the headquarters, temporary space for projects, an option for satellite workers, etc.)

- Could you mention what type of employees are mainly working at the co-working space? (for instance, managers or mobile workers, temporary staff, amongst others.) And what is the nature of their work? (individual work, collaborative, team work, meetings with clients, etc.)

The memberships of co-working spaces usually grant access to multiple locations, both locally and internationally.

- Are the employees of *[company]* using more than one of the locations offered by your co-working provider either occasionally or on a regular basis? (for working, or meetings, etc.).

Several authors have acknowledged that in contrast with the long-term commitments typically associated with real estate, co-working spaces typically offer short-term agreements (daily, weekly, monthly or yearly). Considering this,

- Do you consider that co-working provides financial flexibility to *[company]*? Why?
- How important was this aspect in your decision to use co-working?

Part 4. Co-working as an accommodation strategy

The common characteristics of co-working spaces, for instance community, high quality service provision, amongst others, have been associated with a number of benefits for its users

- What do you think are the main benefits (or advantages) for *[company]* to use co-working services? Can you give some examples?
- What are the main challenges that *[company]* has faced in adopting co-working as part of their accommodation strategy? Can you give some examples? (either externally or internally, with the employees, etc.)
- Do you consider that co-working has helped the performance of the company in any way? How and why?
- How do the employees of *[company]* experience working at a co-working space? Could you mention some benefits or drawbacks as experienced by the employees?

Part 5. Future possibilities in relation to co-working

Looking back at the experience of *[company]* with co-working spaces

- Overall, are you satisfied with the decision of using co-working spaces?
- Is there something you would have changed from your strategy to use co-working?
- And do you have any suggestions that would facilitate the use of co-working spaces by other corporations?

Finally, with the increasing expansion of co-working spaces in the corporate sector in the last years

- Do you think that co-working could play any role in the future accommodation strategy of the company? (either as a complementary space, a temporary office or for a certain type of employees in the company, etc.)
- Are there any plans to increase (or decrease) the current % or number of employees that work from a co-working space in the upcoming years?

Is there something additional that you would like to mention that you consider relevant for the research?

I would like to thank you for your participation in this research. If you are interested I can share my study once my graduation project is finished.

Appendix B—Interview Protocol Supply Study

Graduation Project

DD/MM/YYYY

Interview Protocol

Research: Co-working as an accommodation strategy for corporations

Institution: Delft University of Technology

Interviewers: Natalia Echeverri Agudelo

Interviewee: Name (Company)

Introduction

First of all, I would like to thank you for agreeing to participate in this interview. As I have mentioned before, this is part of a research carried out for my graduation project at the Faculty of Architecture and the Built Environment at the TU Delft. As I explained before, the research focuses on the value of co-working spaces for corporations; particularly the aim of the study is to understand how co-working can contribute to the performance of a corporation by meeting the flexibility demands of the organizations and its employees and suggest alternatives to facilitate the adoption of this workplace model in the corporate sector.

The outcome of the interview will be used to adjust the propositions that have resulted from my theoretical framework and give new insights into the topic of co-working as a corporate accommodation strategy. The interview consists of four main sections, I would like to remind you that there are no right or wrong answers and that the information provided would only be used for academic purposes. Accordingly, I would like to ask for your consent to record this interview, with the sole purpose of transcribing it, after this, the recordings will be deleted. Your answers in this interview will remain confidential.

Please keep in mind that you can refuse to answer any of the questions and you can withdraw from the study at any time.

Part 1. General

As a start, could you briefly explain your position at the company at the scope of your job?

Part 2. General aspects on co-working

According to literature, with the exponential growth of co-working spaces in the last years, organizations are increasingly considering it as part of a range of solutions for their accommodation strategy.

- Have you experienced an increase in the interest from corporations to use co-working spaces at [company]?
- How has the company reacted to this? (i.e. more packages targeted to corporations, different spaces, etc.)
- Do you consider that the demand of this sector will continue to grow in the foreseeable future? Why?

The common characteristics of co-working spaces, for instance community, high quality service provision, amongst others, have been associated with a number of benefits for its users

- What do you think are the main benefits (or advantages) for corporations to use co-working services? Can you give some examples?

Even though co-working is growing in the corporate sector, freelancers, entrepreneurs and independent workers are still the main source of demand of co-working spaces

- What are the main challenges faced by organizations in adopting co-working as part of their accommodation strategy? Can you give some examples?
- What does the *[company]* have to offer that distinguishes from other co-working operators?

Part 3. *[Company]* and the corporate sector

Currently *[company]* offers a diverse community of freelancers, mobile workers, and creatives.

- What do you consider are the main advantages of having corporate users at *[company]*? (for the company, and the other members)
- Could you give me an approximate idea of the size of the corporate sector at *[company]*? (either in terms of numbers of corporations, or number or % of users that come from a corporation)
- From your experience at *[company]*, what are the main things that corporations are looking for at a co-working space?
- Is *[company]* currently offering special service packages for corporations? If so, could you briefly explain what they consist of? (membership for all the staff and shared)

According to the website, *[company]* offers flex and dedicated desks, private offices, meeting rooms and event spaces

- From this wide range of options what kind of spaces are corporations mainly using at *[company]*?

The membership of *[company]* grants access to multiple locations in the Netherlands, and across other European cities.

- Are the corporate users usually using more than one of the locations offered, either on a regular basis or occasionally?

According to literature some companies have started to use co-working as their main office location, while others use it as secondary supportive space either for mobile workers, business meetings, temporary projects or special events.

- Could you explain how this is working with companies using co-working spaces at *[XX]*? (is it mainly as an extension of the headquarters, meeting spaces, events, etc.)
- Could you mention which type of employees are mainly working at the co-working space? (for instance, managers or mobile workers, temporary staff, amongst others.) And what was the nature of their work? (individual work, collaborative, team work, meetings with clients, etc.).

Part 4. Future possibilities in relation to co-working

According to your website, *[company]* has currently more than XXX locations and some new openings in the next couple of years.

- Are corporations a target group in the expansion plans of the company? How? (are there any particular strategies to attract this sector)
- Do you have any suggestions that could increase the use of co-working spaces in the corporate sector? (increase awareness, customized services, etc.)

Is there something additional that you would like to mention that you consider relevant for the research?

I would like to thank you for your participation in this research. If you are interested I can share my study once my graduation project is finished.

Appendix C—Interview Protocol Expert Study

Graduation Project
DD/MM/YYYY

Interview Protocol

Research: Co-working as an accommodation strategy for corporations

Institution: Delft University of Technology

Interviewers: Natalia Echeverri Agudelo

Interviewee: Name (Company)

Introduction

First of all, I would like to thank you for agreeing to participate in this interview. As I have mentioned before, this is part of a research carried out for my graduation project at the Faculty of Architecture and the Built Environment at the TU Delft. As I explained before, the research focuses on the value of co-working spaces for corporations; particularly the aim of the study is to understand how co-working can contribute to the performance of a corporation by meeting the flexibility demands of the organizations and its employees and suggest alternatives to facilitate the adoption of this workplace model in the corporate sector.

The outcome of the interview will be used to adjust the propositions that have resulted from my theoretical framework and give new insights into the topic of co-working as a corporate accommodation strategy. The interview consists of three main sections, I would like to remind you that there are no right or wrong answers and that the information provided would only be used for academic purposes. Accordingly, I would like to ask for your consent to record this interview, with the sole purpose of transcribing it, after this, the recordings will be deleted. Your answers in this interview will remain confidential.

Please keep in mind that you can refuse to answer any of the questions and you can withdraw from the study at any time.

Part 1. General Aspects on co-working

According to theory, co-working is defined by five main characteristics, 1) Community, collaboration and interaction between people of different backgrounds; 2) Space-as-a-service, membership that grants access to physical, virtual and social working environment; 3) Multipurpose office, typically ABW including open-plan, individual rooms, meeting rooms, etc.; 4) High accessibility, 24/7 and transportation hubs; 5) Attractive workplace, state of the art facilities and focus on user experience to attract target groups.

Considering these characteristics and the extensive research the *[organization]* has carried out in relation to the workplace and employee preferences

From the perspective of the employees:

- What do you consider are the main benefits for the employees to work at a co-working space?
- What do you consider are the main challenges for the employees to work at a co-working space?

From the perspective of the organization:

- What do you consider are the main advantages of using co-working as part of their accommodation strategy?
- What do you consider are the downsides of using co-working as part of their accommodation strategy?

In the last decades, the developments in ICT and technology have resulted in more mobile working habits, with this, the boundaries of the workplace have become less attached to one particular location. This has also resulted in the emergence of home office; but often, these arrangements have dismissed the importance of co-location and face-to-face interaction in the knowledge economy.

- Do you consider that co-working could offer the possibility to support satellite work while strengthening the social aspects of the workplace? (*balance community and autonomy*)

Co-working operators often provide a variety of high quality services that focus on employee experience, these often include wellness programs, events, and even hospitality services like dry-cleaning, childcare, amongst others.

- How important do you think these services are for the employees? And how relevant should these be for organizations when evaluating their workplace strategies?

As I mentioned, co-working spaces usually offer a variety of workplace settings that cater to the demands of different types of users.

- How relevant do you think this aspect is in promoting employee autonomy? And what would be the impact of this for the organization? (*freedom to choose*)

The memberships of co-working spaces usually grant access to multiple locations, both locally and internationally. Some authors have mentioned the importance of giving employees the flexibility of choosing where to work, both to reconcile their work and private life and to limit the constant interruptions by colleagues.

- Do you think this could play an important role in supporting the work-life balance of the employees and increasing their productivity? (*reduced commuting time, closer to facilities of private life, etc.*)

Because co-working spaces gather a variety of users from other corporations, independent workers, freelancers, etc.

- Do you think that this co-location could result in any relevant interactions or connections with actors outside of the corporation? (*networking possibilities*)
- Do you think this could be beneficial for social cohesion and knowledge sharing amongst the users?

Part 2. Findings from cases

Following questions are based on the findings from my cases

From my interviews, I've seen that some companies have started to combine their main office space with flexible space provided by co-working operators (memberships). In this strategy employees can choose on a daily basis whether they prefer working at the head office or at the co-working space.

- What do you think about this strategy? Do you think it could be a way to support the autonomy of the employees and eventually contribute to their performance and satisfaction?
- Do you see any potential drawbacks with respect to this strategy?

It has been mentioned by several companies that one challenge in adopting co-working is the management style, they have mentioned the need of changing the mindset of the employers. From a traditional way (being present at the office from 9-6) to managing by results, and trusting the employees.

- Do you agree with this statement? And what do you think organizations could do to facilitate the adoption of co-working as part of their accommodation strategy?

Another aspect that has been mentioned in some cases is that on one hand the company tries to promote their own corporate values while at the same time the co-working provider tries to create a community around their own set of values;

- What do you think are the possible repercussions of this? And how could this be tackled?

Part 3. Future possibilities

According to literature, with the exponential growth of co-working spaces in the last years, organizations are increasingly considering it as part of a range of solutions for their accommodation strategy. According to C&W (2020) 60% of the companies are currently using co-working in some part of their portfolio.

- If this workplace model is to be adopted by corporations in a larger scale, what do you consider are the main aspects that have to be addressed to ensure the support of the employees? (*by the suppliers and the company*)
- Do you think that companies could use co-working also as a testing lab to understand the preferences of the employees and explore innovative workplace concepts that could be implemented in their own office? (*furniture, layouts, workplace arrangements, etc.*)

Appendix D—Form of Consent

Informed Consent Form

Research: Co-working as an accommodation strategy for corporations
Institution: Delft University of Technology
Interviewers: Natalia Echeverri Agudelo
Interviewee: Name (Company)

Please tick the appropriate boxes

Taking part in the study

Yes **No**

- | | | |
|--|-----------------------|-----------------------|
| 1. I have read and understood the study information dated DD/MM/YYYY, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction. | <input type="radio"/> | <input type="radio"/> |
| 2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason. | <input type="radio"/> | <input type="radio"/> |
| 3. I understand that taking part in the study involves answering questions that will be audio-recorded, with the sole purpose of transcribing the interview, after which, the recordings will be deleted. | <input type="radio"/> | <input type="radio"/> |

Use of the information in the study

- | | | |
|--|-----------------------|-----------------------|
| 4. I understand that information I provide will be used only for academic purposes for the graduation project and corresponding presentation at TU Delft, unless indicated that certain information is confidential. | <input type="radio"/> | <input type="radio"/> |
| 5. I understand that personal information collected about me that can identify me, such as [e.g. my email address or personal contact details], will not be shared beyond the study team. | <input type="radio"/> | <input type="radio"/> |
| 6. I agree that my information can be quoted in research outputs. | <input type="radio"/> | <input type="radio"/> |
| 7. I agree that my real name can be used for quotes. | <input type="radio"/> | <input type="radio"/> |

Future use of information by others

- | | | |
|---|-----------------------|-----------------------|
| 8. I give permission for the publication of graduation thesis results at the TU Delft educational repository, which are partially based on the anonymized transcripts of this interview, to be used for future research and learning. | <input type="radio"/> | <input type="radio"/> |
|---|-----------------------|-----------------------|

.....
Name of participant

.....
Signature

.....
Date

Appendix E—List of Interviews

	N	Code	Organization	Interviewee	Role	Interview
Demand	01	Case A	Transportation Company	A	EMEA Workplace Lead	Face-to-face
	02	Case B	Communications Agency	B	Associate General Manager (Finance & Operations)	Face-to-face
	03	Case C	Consumer Goods Company	C	Head of Real Estate Strategy & Transactions Europe	Face-to-face
	04	Case D	Energy Company	D	Real Estate Portfolio Manager EMEA	Phone call
	05	Case E	Entertainment Company	E	Director of Workplace EMEA	Phone call
Supply	06	Provider W	International co-working operator	W	Co-working space manager	Face-to-face
	07	Provider X	Local co-working operator	X	Co-working space manager	Face-to-face
	08	Provider Y	International co-working operator	Y	Chief Financial Officer	Face-to-face
	09	Provider Z	Local co-working operator	Z	Founder and Manager of the space	Face-to-face
Expert	10	Expert 1	Center for People and Buildings	1	General Director	Face-to-face
	11	Expert 2	HOK—Hellmuth, Obata + Kassabaum	2	Director of Global Workplace Practice	Video call
	12	Expert 3	Savills Netherlands	3	Head of Research & Consultancy	Phone call

Appendix F—List of Codes ATLAS.ti

Theme	Code	Origin
Approach	Co-working Strategies	Emergent
	Co-working Structure	Theory
Corporation Flexibility	Physical Flexibility	Theory
	Functional Flexibility	Theory
	Financial Flexibility	Theory
Employee Flexibility	Time Flexibility	Theory
	Space Flexibility	Theory
	Location Flexibility	Theory
Advantages	Advantage Efficiency	Theory
	Advantage Environment	Theory
	Advantage Networking	Emergent
	Advantage Satisfaction	Theory
	Advantage Innovation	Theory
Challenges	Challenge Capacity	Emergent
	Challenge Company	Emergent
	Challenge Cost	Emergent
	Challenge Image / Culture	Emergent
	Challenge Privacy	Emergent
	Challenge Quality	Emergent
	Challenge Security	Emergent
	Challenge Trust	Emergent
	Challenge Internet	Emergent
	Challenge Mismatch	Emergent
	Challenge Customization	Emergent
	Challenge Management	Emergent
	Challenge Occupancy	Emergent

