HOW COLLABORATIVE SPACES ENABLE THE MODERN WORKPLACE: THE CASE STUDY OF MICROSOFT ITALY

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Abstract

Nowadays, large corporations and new ventures are totally redesigning their workplace. Indeed, firms are starting to invest in the creation of the so-called modern workplace. In so doing, companies also have to deeply rethink their ways of working. The aim of this research is to understand (i) how collaborative spaces in large corporations impact on collaboration, sharing of knowledge, and innovation, and overall (ii) the new role these spaces assume in the so-called modern workplace. Indeed, these two issues are under-explored in extant literature on collaborative spaces, which is currently mainly focused on co-working spaces and their impact on local economies.

To explore issues sub i) and ii), we study the case of Microsoft Italy, which has been the pioneer of the new concept of the so-called modern workplace since 2013. Microsoft Italy realized its modern workplace in Milan also through the building of the Microsoft House in February 2017. Leveraging on this case, we tried to study how the Microsoft House, besides digital technologies, leverages on collaborative spaces and how their characteristics affect the main pillars of the Microsoft modern workplace. In particular, a qualitative case study seemed to be the most appropriate method in the critical, early phase of the study of a new phenomenon, when key variables and their relationships are still unexplored.
Executive Summary

Nowadays firms are starting to invest in the creation of the so-called modern workplace. Although it has been so far underinvestigated by scholars and a clear definition does not exist yet, we defined the modern workplace as “the off-line and on-line work environment aimed at realizing four main pillars: employees’ engagement, flexibility, collaborations for innovation, and well-being”.

Besides digital technologies, one of the main levers that firms can use to develop the modern workplace consists in the creation of collaborative spaces within their buildings (Britton, 2016; Pettersen, 2016).

The literature on collaborative spaces develops in two main streams: co-working spaces and the design of offices internal to a company. While co-working literature is more focused on the community building and the effects on local economies and innovation, the literature about collaborative spaces within companies focuses on which office design improves company’s performance by boosting collaboration.

In particular, collaborative spaces are explicitly designed to improve the quantity and quality of interactions and knowledge sharing among employees and, more generally, among employees and firms’ stakeholders (customers, suppliers, universities and research centres). Knowledge sharing and collaboration take place in several forms: casual encounter, formal and informal meetings. In this sense, face-to-face interactions and unprogrammed encounters (i.e., path overlap and proximity) are key elements (Kabo et al. 2014, 2013; Catalini, 2015). However, geographical proximity can refer to different layers, from a broad scale, such as metropolitan areas, to a fine-grid scale, between workers within the working environment. Thus, collaborative spaces refer not only to the physical building
infrastructures (research offices and co-working spaces), but also to the local area (cities communities and science parks) (Rammer et al, 2016).

From the literature, we defined the main 4 broad characteristics of collaborative spaces as: in-site technology, adaptability (variety of spaces solutions, space distribution), facility to interact (location in the city, absence of space allocation, space concentration), and transparency. When creating collaborative spaces within their buildings and redesigning their ventures as collaborative spaces, firms have to deeply rethink their ways of working, without disregarding employees’ needs.

From the discussion above, it appears evident that collaborative spaces can be a crucial enabler for the creation of the modern workplace. Nevertheless, the main literature gap we identified is represented by how collaborative spaces in large corporations impact on collaboration, sharing of knowledge, and innovation, and overall the new role these spaces assume in the creation of the modern workplace.

![Figure 2](image)

**Figure 2.** Needs, leverages and objectives of the modern workplace

Modern workplace transformation is becoming a relevant topic inside organizations nowadays. Modern workplace goal is represented by matching company objectives (employees, engagement, productivity, collaboration and controlling) and employees’ needs
by leveraging technology, flexibility and collaborative spaces [see Figure 1] (Litchfield et al., 2016; Bystrom & Janica, 2016; Britton, 2016).

This research aims to provide evidence supporting this view and to show how collaborative spaces contributes to achieve the main pillars of the modern workplace we cited above. In so doing, we ultimately intend to contribute to academic conversations on the topic, and to provide new insights to firms, which want to create modern workplaces (also) through the creation of collaborative spaces.

To this end, we conducted a qualitative case study research to study the contemporary phenomenon. Since it is a recent phenomenon that goes under-remarked in the current literature, the case study research is the most suited method for studying it. Indeed, it is a methodology used to generate and test theory by providing ground-breaking insights (Gibbert et al. 2008). In particular, case studies are considered the most appropriate tools in the critical, early phase of a new management theory, when key variables and their relationships are being explored (Gibbert et al. 2008).

We focus on Microsoft Corp., in general, and Microsoft Italy, in particular, as a case in point. Indeed, Microsoft Corp. has been investing on the development of the modern workplace since 2013, and it was among the first companies to speak about this topic. Microsoft does not only champion the modern workplace internally, but it delivers also the technological solutions for its customers, which intend to realize their own modern workplace. In short, the modern workplace is a key lever of value generation in Microsoft.

In particular, materials provided by Microsoft has permitted to understand which is its modern workplace vision. These documents were fundamental to identify the pillars of the modern workplace as intended by Microsoft: employees’ engagement, flexibility, collaborations for innovation, well-being, centrality of the technology, and growth-mindset. Moreover, it gave us the possibility to set preliminary hypothesis on how characteristics of collaborative spaces impact on them [see Table 5].
Collaborations for innovation

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<th>Facility to interact</th>
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**Table 1.** Hypothesis on how collaborative spaces impact on Microsoft modern workplace

On February 2017, Microsoft Italy opened the Microsoft House, the new Italian headquarter of Microsoft Corp., intended to be a collaborative space that realizes the modern workplace. Thus, Microsoft House is the ideal setting for answering our research question: *do collaborative spaces enable the development of a modern workplace (and its pillars)?*

We started our collaboration with Microsoft Italy by conducting preliminary interviews involving employees, who explained us the vision and the characteristics of the Microsoft House, as well as the main differences with the previous location in Peschiera Borromeo. The reason why they decided to build the Microsoft House is that nowadays “*in order to trigger innovation, companies must implement an osmotic change with the external environment, which include other companies: partners, customers, start-ups, young people, competitors and technology itself*”. Although the previous headquarter was really efficient and functional to any type of employees’ activities, and one of the most significant example of best practices in terms of organizational workplace, it would have not guaranteed a central role in the Italian innovation scenario anymore.

The new building, extends on six floors over 7500 square metres. Half of them are opened to citizens and visitors (MTC, Loft, Digital class, Showroom) and the remaining ones are used for internal activities. Moreover, thanks to the first round of interviews, we were able to better understand the goals and the reasons of the Microsoft House project. In particular, we interviewed 6 employees who belong to the Microsoft “Leadership Team” and lead us to
understand that the new building is based on four main pillars: *visibility*, *openness*, *smartness* and *innovation*.

The insights coming from a first round of interviews were really useful in order to set a second round by designing questions with the aim to compare our hypotheses with the actual observed patterns in Microsoft. Indeed, we conducted more focused questions explicitly on the relationship between collaborative spaces and the creation of the *modern workplace*. In particular, since the majority of Microsoft Italy employees have sales or tech/sales roles, we decided to rely on interviews of 12 employees coming from different business units.

Employees’ interviews have permitted to validate most of our initial hypotheses about collaborative spaces’ impacts on *modern workplace* pillars.

Collaboration resulted the most impacted pillar by collaborative spaces. In particular, adaptability improves the quality, and thus the quantity, of *engaged collaboration* (scheduled). On the other hand, the effect on *casual collaboration* is more unclear: the concentration of space, the absence of space allocation, and the transparency increase casual collaboration among employees within the building, however employees come less often to the new headquarter than to the previous one as a result of the increased work flexibility. On the other hand, the *external collaboration* is enhanced by the in site technology and the facility to interact. Indeed, in site technology, the central location and the Microsoft Technology Centre are extremely useful in showing customers Microsoft workplace transformation and how *modern workplace* happens.

Work flexibility is often referred by employees as Smart Working. It is enabled by the possibility to have several types of spaces able to perfectly match the working needs inside and outside the headquarter. Thus, in site technology and adaptability are the main factors favouring work flexibility. Although in site technology facilitates Smart Working, in some cases, it could also negatively impact working remotely since workers could provide a more engaging and productive meeting when physically present in the building.

Moreover, we expected that facility to interact does not directly impact on Microsoft flexible way of working. By contrast, this aspect has been fully addressed by respondents.
Indeed, level of space allocation, space concentration and the location in the city are aspects that generally improve flexibility.

Even the use of technological tools can be enhanced by physical space characteristics. Indeed, the interviews confirmed that the characteristics of building’s technology and space adaptability facilitate it.

The effect of transparency and easiness to interact on the diffusion of a growth mindset among employees has been confirmed. However, an interesting emerging issue was represented by the relationship between in site technology and engagement: we expected that in site technology would have impacted on employees’ engagement, but employees linked this topic to the growth mindset instead.

While regarding the employee engagement, we did not expect any correlations between it and transparency. However, it emerged that transparency gives the feeling of a company where there is no hierarchy, so that employees feel more empowered. It also helps to create the sense of being part of a family that shares the same overall objectives and have no secrets, participating in the culture internalisation process as well as the building of trust.

The central position is the main factor improving employees’ well-being. Indeed, employees can easily enjoy the city centre, and thus it creates several opportunities for team building or just leisure activities (lunch, aperitive, dinner...). By contrast, the new building has less recreational areas than the previous headquarter, and transparency could be perceived as a way of monitoring by employers, these aspects could negatively affect employees’ well-being.
As we previously anticipated, since it is a recent phenomenon, which was under-researched in the existing literature, the case study research is the most suited method for studying it. Anyway, Microsoft House case study includes some limitations. First, our research is limited in terms of “generalizability” or external validity. Indeed, a cross case analysis involving more firms is necessary as a good basis for analytical generalization. Second, a further limitation is represented by the fact that respondents could have perceptions that are different from reality. Indeed, workers may lack the perception of benefits coming from the change of headquarter, which is due to the typical humans’ resistance to change. Third, since we conducted the research during a large organisational structure change. Thus, Microsoft case may be a possible bias indicator of what happen in reality. On the one side, we could appreciate how the space adaptability reduces the required costs and time of organisational changes. Organisational changes have an impact on how spaces are used by employees. However, employees whose team or role changes need to spend more time in the building. Indeed, the change of team leads employees to spend more time together with their new colleagues to know each other and build the trust.
Despite limitation, we believe our research could be a starting point for future studies more focused on the organisational change aspect and how the physical space design may represent a supporting tool of the change management process.
# Content Index

**HOW COLLABORATIVE SPACES ENABLE THE MODERN WORKPLACE: THE CASE STUDY OF MICROSOFT ITALY** ................................................................. I

**ABSTRACT** ........................................................................................................ III

**EXECUTIVE SUMMARY** .................................................................................... IV

**CONTENT INDEX** ................................................................................................ XIII

**FIGURES INDEX** ................................................................................................. XV

**TABLES INDEX** ................................................................................................ XVI

**INTRODUCTION** ................................................................................................. 1

**CHAPTER 1  COLLABORATIVE SPACES’ LITERATURE REVIEW** ......................... 5
  1.1 INTRODUCTION .......................................................................................... 5
  1.2 METHODOLOGY USED FOR SYSTEMATIC REVIEW ...................................... 7
  1.3 METHODOLOGIES USED BY THE EXISTING LITERATURE .............................. 12
  1.4 LITERATURE REVIEW: A TAXONOMY .......................................................... 16
  1.5 CONCLUDING REMARKS ............................................................................ 31

**CHAPTER 2  THE MODERN WORKPLACE** ......................................................... 34
  2.1 THE MODERN WORKPLACE LITERATURE ....................................................... 34
  2.2 MICROSOFT’S MODERN WORKPLACE .......................................................... 41

**CHAPTER 3  COLLABORATIVE SPACE AND MODERN WORKPLACE: THE CASE STUDY ON MICROSOFT ITALY** ......................................................... 47
  3.1 THE MICROSOFT HOUSE ............................................................................ 47
  3.2 MICROSOFT ORGANISATION ..................................................................... 52

**METHODOLOGY** ................................................................................................. 55
3.3 METHODOLOGY .................................................................................................................. 55

CHAPTER 4 INTERVIEWS FINDINGS ......................................................................................... 62

4.1 COLLABORATION ............................................................................................................. 62
  4.1.1 Facility to interact ................................................................................................. 63
  4.1.2 Space adaptability ................................................................................................. 70
  4.1.3 Transparency ......................................................................................................... 73
  4.1.4 In Site Technology ................................................................................................. 74
  4.1.5 Organisational Structure Changes ......................................................................... 76

4.2 FLEXIBILITY ..................................................................................................................... 77
  4.2.1 Facility to interact ................................................................................................. 80
  4.2.2 Space adaptability ................................................................................................. 84
  4.2.3 In Site Technology ................................................................................................. 87

4.3 TECHNOLOGY .................................................................................................................. 88
  4.3.1 In Site Technology ................................................................................................. 91
  4.3.2 Space Adaptability ................................................................................................. 93

4.4 GROWTH MINDSET ....................................................................................................... 94
  4.4.1 Facility to interact ................................................................................................. 95
  4.4.2 Transparency ......................................................................................................... 96
  4.4.3 In Site Technology ................................................................................................. 98

4.5 EMPLOYEE ENGAGEMENT ............................................................................................ 98
  4.5.1 Space Adaptability ............................................................................................... 99
  4.5.2 Facility to interact ................................................................................................. 100
  4.5.3 Transparency ........................................................................................................ 100

4.6 WELL-BEING .................................................................................................................... 101
  4.6.1 Facility to interact ................................................................................................. 103
  4.6.2 Space Adaptability ................................................................................................. 105
  4.6.3 In Site Technology ................................................................................................. 105

4.7 FINDINGS CONCLUSIONS ............................................................................................. 106

CONCLUSIONS ......................................................................................................................... 109

REFERENCES ........................................................................................................................ 113

APPENDIX A QUOTES AND INTERVIEWS ........................................................................... 117
  A.1 RESPONDENTS’ DESCRIPTION ..................................................................................... 117
  A.2 QUOTES ......................................................................................................................... 118
Figures Index

Figure 1. Number of papers in the literature review about collaborative spaces for each year from 2001 to 2017 (data on 2017 are available only until March) 8
Figure 2. Needs, leverages and objectives of the modern workplace 34
Figure 3. The Showroom 48
Figure 4. The Digital Class 48
Figure 5. The Loft 49
Figure 6. The Hub 49
Figure 7. Open Space Offices 49
Figure 8. Respondents divided in Microsoft Italy division chart (2nd round of interviews) 60
Figure 9. The Surface Hub 86
Figure 10. The Creative Gardens 86
Figure 11. The Envisioning Centre 86
## Tables Index

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.</td>
<td>Collaborative spaces literature analysis</td>
<td>9</td>
</tr>
<tr>
<td>Table 2.</td>
<td>Collaborative space literature methodology analysis</td>
<td>13</td>
</tr>
<tr>
<td>Table 3.</td>
<td>Space taxonomy</td>
<td>17</td>
</tr>
<tr>
<td>Table 4.</td>
<td>Hypothesis on how collaborative spaces impact on modern workplace</td>
<td>40</td>
</tr>
<tr>
<td>Table 5.</td>
<td>Hypothesis on how collaborative spaces impact on Microsoft modern workplace</td>
<td>45</td>
</tr>
<tr>
<td>Table 6.</td>
<td>How collaborative spaces characteristics impact on Microsoft modern workplace pillars</td>
<td>106</td>
</tr>
</tbody>
</table>
In the recent years an increasing number of companies invested to create new collaborative workplaces. Our research aims to understand, which are the drivers behind this choice, the workplace’s effects on employees’ output, and how the concept of workplace is changing. The word “workplace” has always been defined as “a place where people work, such as an office or factory” (Oxford Dictionary). However, recently it has been introduced the new concept of “modern workplace”, which is no more referring to just a physical place, but more generally to the whole working environment comprehensive of all the enabling tools, such as the new technologies. The physical space remains one of the main tools of the modern workplace. In particular, this research is focused on the role of collaborative spaces and aims to detect all the relationships between their key characteristics and the main pillars of the modern workplace (employees’ engagement, flexibility, collaborations for innovation, and well-being).

The first chapter consists in a review of the literature on collaborative spaces, in which the literature about the topic is analysed in terms of contents, methodologies and demographic area (in terms of authors’ nationality, nationality of the affiliated universities, and authors’ studies background). It describes all different types of collaborative spaces (co-working spaces, research centre, flex offices, etc.) and aims at identifying their benefits, role and impact in the work environment. Moreover, it helps to highlight if there are gaps in the
literature to be addressed. In particular, literature about offices design for collaboration is focused mainly on research laboratories in university campuses, while scholars under-remarked how collaborative spaces characteristics impact in large corporations’ offices. For this reason, we decided to explore the case of Microsoft Italy. Our analysis aims at filling this gap by understanding how the characteristics of collaborative spaces impact on the Italian Microsoft headquarter.

In the second chapter, we were able to address the so-called “modern workplace”. The literature is quite recent regarding this topic and is based only on some aspects of workplaces. For this reason, Microsoft Italy provided us a set of documents and videos which permit to better understand the concept of Microsoft modern workplace in order to define which are its main pillars (innovation, flexibility, well-being, technology, engagement, and growth mindset). In particular, we found an interesting gap between literature and Microsoft modern workplace concept, which relies on two main pillars: technology and growth mindset. Indeed, the term “modern workplace” was coined by Microsoft several years ago and it has invested a relevant number of resources for its transformation. Although Microsoft is focused on the technological workplace side, collaborative spaces represent a part of the broader phenomenon of the modern workplace.

Recently, Microsoft started to adapt this workplace model to its new Italian headquarter in Milan called “The Microsoft House”. Thus, the third chapter highlights “The Microsoft House” case and its features. Indeed, it aims at understanding both the context of the new Italian headquarter and the organizational structure of the company. It has been defined “as a collaborative open space among people, where individual and organizations can engage and develop solutions and digital opportunities; a landmark for young entrepreneurs and students for delivering innovation in order to contribute to the future and economic development in Italy”.

This chapter includes the methodology used in order to study the Microsoft Italy case study. Since the topic is quite recent, the best option was represented by a qualitative case study where we tried to provide a definition of the modern workplace (not existing in
literature). Indeed, it is a methodology used to generate and test theory by providing ground-
breaking insights. In particular, case studies are considered the most appropriate tools in the
critical, early phase of a new management theory, when key variables and their relationships
are being explored.

The fourth chapter analyse in detail the Microsoft House case study. It is based on 12
Microsoft sales employees' interviews, which has permitted to study how each characteristic
of collaborative spaces (on site technology, transparency, adaptability, and facility to
interact) directly impact on the main pillars of the Microsoft modern workplace. In
particular, it has permitted to test our initial hypothesis coming from literature review and
Microsoft documents and to spot new aspects that were not relevant before.

The last section is represented by our conclusions and suggestions for future research
paths.
1.1 Introduction

The question about how individuals and innovation communities participate in localized dynamics of innovation is still unclear. The literature about the topic is still not defined precisely, it includes different and broad themes related to each other: micro geography, epistemic communities, collaborative working environment, knowledge sharing, and the dynamics of innovation. Our first attempt is to provide a general framework about how these topics are linked and to understand which of them are more developed or which need further research.

The first macro-theme relates to the effects of micro-geography characteristics of communities on the innovation process. In particular, the relationship among large groups of individuals and the opportunities for social interactions have been addressed (Soreson and Samila, 2016). Going deeper in the role of communities in innovation and creative process, it is possible to define three different layers of basic components: upperground, middleground, and underground (Cohendent and Grandadam 2014; 2010). This enables new ideas to transit from an informal microlevel to a formal
It has been remarked that epistemic communities have a crucial role in the development of radical innovations, where the middleground level has the task of expressing new rules that will guide a cognitive work of the community (Cohendet and Grandadam 2014; 2010).

The second macro-theme relates to the working environment and the importance of personal interactions. Collaborative working spaces are places in which a group of individuals with more or less heterogeneous backgrounds are co-located together. Thus, co-workers can network their other activities by engaging in peer-to-peer interactions through various settings that allow concentrative work, collaboration, and social activities (Spinuzzi 2012; Olma 2012; Parrino 2013; Laing 2013).

In particular, collaborative working environment studies can be classified in two main categories: co-working spaces and the design of offices internal to a company.

Co-working literature is more focused on the community building and the effects on local economies and innovation (Merkel 2015; Russ and Orel 2015; Capdevilla 2015), meanwhile collaborative working within the company is related to leverage the office design in order to improve company's performance and boosting collaboration (Kabo et al 2014, 2013; Bodin and Bodin 2009).

The third macro-theme concerns knowledge sharing within and outside the working environment. This theme is transversal to the other topics. The literature shows the importance of the transmission of tacit knowledge through face-to-face interactions in shaping innovation (Storper and Venables 2004). In order to study these effects, it is important to have indicators about face-to-face contacts, but the literature often pointed out the difficulties in measuring them. In particular, when referring to dynamics within a company the most used indicators are different measures of functional distance: proximity (Catalini, 2015), space design features as path overlap (unprogrammed encounters) (Kabo et al 2014; 2013), accessibility, visibility, and intelligibility (Fabbri and Duboc, 2013). While, when referring to communities and local environment, the proxy for face-to-face contacts is represented by the presence of opportunities for social interactions as hubs and co-working
1.2 Methodology used for systematic review


We used the systematic review process using “Scopus” to search the following keywords: open space working, collaborative space, co-working space, open space organization, open space office, collaborative workplace, Smart Working and workplace.

We also included some articles from “Deskmag”, The “co-working Magazine” using “work in collaborative spaces” as a keyword, meanwhile Smart Working has been excluded since, although strongly correlated with the theme it lies outside our research focus. Since the topic is quite recent, a big percentage (27%) is represented by written paper (WP), they have not been published on any journal. All the others are almost equally distributed: 37% are published in management and innovation journal and 36% in geography and environmental planning journals. This is mainly due to the fact that microgeography and work environment studies include many innovation, and also entrepreneurship aspects in their research. They can be probably defined as a cross-topic, which gains the interest of both groups of scholars that can study it from different perspectives. In order to understand the
Journal outlet impact on the research topic, we exploit our sample’s citations count. The 5 most cited articles are: Working Alone, Together: Co-working as Emergent Collaborative Activity (2012; 47 citations), Epistemic communities, localization and dynamics of knowledge creation (2014; 58 citations), Science Parks and the growth of new technology-based firms-academic-industry links, innovation and markets, (2002; 160 citations), Science parks and incubators: observations, synthesis and future research (2005; 214 citations), Firms in territories: a relational perspective (2001, 273 citations) that are respectively published in JBTC, JEG, RP, JBV and WP. As we expected the most cited papers are also the less recent and they deal with microgeography and knowledge sharing within communities and co-working spaces. In these papers, microgeography is related to the different ways in which territories affect firms, and which are the approaches used (innovative milieus, national innovation systems, learning regions). Meanwhile, knowledge sharing refers to science parks and hubs (incubators, co-working spaces, universities, and research centres), and the community building and its importance, given that the knowledge society has shifted from mass production to interorganizational collaborations (Yamazumi, 2009).

It looks like the less cited articles are the ones related to the design of offices for collaboration, we attribute this not to a lack of interest, but to the fact that this is a rather new topic, especially related to economic and operating issues.

**Figure 1.** Number of papers in the literature review about collaborative spaces for each year from 2001 to 2017 (data on 2017 are available only until March)
We focused on the recent literature about collaborative spaces since the objective of this research is to understand their relationship with the new concept of modern workplace. The literature on which we based our review spans from 2001 to 2017, but the majority of papers is very recent: 50% of them were published after 2014, indeed the literature has grown quickly over the last 3 years as we can see from Graph 1.

The papers are written by a total of 55 authors coming from 14 different countries (USA, Canada, UK, Spain, France, Italy, Germany, Austria, Finland, Sweden, Slovenia, Greece, Turkey, South Korea). The majority of authors are affiliated to European universities (70%), meanwhile the remaining 30% were based in North America. Regarding their background, the majority of them have studied Economics (27 authors – 49%), while the others have background studies in Architecture (11 authors – 20%), Sociology (8 authors – 15%), Entrepreneurship (4 authors – 7%), Engineering (3 authors – 5%), and Computer Science (2 authors – 4%).

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<thead>
<tr>
<th>Authors</th>
<th>Journal</th>
<th>Title</th>
<th>Nationality</th>
<th>Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avdikos V., Kalogeresis A.</td>
<td>WP</td>
<td>Socio-economic profile and working conditions of freelancers in co-working spaces and work collectives: evidence from the design sector in Greece</td>
<td>Greece</td>
<td>Architecture</td>
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<tr>
<td>Kojo I., Nenonen S.</td>
<td>Intelligent Buildings International</td>
<td>Evolution of co-working places: drivers and possibilities</td>
<td>Finland</td>
<td>Economics and innovation, Design</td>
</tr>
<tr>
<td>Tagliaro C., Ciaramella A.</td>
<td>Journal of Corporate Real Estate</td>
<td>Experiencing smart working: a case study on workplace change management in Italy</td>
<td>Italy</td>
<td>Architecture</td>
</tr>
<tr>
<td>Capdevila I.</td>
<td>International Journal of Innovation Management</td>
<td>Co-working spaces and the localised dynamics of innovation in Barcelona</td>
<td>Spain/ Canada</td>
<td>Economics and innovation</td>
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<td>Slovenia</td>
<td>Economics, Sociology</td>
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<td>Canada/USA</td>
<td>Architecture</td>
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<td>Buzz: face-to-face contact and the urban economy</td>
<td>UK</td>
<td>Sociology, economics</td>
</tr>
<tr>
<td>Felichism W., Kabo, Natalie Cotton-Nessler, Yongha Hwang, Margaret C. Levenstein, Jason Owen-Smith</td>
<td>Research Policy</td>
<td>Proximity effects on the dynamics and outcomes of scientific collaborations</td>
<td>USA, South Korea</td>
<td>Architecture, Economics and innovation, Sociology</td>
</tr>
<tr>
<td>Tynjälä P., Hääkkinen P., Hämäläinen R.</td>
<td>WP</td>
<td>TEL@work: Toward integration of theory and practice</td>
<td>Finland</td>
<td>Sociology</td>
</tr>
<tr>
<td>Susanne Ollila, Maria Elmquist</td>
<td>Creative and Innovation Management</td>
<td>Managing open innovation: Exploring challenges at the interfaces of an open innovation Arena</td>
<td>Sweden</td>
<td>Economics and innovation</td>
</tr>
<tr>
<td>Sampsa Samila, Olav Soreson</td>
<td>WP</td>
<td>Community and Capital in Entrepreneurship and Economic Growth</td>
<td>Finland, USA/Singapore</td>
<td>Economics and innovation, entrepreneurship</td>
</tr>
<tr>
<td>Feldman M. P.</td>
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Table 1. Collaborative spaces literature analysis. “Nationality” refers to [authors' nationality / country of affiliated university if it is different from the authors' one]

1.3 Methodologies used by the existing literature

Considering the papers included in our literature review on collaborative spaces, it emerges that the majority is based on qualitative research. As it is possible to see in the table, 30% of the papers adopts a quantitative methodology, 48% a qualitative methodology meanwhile 22% uses both of them. Most of the papers used a qualitative approach. This result is in line with the expectations considering that the topic is relatively recent and thus less developed. Indeed, preliminary to quantitative analysis it is necessary to understand the theory and dynamics of the process, and to address the most suitable variables that will be considered in building the model.

Quantitative analysis can be defined as a simply way of measuring or evaluating things, behaviours, experiment through the collection and examination of variables and data with the development of a statistical or mathematical model for their elaboration. Quantitative
analyses on collaborative spaces is adopted especially for research offices and science parks and is focused on space variables: physical distance/proximity, overlapping path, accessibility, number of collaborative spaces, and layout building. Papers studying the sharing of knowledge in collaborative spaces also consider human variables in their quantitative analysis such as tendency to collaborate, previous collaboration, creativity, face to face consultations, social integration, and productivity. It could be interesting, but also reasonable, that authors who use space variables have mainly architectural or design background, meanwhile human variables have been addressed especially from authors with sociology and economics background.

Qualitative research is often a primarily exploratory research and serves the purpose to gain an understanding of the “big picture” by identifying main variables and the relationships among them through the collection of opinions and descriptive information. It provides insights into the problem, helps to develop ideas or hypotheses, or finding correlations for potential quantitative research. For sake of simplicity, we considered as qualitative those papers that are based on descriptive information without any models or statistical analysis.

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1.4 Literature review: a taxonomy

Collaborative spaces are explicitly designed to improve the quantity and quality of interactions and knowledge sharing among employees and, more generally, among employees and firms’ stakeholders (customers, suppliers, universities and research centres).

Nowadays, companies are investing a lot in collaborative spaces since they perceive them as places where innovation arise. Innovation activities strongly rely on combination of both external and internal knowledge. External knowledge can refer to the macro environment in which the firms operate, which includes all the actors that collaborate, compete, or affect the local system (suppliers, competitors, customers, communities ...), but also into the internal firms’ environment, where individuals interact, collaborate, and share knowledge.

Therefore, geographical proximity to these external knowledge sources plays an important role in shaping the level and quality of innovation (Rammer et al, 2016). Geographical proximity can refer to different layers, from a broad scale, such as metropolitan areas, to a fine-grid scale, between workers within the working environment.

The literature covers a wide range of minors explaining the dynamics between innovation activities and geography. Effects on the city environment, space design for productivity & innovation, knowledge sharing & collaboration, reasons in selecting working spaces,
community building, and source of finance represent the main topics highlighted in the literature review.

The content can be classified basing on the different themes discussed and the taxonomy of spaces that have been studied: co-working spaces, research offices, science parks and city communities represent the collaborative “spaces” analysed in literature. Spaces refer not only to the physical building infrastructures (research offices and co-working spaces), but also to the local area as innovation scenarios (cities communities and science parks).

Spaces are designed to foster different goals (productivity, innovation etc..) and impact differently both on the city environment and employees. Indeed, knowledge sharing and collaboration take place in several forms (casual encounter, formal and informal meetings). Authors also highlights the importance in selecting the working space both in terms of advantages and disadvantages. Extremely importance is attributed to the space community both internal to co-working spaces and science parks as well as external communities within the city environment.

The table below shows the classification of the articles based on two axes: themes and spaces taxonomy.

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<thead>
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<td>Reasons in selecting working spaces</td>
<td>Fuzi et al (2015); Fabbri and Duboc (2013); Avdikos and Kalogeresis (2017); Capdevilla (2015); Rus and Orel (2015); Spinuzzi (2012); Merkel (2015)</td>
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Table 3. Space taxonomy
Co-working spaces

Co-working spaces are the most discussed collaborative space in recent literature. It is a current and global workplace phenomenon, which are arising in cities’ environment. Co-working spaces provide the place where co-workers can network their other activities by engaging in peer-to-peer interactions (Spinuzzi, 2012). It is important to point out that not all the shared offices are co-working spaces. Indeed, one of the most important feature of co-working spaces is the focus on the community and its knowledge sharing dynamics (Capdevilla, 2015). According to Co-working Wiki, “independent professionals and those with workplace flexibility work better together than they do alone”, thus “co-working spaces are built around the idea of community-building and sustainability. Co-working spaces uphold the values set forth by those who developed the concept in the first place: collaboration, community, sustainability, openness, and accessibility”.

Johns and Gratton (2013) defines two types of co-working spaces: (i) spaces created by companies for their own workers to foster employees’ engagement and innovation, and (ii) independently operating co-working spaces that serve people for working purposes. Independent co-working spaces host mobile workers such as freelancers, start-up entrepreneurs, small business owners and permanent employees (Foertsch 2011a; Spinuzzi 2012; Laing 2013; Parrino 2013). The main purpose for companies’ co-working spaces is to leverage the flexible way of working and the increase of collaboration to improve their employees’ creativity and productivity. Independent ones have a totally different business model: providing membership fee-based offices for individuals to stimulate the environment and the networking among co-workers.

Literature on co-working spaces covers most of the themes we have previously introduced, particularly focusing on knowledge sharing and collaboration. This growing phenomenon entails a re-examination of the role and the benefits of the work space and it can be leveraged to support innovation processes (Kojo and Nenonen, 2014). There are work-place studies about organization theories focused on facilitating communication that spurs innovation because of direct link between the design of physical space and creativity.
According to Fabbri and Duboc (2013), co-working space contributes to creativity, innovation and learning for co-workers, particularly if they are knowledge workers. Indeed, they have to transform, interacting with each other, their personal and subjective tacit knowledge in organizational explicit knowledge to foster the innovation capabilities of their companies.

Collaborations and interactions are sources of learning and knowledge creation for workers. Indeed, learning at work commonly take place through social and intellectual actions that are not intentional learning activities (Tynjälä et al, 2014). Indeed, collaborations strongly rely on face-to-face encounters (Kabo et al., 2013, 2014). In particular, co-working spaces facilitate encounters, interactions and a fruitful exchange between diverse work, practice, and epistemic communities and cultures: “the physical design of the co-working space, with its open floor plan, arrangement of tables to enable eye contact between co-workers, or actual location of social areas (kitchen, meeting rooms, sofa corner) play an important role in turning it into a collaborative space. The design has an influence on the flows of movement in a space and the interaction patterns between people” (Merkel, 2015). In turn, collaborations depend on physical office features and design. Thus, it means that the physical space may influence how and where communication takes place and the quality of that communication: accessibility, density, proximity, distance to others, layout, design and visual cues can enable or constrain the processes of knowledge creation and sharing (Fabbri and Duboc, 2013).

In order to understand the real benefits for independent and companies’ co-working spaces it is important to understand the reasons why individuals co-work. According to Fuzi (2015), their main characteristics is to encourage creativity, idea sharing, mentoring, networking, socializing and generating new business opportunities for small firms, start-ups and freelancers who typically lack the resources of large organizations. Especially for entrepreneurs, the main reason that brings them to work in these spaces is to build social networks and to create synergies with peers in the working environment. Moreover, working in a joint space means having cost-savings through shared equipment and rent (Merkel,
Indeed, thanks to the growing inflow of investments into premium housing and office buildings in cities, the global urban strategy of gentrification has served to significantly increase rents overall, making it difficult for creative professionals, especially in the early stages of their career, to obtain and maintain an office or production space in the city (Merkel, 2015). Furthermore, according to Merkel (2015), “co-working spaces can be described as a bottom-up solution or collective strategy for coping with structural changes in the general labour market and in the organization of work, particularly in the labour markets of the creative industries” in which the proportion of freelancers and self-employed is continuing to increase. These categories of workers choose co-working because they may feel alone, or also to avoid unproductive working life at home offices (Merkel, 2015, Spinuzzi 2012). Indeed, being present in a co-working space environment positively influence individuals’ productivity, creativity, wellbeing and social embeddedness (Fuzi et al, 2015: in their study 85% felt less lonely and 75% reported to be more productive since joining co-working spaces).

Co-working spaces are built around the idea of collaborative space and sustainability. A crucial role is played by the hosts who create a community in which co-working spaces tend to identify themselves through the specialization in different fields (fablab1, hackerspaces2...) (Rus and Orel, 2015). Furthermore, co-working spaces contribute to the interaction between co-located actors through the articulation of places, spaces, projects and events, and thus they are a form of intermediaries between individuals (which represent the underground level of the community) and innovative firms (which are the upperground level of the community) (Capdevila, 2015). On the other hand, the notion of co-working community has little to do with the notion of traditional community because it does not include just belonging, sharing, and trust, but it also embraces openness to new people, innovation, new ideas, and other communities (Rus and Orel, 2015). Hence, local co-workers have access to

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1 FabLab: Fabrication Laboratory: it is a small workshop offering personal digital fabrication. (Bodin, 2009)

2 Hackerspace: A hackerspace is a physical location where people can meet, work, and learn on a variety of subjects, primarily related to technology. (Jones, 2010)
knowledge from external sources, and at the same time external individuals integrate in the “local buzz” and get in contact with the locally developed knowledge. This cross-pollination improves the innovativeness of the community (Capdevila, 2015). Openness and cross-pollination are the main reasons why companies are opening their spaces to entrepreneurs, freelancers, students and other individuals as a form of open innovation.

Rus and Orel (2015) provides a general process to build a co-working community composed by four steps: learning, community building, ground testing, and community creation. Learning means to identify the interest and the real demand of a co-working space, including the preliminary research on the co-working spaces already operating in the area. Community building refers to finding the “initiators” of the co-working movement: self-employed individuals from different fields to offer lobby free of charge (Orel, 2014). Initiators are used as a mediation process to build relationship among the early users and to seed the culture of openness and collaboration. It brings to closer personal relationships among them and to opportunities for sharing the knowledge. The ground testing phase aims at stimulating interest in the local environment and legitimize the community. These four phases may not be universal, but represent the efforts at building communities that create the demand for shared physical spaces and the preconditions for the sharing and collaborative culture required by them.

Co-working spaces can significantly affect the local area in which it is located, not only in terms of local development but also under a structural perspective. They represent both a “solution for” and a “cause of” the increase in rents and prices of housing in the area. Indeed, high level of investments in office buildings can strongly support re-urbanization process and the urban strategy of gentrification of local areas (Kojo and Nenonen, 2014; Merkel, 2015). On the other hand, gentrification of areas brings to the increase of rents overall. Indeed it forces low income residents out of inner cities areas by making it difficult for creative professionals, especially in the early stages of their career, to obtain and maintain a flat or to let alone an additional office or production space in the city (Lees et al, 2008). Thus, this is

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2 Hackerspaces: A place in which people with an interest in computing or technology can gather to work
also a driver for the increase in demand of co-working spaces (Merkel, 2015). Another way through which co-working spaces impact the city is by reducing the environmental impact on it, indeed, co-workers by sharing the resources may reduce the overall consumption of energy and wasted consumptions (Kojo and Nenonen, 2014).

**Research offices**

We considered into the category “research offices” the following spaces: research centres, university laboratories, and company R&D offices. Firstly, the literature studies which is the relationship between the workplace design and the workers’ level of innovation and productivity. “*Spatial allocation is often driven by idiosyncratic needs that are either unrelated to inventive activity (e.g. availability of space, building costs, amenities, etc.), or that emerge from an intensive bargaining process between the parties involved*” (Catalini, 2015, pp. 3). However, many researches have been conducted in order to understand what is the link between proximity and innovation outcomes, and many big enterprises are redesigning their offices in this direction.

Catalini (2015) analyses the relationship between work space planning, consultations (face-to-face consultations) and innovation process outcomes, highlighting the importance of sharing information since higher level of consultations brings to higher level of R&D effectiveness (Toker and Gray, 2008). Therefore, face-to-face consultations, that can be programmed or casual encounters, are influenced by the proximity among researchers.

Proximity is linked not only to the collaboration rate, but even to the types of ideas, the degree of experimentation, and the direction of researches. In particular, co-location leads to the reduction of experimentation costs because of the reduction of distance that decreases the opportunity cost of time, and in turn it leads to the increase of interactions. It has effects on quality and type of collaborations: it may bring to an increase of projects with high uncertainty ex-ante. At the same time, it lowers the expected quality through a weaker selection effect, and it could lead to higher variance, and thus also to higher return projects.

on projects while sharing ideas, equipment, and knowledge. (Makerspace book, 2013)
Empirical studies show that co-location induces labs to engage in more high-quality research and increases the crosspollination of ideas among researchers (Catalini, 2015).

It is important to remark that proximity affects collaboration by increasing the likelihood of casual encounters and by reducing the time and cost for face-to-face consultations, of particular importance in case of high degree of tacit knowledge (Catalini, 2015; Kabo et al., 2013; 2014). In particular Kabo et al. (2013, 2014), considering the fact that collaboration is mainly increased by casual encounters more than proximity itself, instead of using physical distance adopted functional distance or functional proximity that measures the extent to which researchers share overlapping areas and paths. It focuses more explicitly on the relational aspect of physical layouts by emphasizing, for instance, the ease and difficulty of movement among spaces. In particular, Kabo et al. (2014) in their empirical study show that collaboration is more sensitive to path overlap than to physical distance, meaning that path overlap represents a better and tight proxy for face-to-face encounters. These results show that configurational properties of space can shape collaboration formation and success by programming face-to-face interactions through the design of the building (Kabo, 2014).

As we already mentioned, building and space design plays a crucial role in innovation outcomes. Many companies moved their business units, especially R&D, to the “hoteling” or “hot-desking model”. According to Tagliaro and Ciaramella (2015), “the hoteling” and “hot-desking” means providing workstations on an “as needed”. The first one allows the employees to book their desk in advance while the “hot-desking” function on first come-first served basis. The “hot-desking” model brings workers to change their work station on a daily basis. An important issue is represented by the lack of perception of possible benefits coming from this change, or better people’s perception may be incorrect sometimes, it may deviate from reality. For example, Tagliaro and Ciaramella (2016) show in their study that employees signalled a general lack of rooms, in particular of medium-sized and large rooms. However, the real occupancy rate of the rooms did not exceed the 25%.

Workers behaviours in marking working territoriality is one of the most discussed topic in the literature, mainly due to the negative impact on collaboration. Moreover, changing the
way of working is not an easy issue. Workers need to understand the process underway, to get accustomed with the new office environment and familiarize themselves with its “affordances”. As Brown (2009) shows in its study, 50% of workers thought that dropping their habits would cause depression and make their productivity suffer. By contrast, territoriality may engender a sense of belonging to a social group, although sometimes it can bring to build social hierarchies. According to Brown (2009), there are four types of territoriality behaviour. The first two are control oriented making and identity oriented making, which refers more to the behavioural expression of feelings of ownership, and the need of power. The third and fourth are reactionary oriented making and defender oriented making, which are related to the anticipatory actions to avoid future conflicts among workers.

Furthermore, workers typically complain about noise and privacy. Bodin and Bodin (2009) in their study show that the number and type of complains differ among different office layouts. In particular, the cell-office employees are the ones reporting the least complaints and are the most satisfied in terms of environment factors. On the other hand, they are the worst solution in term of affinity and social interactions, indeed cell-offices tend to isolate workers. The medium and large-plan offices instead show opposite results: great performance in terms of affinity and social interactions, but are characterized by higher number of complaints for environmental factors such as noise, privacy and space availability. Two interesting “middle positions” are the flex-offices and the combi-offices. The flex-offices are defined, often but not always, as an open-plan layout where employees lack any personal workstations. It is the most flexible one since not only the office plan is flexible, but also the work scheme of the employee. The combi-office has no strict spatial definition. Instead, it is defined by teamwork and the sharing of common facilities. Flex-offices main complaint is basically related to the impossibility to personalize the workplace, while combi-offices do not have specific complaints, but at the same time do not excel in any category.
**Science parks**

There is no uniformly accepted definition of a science parks, and there are several similar terms used to describe similar developments, such as “Research park”, “Technology park”, “Business park”, “Innovation centre”, etc.” (Monck et al., 1988). One definition can be a geographical “framework composed by different types of actors, including competent customers demanding new and sophisticated solutions, innovators who create such solutions, entrepreneurs who identify innovations and create businesses based on them, venture capitalists who supply finance to innovators and entrepreneurs, and industrialists who produce and market the new product/service/method on a large scale” (Dicken and Malmberg, 2001).

Despite of the globalization and its homogenization effect, territories, even within the nation boundaries, greatly differ in terms of economic specialization and competitiveness, with the territory’s competitive firms and industries connected in clusters of industries. One of the main reason is the fact that even the most developed communication technologies are not comparable to face-to-face communication. Indeed, this type of communication is fundamental in order to create trustful relations and communicate non-codified tacit knowledge. Therefore, the less codified the knowledge the most “sticky” it is to the local milieu (Dicken and Malmberg, 2001).

It could be interesting to understand which are the reasons behind localizing in a science park, or better, try to understand why investments made in certain places yield jobs, growth, and prosperity while similar investments made in seemingly identical places fail to produce the desired result (Feldman, 2014). Obviously, the advantage of successful place is built over a long period of time: for example the “Silicon Valley model” works only for Silicon Valley, it cannot be applied to others clusters.

In order to create and maintain vibrant the local ecosystem a supportive environment with a leading organization (universities, big firms, incubators ...) is needed (Lorenzoni and Ornati, 1998). Indeed, universities are important actors in the regions in terms of employment and economic activity (Löfsten and Lindelöf, 2002).
Nowadays there are even firms that by providing educational benefits and skill enhancement training, profit-sharing opportunities, and good working conditions certainly are affecting the vibrancy of place and the quality of capacity in a local community (Feldman, 2014). Surely, an important actor is represented by entrepreneurs who advocate for resources for their growing businesses. Applying their skills and creativity they will be able to generate local development and prosperity. Moreover, the story of successful places is predicted by the story of successful individuals (Fred Terman and George Kozmetsky in Silicon Valley). However, individuals with high social capital may also be in position to create conditions that contribute to local prosperity and quality of life. Social capital is also the basis for the formation of communities important to establishing emerging technology in place (Feldman 2014).

Furthermore, science parks characterized by high level of merger and acquisition are also the most successful ones. In the last years mergers and acquisitions have led to greater employment growth and additional investment in the region (Feldman, 2014).

Other important factors sustaining science parks are: the presence of incubators or incubator type companies, active potential markets nearby, and government subsidies to research project and innovation (Roure and Keely, 1989). The role of government represents also an important aspect to be considered, however according to Löfsten and Lindelöf (2002), evaluating government role often comes to the conclusion that government efforts are only successful when enlisted in public–private partnership.

It seems that geography provides a platform where to organize resources (universities, incubators, start-ups, multinational companies ...) towards specific purposes. In science parks, more than facilitating face-to-face interactions and the exchange of tacit knowledge, geography enhances the probability for unexpected discoveries to have a profound and transformative impact (Feldman, 2014).
City communities

When referring to communities we focus on the category of epistemic communities, which are the active units behind the formation of new knowledge. They have been defined as groups of knowledge-driven agents linked together by a common goal, a common cognitive framework and a shared understanding of their work (Cohendet et al., 2014). It has been studied how they are able to generate creative knowledge through particular processes, actors involved and the relationship with local environment.

The role of communities is essential in the creative processes as they are a key intermediary between individuals and formal institutions. In particular, the anatomy of the creative city could be described through three main layers: upperground, middleground and underground (Cohendet 2010).

Upperground is the level of institutions (universities, research lab and cultural spaces) and innovative firms. Their role is essentially financing and integrating different type of knowledge by their capacity to test new forms of creativity on the market. The main important task is to maintain the interactions with the members of the cities’ communities to bring permanently useful knowledge, coming from their daily activities, and creative ideas to the firm.

According to Cohendet (2010), underground is the level of individuals or a group of individuals who share a deep interest. It has a leading position in the innovative trends, it drives and exploits opportunities for innovative changes. Thus, a link between Underground and Upperground is needed. By contrast, good connections between them offer a necessary condition for having a creative city, but they do not guarantee the existence of a vibrant city forming a fertile ecosystem.

Middleground is represented by the communities and their platforms for sharing knowledge within the city. Communities have to discover innovative micro-ideas coming from the underground, which can become business opportunity for firms or economic applications that could enter in the market. In particular Cohendet identified two ways through which knowledge among communities is built: “exploration and exploitation of
epistemic communities” (bottom-up) and “exploration and exploitation of communities of practices” (top-down). Epistemic communities are based on deliberate knowledge creation where individuals accumulate knowledge according to their own experiences. In this case regulations through procedural authority are strictly recommended because epistemic communities do not work in isolation. Indeed, Middleground has to help them in convincing others of the potential and usefulness of their ideas.

According to Amin and Roberts (2008) communities of practices represent groups of people engaged in the same exercise, communicating regularly between themselves on their activities and where members want to develop their competences before. This process takes place through continuous sharing of individual resources. In this case, Middleground is the platform (through event, spaces and places) necessary for the creation of this cognitive process.

Thus, communities are strongly dependent to spaces and places where people interact, and they are usually locally defined and constrained, even when they are open to external factors and influences. Therefore, this topic is a part of a broader study about the urban agglomeration mechanism and the creation of new ideas.

Nowadays, it is well known that regional agglomerates are important drivers in the formation of knowledge externalities, which lead, according Cohedent et al. (2014) to the establishment of region-specific paths of knowledge and technology development. However, these externalities are not coming from only specific economic agents (firms, laboratories, governmental institutions), but also from non-economic agents. Indeed, epistemic communities are born in the local environment (outside from forms of economic logic and standardization), but they are central in the development of radical innovation through the provision of the complementary social, cognitive, organisational and institutional support needed to bring their ideas to the market. The major role of epistemic communities is to transfer specialized expertise and knowledge (overall tacit) among the agents that are part of it. In order to do that, face-to-face communication plays a fundamental role: it is a “communication technology” that presents many advantages, especially when most of the
information to be transmitted cannot be codified. These advantages are: high frequency, rapid feedback, and visual and body language cues; all of them have great importance for teaching non-codifiable knowledge and for contexts with high degree of experimentation (Storper and Venables, 2004). Hence, it is essential for the creation of communities.

Radical innovation generates from “breaking the rules”. However, because of agents’ heterogeneity, the epistemic community has to create a “manifesto” and then a “codebook” that contain the new rules guiding the cognitive work of the community for “breaking of the rules”. Both the “manifesto” and the “codebook” are strongly supported by the local dimension. Indeed, to express “the breaking of the rules”, creative talents need constant interactions, regular meetings, interpretation of local practices and first experiments. The essential part of the cognitive building of an epistemic movement is obtained through interactions, frictions or even arguments between the epistemic community and other communities. These encounters between different communities mostly happen in a local context. Often it happens through projects and events that provide a temporary space for different local communities to foster diverse reactions and comments, in order to find potential allies, and to stimulate inspiration (Cohedent, 2014). Moreover, innovation is not only improved by the relationship between diverse communities, but also by communities that present a greater level of peers’ diversity (Soreson and Samila, 2016). Indeed, more diverse and integrated communities promote connections crosscutting social circles, facilitating the flow of information and resources, and so stimulating innovation and entrepreneurship. “Unexpected encounters” among diverse people increase the chances of “cross-fertilization” of contrasting ideas, which often are the sources of radical innovations.

It is important to highlight that the relation between spaces and communities works in both directions: movements embedded in a city or region, not only benefit from the dynamics generated by the local structure of a middleground, but also contribute to benefit the local environment by the development of innovative ideas. These benefits can be of different kinds: by increasing the level of attraction of a city, creating new jobs and
concluding remarks, building new schools or academic institutions, or by developing cultural organizations (Cohedent, 2014).

1.5 Concluding remarks

As we already mentioned, it looks like the less cited articles are the ones related to the design of companies’ offices for collaboration. The spaces design in companies’ offices has been quite addressed for co-working space, and how the space design affects co-workers’ competences and knowledge, meanwhile the relationship between companies’ office design and collaboration has not been well explored yet. In our opinion, this is not due to a lack of interest, but because it is a rather new topic in the literature. Indeed, there are different papers that highlight the importance of office design for collaboration in research centres or university laboratories and R&D centres and how they are able to improve employees’ performances.

The main literature gap we identified is represented by how collaborative spaces in large corporations impact on collaboration, sharing knowledge, and innovation, and overall the new role these spaces assume in the modern workplace. In particular, our research goal is understanding how the characteristics of collaborative spaces impact on the pillars of the so called “modern workplace”.

Through literature review, we were able to define which are the main 4 characteristics of collaborative spaces: on site technology, adaptability, facility to interact, transparency.

- **In site technology:** it includes all the technological tools, physical and not physical, people exploit inside collaborative spaces in order to satisfy their job needs. It can also refer to the “hardware technology” of the building: apps and software which support employees in daily working activities.

- **Adaptability:** it refers to the possibility to satisfy different job needs in different contexts. In particular, there are two different levels of adaptability
  - **Variety of spaces solutions:** it includes all the different typologies of collaborative spaces in companies building. It can refer both to the
possibility of a single space to change itself for best fitting the employees’ needs as well as the availability of different typology of spaces available when requested by employees

- **Space distribution**: it refers to the mix of collaborative spaces in companies building, which permit to satisfy all the possible employees needs according to different kinds of working context. In particular the right mix can vary according to the final company vision.

- **Facility to interact**: it refers to the possibility to interact both to employees, co-workers and for extended collaboration in company’s building. There are different factors which affect the facility to interact among people:

  - **Location in the city**: the position of the collaborative space it is extremely important, especially for the achievement of the building and the closeness to external actors.
  
  - **Absence of space allocation**: collaborative spaces typically have no fixed working positions. It obviously impacts on the possibility of interacting with others or bumping in them inside the building.
  
  - **Space concentration**: This topic is strongly linked to the location of the building. Companies building are more expensive and smaller in city centres compared to those ones located outside the city.

- **Transparency**: this characteristic refers both on the physical and not physical aspect of collaborative spaces. Physical aspects relate to the glass transparency of collaborative spaces. Moreover, open-spaces and no fixed position bring to reduce information asymmetry and facilitate casual collaboration by people in the building.

In the next chapter, we introduce the concept of the so-called “modern workplace”, considering the impact technologies have on the way of working, interacting, collaborating and sharing knowledge among employees within the firm and between the firm and the
external environment or network. In particular, we identify the main pillars of the modern workplace and provide a first definition.
2.1 The modern workplace literature

Office space is just one of the aspects making up the workplace. Nowadays, most of the work is made through technology-based tools, which became an important component of the workplace (Bystrom & Janica, 2016). Indeed, knowledge workers can conduct their activities anytime and anywhere by using their personal computer, or even any computer when companies make use of cloud solutions (Bystrom & Janica, 2016). Moreover, the needs of employees and employers have changed over time. Employees are now more interested in the social aspect of work rather than the wage (Litchfield et al., 2016), while employers focus more on the innovation capability of the company. These elements picture a new workplace environment in which employees' needs push the adoption of new technologies, flexible work practices, and collaborative space offices. Leveraging on them, employers contribute and are able to reach the final company objectives of increased productivity, employee engagement, mass collaboration and monitoring.
Figure 2. Needs, leverages and objectives of the modern workplace

Since information and communication technologies develop, work conditions have shifted from the standard of long-term, local and steady employment to a model of work where employment is not restricted to one particular place or to standard work hours (MacEachen et al., 2008). Bystrom and Jannica (2016) talk about *peopleless office*, a new model of workplace without the typical office boundaries. Indeed, technology allows people to work whenever and wherever they need: at home, in a café or, in general, ‘on the road’. Moreover, technological development and how technology has been influencing our lives are leading to work change. Technology is allowing workers to be connected to each other, to shift from physical spaces to digital spaces (Bystrom & Janica, 2016). For example, smart technology and email synchronized with employees’ smartphones have made it possible for many employees to work regardless of geographic or physical place. It embraces the idea of *peopleless offices* (Bystrom and Jannica, 2016). Adding to the effect of technology, work has become more flexible than before and is now characterized by no-standard working hours. This is mainly due to the flat organizational hierarchies that invite workers’ autonomy and decision-making responsibility. In fact, recent studies show that workers tend to be more productive and innovation increases when employees are empowered to manage their time at
and outside the workplace, despite the fact work is shifting from on time to online (Pettersen, 2014).

Another important driver that leads work to change is represented by collaboration, physical and digital. Indeed, in order to foster the collaborative tendency, social media platforms have been introduced in the workplace. Social sites are extremely fundamental to reach the goal of mass collaboration, as well as to create the right network, trust and productive behaviour among employees. Furthermore, thanks to technology and collaborative tools, the new shape of working is blurring distinction between work time and leisure time, bringing people to work more than what is stipulated in their contract: “workers are always potentially at and available for work” (MacEachen et al., 2008).

However, technology is also used by employers to monitor workers performances (Liu, 2017). This is mainly due to the extremely importance that, nowadays, information is assuming in business. Indeed, according to Liu (2017), employee monitoring in all its forms became a primary mean to increase productivity and efficiency. Moreover, Liu (2017) shows many possible benefits related to monitoring. These benefits belong to 3 broader categories: increased organizational security, reduced corporate liability, and maximize employee productivity. This effect could also be enhanced by physical space characteristics. Indeed, collaborative spaces, especially in company buildings are generally transparent and open. Transparency in collaborative spaces impacts on two main aspects: meetings privacy and employees’ productivity. Company meetings typically include data displayed on screens or TVs. It means that confidential data can be seen by colleagues or people nearby. Moreover, if employees know they are being monitored they have no expectation for privacy and become more productive (Liu, 2017).

Furthermore, one of the problems companies are facing today is the coming of new generation, with different needs and aspirations. Earlier generations were used to look for life-long positions in the same company, while millennials search for work opportunities in a global market that provide professionally improving experiences, and are used to frequent career changes (Bystrom & Janica, 2016). Hence, the workplace model today has evolved as a
response to the continuous rapid urban growth and the needs of the new generation of workers. One of the main factors is that millennials generation desires to work and live in the city. In particular, millennials are getting more established in the workforce when they embed themselves in cities that are walkable, vibrant, flexible, have adequate transportation, provide social and professional experience.

Workers are the most valuable resource for companies, especially for knowledge intensive firms whose loyalty is considered extremely important given the sensitivity of information. Loyalty is strictly correlated with well-being, which is also associated with improved performance and enhance creativity (Bullshman, 2016). Indeed, improving levels of well-being has been shown to be associated with more sustained levels of engagement and performance. Well-being can be defined as “life satisfaction based on an individual’s perception of their health, happiness and sense of purpose” (Litchfield et al., 2016).

Nowadays “human capital management is seen by many, including the investor community, as an indicator of companies’ long-term prospects—the well-being of an organisation and the well-being of its workers are inextricably linked” (Litchfield et al., 2016). Companies can increase employee well-being by limiting comparison, managing communication, and overall introducing regularly positive affective experience (short pleasant experiences) (Bullshman, 2016). The last refers to the “fun at work” that is socializing with co-workers, celebrating at work, and having personal freedoms at work, and which can be seen as a real job resource by leveraging the spaces’ design (“job resources are aspects of the job that help employees achieve work goals either with direct positive effects on positive outcomes” Georganta et al., 2016). The most important aspect of “fun at work” is that it improves job engagement through which the employees have a sense of connection with the activities and the colleagues in their organisation (Georganta et al., 2016).

As we briefly anticipated, the space plays an important role. From a structural perspective, firm workplace decision is a balancing choice whose key parameters are: flexibility and agility, creativity and innovation, efficiency and effectiveness, health and wellbeing, sustainability and most importantly, occupant engagement (Britton, 2016).
Indeed, workplaces can be divided in two main categories: *vertical campus* and *horizontal campus*. The main differences between horizontally and vertically oriented campus are: outward expansion versus upward, as well as predominantly suburban location versus urban. Moreover, there is a fundamental difference in how they connect people. More traditional suburban campuses connect horizontally with visual contact being the key. Vertical campuses connect vertically through stacked floors, potentially linked by open atriums, light, wells, stairs, and elevator cores. Drivers of the choice between horizontal and vertical are: workers preferences (urban vs suburban area), visibility, occupant engagement, flat vs hierarchical organization, and renting costs (Britton, 2016).

From an architectural perspective, modern workplaces are experiencing a new type of internal structure, where individuals do not have private offices but open, shared and collaborative spaces in which they can easily interact promoting collaboration. Complex knowledge work requires a high degree of face-to-face interactions and conversations: having individuals with a shared and relevant specialization nearby enables employees to get fast replies in real time on questions that cropped up during the workday. Moreover, working close to others is not just useful and efficient, but also social, it facilitates the birth of cross-function social networks (Pettersen, 2016). Through face-to-face conversations, the employees can share insights and help each other with common work-related issues. Thus, employees get to collaborate not only with their team members, but to assist others who are not part of their everyday work, in line with the objective of mass collaboration of the modern workplace. Hence, human connections and casual encounters matter more than ever. Modern workplace design needs to be intentionally designed to foster collaboration and tacit knowledge exchange.

Humans evolved to work socially, not to work in isolation. Even with the mobile revolution, people still like working with other people. When they are not, they feel isolated socially. And when they feel isolated socially, they begin to feel disconnected from their organizations and from their work. Indeed, researches show that well-designed workplaces can facilitate casual collisions of people and ideas, accelerating the flow of ideas and
innovation. Widening the hallways, so people can easily stop and talk, and putting up whiteboards in publicly accessible areas, and designing workplace rituals like lunch to maximize knowledge exchange, are some examples of a work environment that encourages social activity and collaboration.

The main goal of the modern workplace is to improve the employee experience and offices play a key role in reaching this goal. Indeed, modern workplaces make use of smart buildings that evolves with the needs of the employee, offering agility, flexibility, and increasing the engagement.

Given the absence of a clear definition, we try to synthesize what we found in the existing literature and propose the following definition of modern workplace: “modern workplace refers to the off-line and on-line work environment aimed at realizing four main pillars: employees’ engagement, flexibility, collaborations for innovation, and well-being”.

**Employee Engagement**

There are many definitions of employee engagement, we refer to “a positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of the business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employee and employer” (Institute of Employment Studies, p. 14).

**Flexibility**

We refer to the workplace flexibility as “formal or informal agreement between an employer and employee to provide individual job control over flexibility in timing, location, amount, or continuity in concert with nonwork needs” (Kossek and Thompson, 2016, p. XX).

**Collaborations for Innovation**

The term “innovation” typically refers to new objects or products, but also to ideas or practices that individuals perceive as new (Rogers 2010, p. 11). Innovation is shaped by the
transmission (Storper and Venables 2004). In particular, we refer to the tacit knowledge transmissions that happen within the internal firms’ environment, where individuals interact, collaborate, and share knowledge.

**Well-being**

As previously introduced it refers to “life satisfaction based on an individual’s perception of their health, happiness and sense of purpose” (Litchfield et al., 2016, p. 2).

As we explained, collaborative spaces are one of the tools of the so-called “modern workplace”, but how do they concur the reaching of modern workplace goals? The aim of this research is to understand how the four main characteristics of collaborative spaces (facility to interact, building’s technology, adaptability, and transparency) contribute for reaching the principal four goals of the modern workplace: employee engagement, flexibility, collaboration for innovation (considering also productivity), and well-being. Indeed, the modern workplace aims at reaching companies’ objectives as well as at satisfying employee needs based on the allignment of their objectives [see Figure 1].

<table>
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<tr>
<th></th>
<th>Collaborations for innovation</th>
<th>Flexibility</th>
<th>Employee engagement</th>
<th>Well-being</th>
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<tbody>
<tr>
<td><strong>Facility to interact</strong></td>
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<td><strong>Adaptability</strong></td>
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<td><strong>Transparency</strong></td>
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<td><strong>In site technology</strong></td>
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*Table 2.* Hypothesis on how collaborative spaces impact on modern workplace

In particular, we expect:

- Facility to interact to impact on innovation, employee engagement, and well-being.
  Indeed, they promotes on-site collaboration by increasing the probability of casual face-to-face encounters. This encourages cross-function collaboration, trust, and a variety of enjoyable and pleasurable activities.
2.2 Building’s technology to favour employee engagement, flexibility, and innovation. In fact, it improves employees’ work experience, the communication with colleagues inside and outside the office, and finding of other colleagues with the skills you need.

- The adaptability of offices, which evolves with the needs of employees through technological opportunities, to promote flexibility, innovation, and well-being.

- The transparency to affect employee engagement, innovation, and well-being. Indeed, it increases the level of trust among employees, the level of creativity and collaboration, and it can favour to maintain social relationship.

2.2 Microsoft’s modern workplace

Large corporations have invested toward this direction, in particular in our work, we study the case of Microsoft. Obviously, modern workplace implementation is not an easy issue, it requires several investments in terms of time, effort and economic resources. Microsoft is working on it from several years and it was one of the first firms speaking about this topic. Microsoft mission is to “empower every person and organization on the planet to achieve more”. Indeed, Microsoft is focused on the technology aspect of modern working both as user and as producer and distributor. It not only promotes the modern workplace culture internally, but also it delivers technology and solutions to customers for their workplace transformation. Thus, Microsoft modern workplace culture is based on the four pillars previously introduced (employees’ engagement, flexibility, collaborations for innovation, and well-being), and two more pillars: technology, and growth mindset, which identifies Microsoft own culture.

**Technology**

Technology gives the possibility to people to do more than before, it changes the way people live, and, it will certainly change the way people work. In a modern workplace, business leaders use technology to harness the collective ingenuity, creativity, and critical thinking of all employees.
Microsoft technology provides the best employee experience in the modern workplace. It allows to be as productive as possible, have faster communication, and shift from physical to digital working:

- **Microsoft 365**: it includes Windows, Enterprise Mobility + Security and Office 365, a productivity software that includes different features: office suits, SharePoint, delve, yammer, OneDrive, power BI.
- **Skype for Business**: it permits to collaborate with everyone at any time, allowing high quality connection with colleagues from everywhere.
- **Yammer**: it is an enterprise social network that allows you to connect and engage across the company: starting conversations, sharing knowledge, and building communities
- **Microsoft Teams**: it is a chat-based collaboration tool that is part of the Office 365. Teams enables local and co-workers to work together and collaborate through a common workspace, using features such as team chat, one-to-one chat and document collaboration.
- **Delve**: it is a data visualization and discovery tool that incorporates elements of social networking and machine learning.
- **Azure**: it is a public cloud computing platform that provides a range of cloud services like computing, analytics, storage and networking.

Therefore, work becomes a thing that you do – and not just a place where you go – agile, data-driven, and customer-centric cultures take hold.

**Flexibility**

The space can be seen just as one tool over other tools. In fact, people do not need space, they need options. For this reason, the workplace must be flexible, it combines different culture, background, and dynamic teams through collaboration.
According to an US survey, 60% of desks are vacant in workplaces. Employees work outside the office, anywhere at any time, and are working on two times the number of teams than the last five years. The implementation of the Smart Working has represented an opportunity for cost saving. By reducing the number or vacant desks, it was estimated that Microsoft was able to cut 10’000$/year per employee.

However, technology is not substituting the physical space, but space and technology are coming together to unlock human potential. The offices of the modern workplace are people centric buildings that are agile and adapt to employee needs.

**Collaborations for innovation**

Interaction and collaboration, both digital and physical, are a fundamental aspect of the modern workplace according to Microsoft. In particular, physical space remains an important tool for communication: physical interactions have been the centre of human experience, a small change in facial expression, in the tone of voice, can communicate a lot. Moreover, people do not want to work in isolation, this means that workplaces have to create the right social environment.

Real value, creativity and innovation rise through collaboration. Indeed, creativity is really about people collaborating inside the organization. The idea of sharing creativity among colleagues and being creative must be helped by the space architecture and furniture. An ecosystem of different kinds of spaces is critical to enhance the process of innovation. Space remains what fundamentally shape how and with whom you interact, and thus how you think: “if I close up people in the same block, in the same space, they will have the same problem, they will think in the same way and they will always find the same solution: they get to think all in the same way because they are exposed to the same things” ... “if they get outside the organization they bump into different people who can influence their way of thinking or how workers perceive objectives stimulating creativity”. The workplace must be designed to be more like a city, so that people bump with others to create collaboration that
can have a strong impact on creativity and innovation. So, the workplace is not a cost, it is an investment in communication.

**Growth mindset**

Another leverage in order to stimulate collaboration and exchange of knowledge among employees is company culture. Microsoft management is leading the change of company’s culture towards the *growth mindset*: the notion is strictly based on the concept of learning, learning from others as well as learning from your own mistakes, so you can move quickly and find the right path forward. It starts with the belief that everyone can grow and develop, so that potential is nurtured and not predetermined, and that anyone can change their mindset. A growth mindset promotes to ask questions, give and get feedbacks, take risks and build on each other’s ideas, because people “are better” when they collaborate and work together. Employees must know that failure happens along the way to innovation. This changes the way employees behave: Microsoft employees are no longer supposed to prove they are the smartest people in the room, but are instead supposed to learn and bring out “the best in people”, they need to be open to the ideas of others, where the success of others does not diminish our own. “As a culture, we are moving from a group of people who know it all to a group of people who want to learn it all” is how Satya Nadella (CEO) explains the change in culture at Microsoft.

First growth mindset promoter is represented by the “One Microsoft” vision. One Microsoft relies on the employees’ collaboration in which people work united by a single, shared mission and to reach shared goals. According to this vision, this goal can be reached only in flat hierarchical organization, where employees are independent decision makers, work on each other ideas and collaborate across boundaries to bring the best of Microsoft to their customers as one. In order to reach this vision information should be powerful, transparent and shared openly, shifting from complex decision and hierarchy oriented to simplicity, clarity and empowerment.
**Employee engagement**

Nowadays business needs highly capable, motivated and integrated workforce with the environment and tools to liberate and not to restrict them. 50% of Microsoft’s workforce are millennials, and it is expected to grow to 60% by 2020. There are five generations in the workplace, and thus Microsoft believes a one-size-fits-all approach to performance incentives and benefits does not work anymore. Millennials are influencing why and how to work, they are more interested in flexibility rather than making money. Furthermore, they look much more to career and experience: they want to feel they are having an experience that is making them grow. Millennials are going to be the future workforce, but even today they are a valuable resource as the company must “mirror” the customers to succeed. To attract and retain them the company has to offer what they need: flexibility, experiences for growing, and working like a network giving away the hierarchy. For this reason, in modern workplaces hierarchies and silos within organisations are dismantled and collaborative teamwork becomes part of the culture.

In order to analyse the effects of the main characteristics of collaborative spaces on the principal goals of Microsoft modern workplace, we built up the following matrix. Our goal is to fill the matrix with the relationships among the different factors through interviews to Microsoft employees.

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<td><strong>Adaptability</strong></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Transparency</strong></td>
<td>X</td>
<td></td>
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<td>X</td>
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<tr>
<td><strong>In site technology</strong></td>
<td>X</td>
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<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
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*Table 3.* Hypothesis on how collaborative spaces impact on Microsoft modern workplace
In particular, we expect:

- The use of technology to be facilitated by in-site technology itself and the adaptability of spaces. Indeed, the technology present in the meeting rooms should facilitate the use of technology also outside the building by improving the experience of online participants.

- The culture of the growth mindset to be favoured by the facility to interact with colleagues and the complete transparency and openness of the building. Indeed, facility to interact could facilitate the learning process, and transparency could improve trust between employees.
CHAPTER 3
COLLABORATIVE SPACE AND MODERN WORKPLACE: THE CASE STUDY ON MICROSOFT ITALY

3.1 The Microsoft House

In February 2017 Microsoft Italy has moved its headquarter from Peschiera Borromeo (MI), outside the city, to Milan city centre. The new building, called Microsoft House, has been presented as “a collaborative open space among people, where individual and organizations can engage and develop solutions and digital opportunities; a landmark for young entrepreneurs and students for delivering innovation in order to contribute to the future and economic development in Italy”.

The reason why they decided to build the Microsoft House is that nowadays, in order to trigger innovation, companies must implement an osmotic change with the external environment, which include other companies, start-ups, young people, competitors and technology itself. Although the previous headquarter was really efficient and functional to any type of employees’ activities, and one of the most significant example of best practice in
terms of organizational workplace, it would have not guaranteed a central role in the Italian innovation scenario anymore.

The Microsoft House extends on six floors over 7,500 square metres, half of them are opened to citizens and visitors:

- **Showroom**: it is a ground floor space developed in partnership with Intel. It gives the opportunity to experience the latest Microsoft’s technologies and partners’ products, like Windows10, Xbox, Intel processors. Moreover, thanks to its openness and free internet connection, it is as a co-working space where entrepreneurs, freelancers, students can work and collaborate in a stimulating environment.

- **Digital class**: it is a digital environment concerning the world of education. In order to promote the digital opportunities for the learning environment, Microsoft let students and professors experience new technologies enabling educational approaches. Microsoft aims at providing skills and competences to professor for developing new digital based learning approach.

- **Microsoft Technology Centre (MTC)**: the first floor of the Microsoft House is dedicated to the Microsoft Technology Centre (MTC), an innovative experiencing space where big corporations and small firms can develop and customize their business solutions taking advantage of the skills, competences and technology opportunities provided by Microsoft. The MTC can be divided in four smaller spaces: *Envisioning Centre* able to host the most important events thanks to its Surface Hub. *Briefing Suite* which host business strategy sections, *Immersion Suite* which provide to simulate and experience different technological solutions and ad hoc
business opportunity. The last space is the *Interactive Centre* for the development of the most interactive and developed solution available in the Italian market.

- **Loft**: it is at the last floor of the Microsoft House, which is occupied by the executive board. A space which combines privacy, concentration and attention to details aiming at hosting the most relevant events and high-level clients.

- **Hubs**: these types of spaces are available at second, third and fourth floors. They are recreational and break areas where employees can chat, relax, have lunch, fun or have informal meeting in stimulating spaces. Each hub is characterized by a different theme: *sport*, *nature* and *urban*.

- **Open space offices, meetings rooms** and **focus rooms**: these are the most common spaces inside the Microsoft House, which can be divided according to the technological solutions, capacity and business needs. In particular, focus rooms are spaces designed to more focused job activities and tasks or at most one-to-one meetings.
Anyway, the second, the third and the fourth floor are totally dedicated to Microsoft employees. They were thought and designed according to all their different activities: formal and informal meetings with colleagues and partners, conference calls, brainstorming, and collaboration time.

We conducted six preliminary interviews, which were very useful in order to understand the context of the new Microsoft headquarter. The Microsoft House was built based on four main pillars: visibility, openness, smartness and innovation.

**Visibility**

Microsoft House is located in the “Innovation Design District” of Milan, which represent one of the most important districts of the city and the new business city centre. Moving to this area has permitted to being closer to customers and partners, creating a sort of stricter connection with them. Compared to the previous location, the Microsoft House, which is more reachable in terms of time and public transportation, provides to be a fundamental reference point both for partners and customers. Visibility is also linked with the topic of transparency. Half of the Microsoft House spaces are totally transparent. It has been developed as a fundamental aspect by Microsoft in order to increase customers trust on company brand especially for communities and earlier generations.

**Openness**

“Microsoft House is not a common office, it is an office designed also for customers”. Consumers can enjoy the showroom by testing Microsoft and partners’ programs. Moreover, this space is able to host community events, freelancers, young entrepreneurs who are attracted by Microsoft culture and the working environment. On the other hand, enterprises can visit MTC, where the focus is on “digital transformation”. In particular, the MTC tour shows all the digital technologies able to drive this business change and visitors can experience the latest high-tech solutions implemented by Microsoft. Moreover, the Digital class hosts from elementary to university students, professors, IT experts in order to deliver
the digital culture of the company. All these spaces are fundamental for Microsoft to obtain important feedbacks, information, customers’ preferences in order to be as close as possible to its customers. Therefore, openness should be seen as the overcoming of barriers between Microsoft and Milano city, creating a continuous dialogue with customers and delivering value to the entire Milan ecosystem.

**Smartness**

Smartness refers to the concept of Smart Working. Microsoft has implanted Smart Working from several years. Moving to a new building, especially in the city centre, represents an opportunity to contribute and accelerate this new way of working. Employees are able to perfectly match working and social life reducing inefficiencies. Smartness, and the Microsoft House in general is totally in line with the Microsoft mission: “empower every people and every organization on the planet to achieve more”. Microsoft House was designed in order to empower every employee to work anywhere at any time, maximizing their potential value.

**Innovation**

Nowadays, Microsoft is one of the most innovative companies worldwide, Microsoft vision rely on innovation. Innovation at Microsoft House can be declined at different levels: innovation of the building from a structural perspective, both external (the external design of the building that has been recognised by the architecture community as the most innovative in the city) and internal (the furniture is 100% designed in Italy with high attention to details), and innovation of the building from a technology perspective, functional technology (like Cortana, intelligent personal assistant created by Microsoft; find me, employees localization software inside the building; Surface Hubs ...) as well as the business and consumer technology, which is exhibited in the showroom and the MTC. According to Microsoft’s managers and the literature, innovation takes place through collaboration. For this reason, collaborative spaces are essential for being creative and for delivering value to the final customer and communities.
3.2 Microsoft organisation

On July 2017, Microsoft has announced an important internal structural change: the evolution of the commercial and consumer models for greater agility and deeper expertise. By changing Microsoft commercial and consumer models for greater agility and deeper expertise, they will best position their field and corporate employees to help customers and partners drive digital transformation across geographies and key industries. “The new organizational scheme will bring to new synergies with and among our partners, aiming at promoting the digital transformation in Italy and in all market segments in which our customers operate”, said former CEO Carlo Purassanta, “moreover it is fundamental offering customized solution and competences to every organization, of any size. Collaborating with our partners will permits us to help Italian organization to understand innovation value and benefits, in order to sustain the socio-economic development of our Country”.

The Microsoft mission remains unchanged: to empower every person and every organization to achieve more. To do this, they are committed to transforming Microsoft partner ecosystem, and simplifying the programs and investment structure for their partners to drive growth and profitability. Microsoft will provide the programs, tools, and resources you need to build and sustain a profitable, successful cloud business.

Hence, nowadays the organisation reporting to the General Manager of Microsoft Italy, Silvia Candiani, is composed by the following business units:

**Enterprise Commercial**

The objective of the unit is to respond best to the needs of Italian corporations and large enterprises by supporting them in the choice of the technology structure and the implementation of scalable and flexible solutions. Indeed, Microsoft must be able to respond with agility to the specific requests of large clients on different markets with diverse application necessities. It is made up the account managers and it is organised by industries.
Public Sector

The public-sector division offers to the central and local public administration a complete set of products and services to let the public administration develop and implement quickly eGovernment solutions oriented to citizens and companies, such as Health and PA digitalization. Consultants and technical personnel offer to organizations and institutions the training and support to identify the best Microsoft’s solutions in terms of efficiency, reliability and safety. It is made up account managers and it is subdivided into three divisions: “central public administration”, “local public administration and health”, and “education” (organized in higher education and lower education).

Specialist Team Unit (STU)

It comprehends the applications of Dynamics, the cloud solutions of Microsoft Azure, the modern workplace of Office 365 and the Data Artificial Intelligence solutions. It is organized for workload, and thus it is transversal to the other business units.

Customer Success

It is the division of the cloud architects that have the aim to accelerate the adoption of Microsoft’s solutions. Microsoft must drive the client along the product lifecycle to show how to use all the potential of it. Thus, the purpose of the new Customer Success units is to ensure customers get the most value from Microsoft by driving active usage and consumption of their products and services. Their customer success resources will be focused across five solution areas: Microsoft Azure, Modern Workplace, Business Applications, Apps and Infrastructure, and Data and AI. Microsoft’s Customer Success units are dedicated to driving value creation with Microsoft’s largest and most advanced customers to ensure they are actively using and consuming all Microsoft products and services, and in turn increasing the lifetime value that customers get from Microsoft.
One Commercial Partner & Small, Medium and Corp.

It is Microsoft’s goal to align the right resources for the right customer at the right time. To do this, the One Commercial Partner (OCP) organization brings together several partner groups from across Microsoft into a single organization. The objective is to consolidate the relationship with partners and to contribute concretely to Italian companies’ innovation. The head of the OCP organization coordinates also the small, medium and corporate division, reporting directly to the CEO, with the objective of accelerating the growth of the cloud in the Italian entrepreneurial world, which represent 90% of Italian companies.

Services

This unit guides the sales, it is transversal to the other units, by considering the typology of solutions it supports the other divisions in strategic architectural and deployment projects among top Italian customers.

Marketing & Operations

The Marketing & Operations division has the aim of communicating the business value of Microsoft’s products and solutions for the diverse market audience. It develops the marketing strategies and activities to support the sales’ divisions. This division heads the following groups:

- Windows client, responsible for operating systems;
- Server Tools & Cloud, with responsibilities on operating systems and server platforms;
- Office, responsible of individual and group productivity instruments;
- Microsoft Dynamics, the suite of business application to run a company digitally, totally cloud based.

Other groups within the Marketing & Operations division are: Central Marketing, Strategic Marketing, Customer and Partner Marketing Direction, and Public Relations.
To study the contemporary phenomenon of “modern workplace” and collaborative spaces, we conducted a qualitative case study research. We wanted to provide a first definition of “modern workplace” and to study the role of collaborative spaces as one of its tools. The “modern workplace” is a completely new concept, thus there was no definition in the existing literature, so we provided a first one above. Collaborative spaces are a recent phenomenon too; however, they have been studied in the recent years, thus it was possible to conduct a literature review about this topic. By the analysis of the existing literature about collaborative spaces, we were able to understand the main characteristics of them. The aim of this study was to understand the relationship between collaborative spaces and the modern workplace, in particular we expected the main characteristics of collaborative spaces to support the modern workplace’s key objectives. Since it is a recent and understudied phenomenon, the case study research is the most suited method for studying it. Indeed, it is a methodology used to generate and test theory by providing ground-breaking insights. In particular, case studies are considered the most appropriate tools in the critical, early phase of a new management theory, when key variables and their relationships are being explored, which represent exactly the state of our research (Gibbert et al. 2008). They have a
distinctive advantage for “how” and “why” questions and are particularly suited to examine, reveal properties, arrive to a comprehensive understanding, and develop general theoretical statements about new phenomena in which it is difficult to separate the phenomenon’s variables from their context (Gibbert et al., 2008; Merriam, 1988).

Indeed, case studies get closer to the subject of interest as they possibly can, whereas experiments and surveys often use convenient derivative data and usually have a narrower focus. The case study design helped us to understand the processes of events, projects, and to discover context characteristics that sheds light on the issue (Merriam, 1988).

Our research focus on the case of the “Microsoft House” in Milan. Specifically, it is a particularistic research as we aim at examining a specific instance, the “Microsoft Italy case”, to illuminate a general problem, which is the modern workplace and the relationship with collaborative spaces. Indeed, Microsoft is one of the pioneer in the use of the term “modern workplace” as well as in its adoption. The role of its technologies is leading the change in how people work by enhancing time and place flexibility. Nowadays, knowledge workers are able to work anywhere at any time, these new opportunities profoundly changed the role of spaces and the concept itself of workplace.

The research is also interpretative, whose output is aimed to be a complete qualitative description of the “Microsoft Itala case” and the “modern workplace” phenomenon. Indeed, we want to obtain information from a wide variety of sources (e.g., academic papers, news, articles) and to use the insights coming from the collaboration with Microsoft (e.g., company documentation, semi-structured interviews and on-the-place observations), to identify the main variables and relationships among them. However, since there is a lack of theory about phenomenon, these descriptive data are also used to theorize and to develop conceptual categories to illustrate, support, or challenge theoretical assumptions held prior to the data gathering. We could provide, by a first analysis of company documentation and the few papers on the topic, a first definition of “modern workplace” as “the off-line and on-line work environment aimed at realizing four main pillars: employees’ engagement, flexibility, collaborations for innovation, and well-being”, in which the off-line work environment is
the equivalent of the physical space, while the on-line work environment is represented by
the set of technologies available and employed by employees.

Finally, the research is aimed to be a heuristic research, to extend the knowledge of the
reader about the issue by showing new trends, introducing new definitions, and more in
general by drawing attention about these phenomena.

In particular, we used multiple sources of data to attain the richest possible understanding of the case (Merriam, 1988). Indeed, we based our research on:

- Participant observation that provides insight into the behaviour patterns and
  social organizations (it has been useful to understand how the “Microsoft House”
  is used by employees and external entities);
- The collection of artefacts and texts publicly available or provided by Microsoft
  (such as pitches to guide employees in the change and HR management’s
  presentations about the new culture and its goals)
- Semi-structured interviews.

The most of information was collected through interviews. Indeed, the best way to learn
about the people that are part of the case is to speak with them: the informants (Merriam,
1988). We conducted a first set of informal and semi-structured interviews to six members
that were key members of this change coming from different business units in order to
understand the main characteristics of the project. We developed a loose guide, with general
questions designed to open up conversation about the topic. Thus, in this first set of
interviews we asked very broad questions and let the informants talk about the
characteristics they believe to be more relevant. Doing so, we understood better where to
focus our research, the background, the drivers behind the change, and the culture of the
company. Interviewing was an iterative process, questions were firstly developed on the basis
of the literature on collaborative spaces, tested, and then refined based on what we learned
from asking people these questions. In particular, these first interviews were based on the
role of the “Microsoft House”, the main pillars of the project, how the “Microsoft House” was
designed, how it is used by the employees, which were the main difficulties related to the
change, what has mostly changed since it was introduced. They provided insights about the main characteristics defining collaborative spaces enriching our knowledge coming from the literature. The structure of these first interviews is shown in the following table:

1. Can you better explain what are the pillars on which the Microsoft House project has been designed?
   - Visibility
   - Openness
   - Innovation
   - Smartness

2. Which are the types of space inside the building? Is there a formal classification?

3. Do you have any particular working preference regarding spaces when you are in the building?
   a. Alone
   b. With your team
   c. With colleagues of different division
   d. With the leadership team
   e. With external actors (customers, partners)

4. Which are the most frequented spaces by your colleagues?
   a. Alone
   b. With your team
   c. With colleagues of different division
   d. With the leadership team
   e. With external actors (customers, partners)

5. Moving to the new building, did you mind any changes in interacting among employees?
   a. In your team
   b. With teams of your division
   c. With teams of other divisions
   d. With leadership team
   e. With external actors (customers, partners)

6. Moving in the new building, has it impacted on your working activities? How and which ones did they change?

7. Moving in the new building, has it impacted on your productivity? Which are positive and negative aspects

8. Are there some spaces where you are less productive in?

9. Which are your favorite spaces characteristics?
10. Since the new building has a more central position, did you mind a reduction of workers who are in the building? Which is the average weekly time you spend in the headquarter?

11. Did you host a higher customers or public events compared to Peschiera Borromeo headquarter? How much?

12. Each space has its own rule and it has been designed according to specific objectives. Have you ever explained how to used collaborative spaces? Do you believe that employees use them correctly?

13. How did you measure your employees’ productivity? Which output do you consider?

Moreover, from this first set of interviews, we understood that collaborative spaces for Microsoft were only a part of the broader phenomenon of the “modern workplace”. Thus, we focused our second round of interviews to understand the relationships between the characteristics of the collaborative spaces and the pillars of the modern workplace. These interviews were semi-structured too, but with more formal and focused questions on our final research question, the modern workplace for Microsoft, its main pillars, the role of physical spaces, and in particular the role of the “Microsoft House” to reach these pillars.

In particular, we firstly gathered information about how Microsoft defines the “modern workplace” from their internal and public documents and presentations, we structured them, and then we verified the results through the second round of interviews. The main questions were standard and the same for each informant, however it is crucial methodological rigor in terms of validity (internal, construct and external) and reliability (Gibbert et al. 2008). We obtained internal validity, also called logical validity, through: a clear research framework formulated through the use of existing literature, documentation as well as primary interviews; pattern matching, by designing questions with the aim to compare our hypotheses with the actual observed patterns in Microsoft; theory triangulation to verify findings through the adoption of multiple perspectives and the adaptation of questions aiming at verifying previous interviews’ findings (Gibbert et al. 2008). Triangulation was also fundamental to obtain construct validity (Gibbert et al. 2008). In order to obtain external validity, also called as “generalizability”, we suggest a cross case analysis involving more case studies as a good basis for analytical generalization (Gibbert et
al. 2008). Other equivalent studies could be conducted within other Microsoft headquarters in different countries as well as in different organisations adopting the modern workplace. To simplify future comparisons among case studies, we provided ample details on the case study context. Finally, reliability depends on the transparency and the replicability of the study (Gibbert et al. 2008). Information about each step of the study as well as the documentation organised in a case study database is available. Thus, we consider ourselves to have offered all the necessary information to replicate the study within other contexts.

The effects the collaborative space has on the way of working of employees could vary with the different job positions. Since both the level on the hierarchy and the business division are factors that could affect the result of the interviews, in order to obtain a general and overall view, the sample for this second round was built by covering all the divisions of the organisation (enterprise commercial, public sector, specialist team unit, customer success, one commercial partner & small medium and corporate, services, marketing & operations) as well as the different reporting layers. In particular, the following shows the position covered by the employees interviewed in this second stage, where GM-# means # hierarchical layers under the general manager.

**Figure 8.** Respondents divided in Microsoft Italy division chart (2nd round of interviews)

The first interview was made to Fabio Santini, recently member of the leadership team and head of the divisions One Commercial Partner and Small, Medium and Corporate. Previously, he was the director of innovation and development at Microsoft Italy with the
objective to drive the commitment towards youngsters, developers and IT professionals. He has worked at Microsoft Italy for 15 years, before joining Microsoft he was the R&D Manager of a software house.

In the following table there are the main questions asked in the second round of interviews aiming to understand Microsoft modern workplace pillars and the impact of collaborative spaces on them:

<table>
<thead>
<tr>
<th>Question</th>
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<tr>
<td><strong>1. Which are the Microsoft modern workplace pillars (the most characterizing factors) in your opinion?</strong></td>
</tr>
<tr>
<td><strong>2. (In case of not mentioning them) Is it possible to define the Microsoft modern workplace by the following factors? Which is their role?</strong></td>
</tr>
<tr>
<td>▪ Technology</td>
</tr>
<tr>
<td>▪ Employee engagement</td>
</tr>
<tr>
<td>A positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of the business context</td>
</tr>
<tr>
<td>▪ Collaboration for innovation</td>
</tr>
<tr>
<td>▪ Employees well-being</td>
</tr>
<tr>
<td>Being satisfied of perceived on their own health happiness and life goals</td>
</tr>
<tr>
<td>▪ Company culture: Growth Mindset and One Microsoft</td>
</tr>
<tr>
<td><strong>3. What are the implementation constrains of the Microsoft modern workplace? In particular, which are related to collaborative spaces?</strong></td>
</tr>
<tr>
<td><strong>4. Which characteristics should collaborative spaces have in order to implement modern workplace pillars? (In case of not mentioning them) Collaborative spaces are typically characterized by facility to interact, transparency, on site technology, spaces adaptability. How they are able to develop modern workplace?</strong></td>
</tr>
<tr>
<td><strong>5. In your opinion, how does the Microsoft House help to realize the so-called “modern workplace”? On which areas and how do the main characteristics impact on the achievement of the modern workplace?</strong></td>
</tr>
<tr>
<td>o Does spaces’ design help in the creation of the modern workplace? Are there some spaces directly impacting on it more than others?</td>
</tr>
<tr>
<td>o In your opinion, are there any Microsoft House aspects that should me improved in order to achieve the modern workplace transformation?</td>
</tr>
<tr>
<td><strong>6. How do Microsoft House collaborative spaces impact on your working efficiency?</strong></td>
</tr>
<tr>
<td>In your opinion, are there any aspects that can be improved in order to increase your working efficiency?</td>
</tr>
</tbody>
</table>
In the following sections we discuss the findings coming from our second round of interviews. In particular, each section refers to one pillar of the modern workplace and shows which and how the characteristics of spaces facilitate its own achievement.

4.1 Collaboration

“Collaboration is a process in which autonomous actors interact though formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions” (Thomson and Perry, 2006).

As a result of the interviews we classified collaboration in different types, and the two main drivers used for classifying it are: (i) among which entities it takes place and (ii) the ways it develops. From the first driver, it comes the distinction between the “internal collaboration”, among company’s employees, and the “extended collaboration”, among the company’s employees, customers and partners. “Internal collaboration” can be further divided in “in-team collaboration” and “cross-team collaboration”. The first refers to the collaboration within the same team, division, or function, while the second one refers to the collaboration among employees working in different teams, divisions, or functions.
The way in which the collaboration develops leads to the distinction between the “engaged collaboration” and the “casual collaboration”. The “engaged collaboration” represents the collaboration taking place among actors that were in advance identified as people involved in the same project ecosystem because of their direct participation or their expertise area. While the “casual collaboration” refers to the collaboration among employees outside this predetermined set, and it takes place thanks to casual encounters and the ex-post discovery of common interests and collaborative economies.

Basing on our interviews, the main characteristics impacting the amount and quality of collaboration within the company are:

1. Facility to interact
   a. Level of spaces’ allocation
   b. Space concentration
   c. The presence of dedicated spaces shared with customers and partners
   d. Location centrality
2. Space adaptability
   a. Variety of space solutions
   b. Space distribution
3. Transparency
4. In site technology
5. Organisational structure changes

In the following, these aspects are explained in detail.

**4.1.1 Facility to interact**

*Level of spaces’ allocation*

Microsoft considers cross-team collaboration to be as much as important as in-team collaboration. This is the main reason behind the choice to not have business unit space allocation within the Microsoft House.
In the new headquarter no employee has its own desk or an area where he/she is stuck to, but everyone can move and work freely everywhere in the building. The absence of space allocation requires employees to avoid space personalisation, so no one has his/her own desk, but desks must be kept cleaned by personal objects, neutral and indistinguishable.

Since employees do not have to work in a certain area dedicated to their organisational unit, this new freedom increases the likelihood of them to get in contact with other people belonging to different units with diverse skills and expertise. Anyway, problems in the implementation of this way of working may arise since humans tend to aggregate following a routine: employees tend to recreate a routine and thus there is the risk of the formation of groups within the organisation sitting and occupying always the same areas. Nevertheless, most of informants say they use this freedom and generally change location based on their actual needs of that moment, employees never go to the same place, they decide to sit and work on the floor and area where the resource they need is located [see quote 1, 2]. Thus, it also increases the dynamicity: employees do not only work with more diverse colleagues, but they also get used to change more often these colleagues [see quote 3].

One of the results is that employees are willing to talk with new people. In this way, they get to know each other as well as to understand each one area of expertise quicker than in the previous environment. It helps to create a broader overview of each employee about company’s business [see quote 4]. Some respondents noted that after having moved to the new headquarter they met in few days several people they never worked with, because in the previous offices they were used to go always to the same area where the closest colleagues [see quote 2]. Sitting physically closer to different colleagues gives employees the occasion to meet and talk with people who do different jobs or have different customers. This confrontation can help to better understand your customer needs by looking to different perspectives, or it can introduce new ideas about future products’ propositions (overall when dealing with services and marketing units). They represent opportunities to trigger new activities, which can be both parallel or synergic with your colleague’s one, creating new potential business.
Most of the respondents think the absence of space allocation accelerates the knowledge of new people within the company by increasing the exposure of each employee to the rest of the company [see quote 3]. However, few respondents note how this dynamicity could on the contrary penalize new employees to develop a social network within the company [see quote 5], indeed they got less attention than if they were sitting every day in the same area surrounded by the same people.

Despite the Microsoft House is not divided into formal areas for each business unit and everyone is free to work where he/she prefers, there exists “anchor zones” representing where the “base” of a unit is. The main reason of their existence is to increase efficiency in collaboration, mainly by increasing the likelihood of people to be closer to the colleagues with whom they collaborate most. Indeed, this system reduces the costs of: looking for people with the required expertise, collaborating with the members of your business unit, and collaborating with other specific business units. Firstly, it is easier for employees to look for people with a certain expertise area if they know where to look for it. Furthermore, being closer reduces the costs of face-to-face collaboration and collaboration among people in the same area happens naturally more often. Finally, some divisions collaborate together more often than others. Thus, it is more efficient to locate their anchor zones close to each other’s (considering the structure of the Microsoft House, these divisions’ anchor zones are located on the same floor). Indeed, the tool for booking a room suggest you firstly the available rooms on your floor, thus it is more efficient having a meeting with people who are located on the same floor as they are logistically closer and can reach the meeting room quicker; on average you are reducing employees’ “loss time” [see quote 8].

**Space Distribution**

“The Microsoft House has been designed as a place for both internal and extended collaboration. It is not an office for working alone” [see quote 7]. This is reflected in the allocation of space, which is mostly dedicated to meeting rooms (large and formal as well as small and informal) where most of internal and external collaboration happens. The
remaining space mainly consists in open space areas, which facilitate participation, and some focus rooms. This design of spaces should facilitate the possibility to work with people you need and not just the possibility to bump in everyone. Indeed, it is necessary to design the location of spaces to reduce confusion. Considering this objective, the largest meeting rooms are not located close to the open space so to avoid large group of people moving around the open space, close by the open space instead it is possible to find smaller rooms, which can be used for improvised calls [see quote 77].

Decisions regarding the design of spaces were not affected by Microsoft’s number of employees, but were driven by the aim of these spaces. Following, the Microsoft House is made by many meeting rooms and few desks for individual work since the idea is that “this is not an office, but a space for collaboration where you come to collaborate” [see quote 10]. Since spaces are few, to be well structured they must be thought for collaborating and meeting with partners and customers. However, some informants express the need of having more 5-6 people meetings rooms instead of a big number or 2-3 meetings room. Moreover, the small rooms are often equipped with small soft armchair and small table that are not comfortable since most of the time you are using a PC even during informal meeting.

**Space Concentration**

When the concentration of employees in the space increases the likelihood of casual encounters increases [see quote 3]. In particular, in a very dynamic context this effect works more with people you already know. Indeed, it helps maintaining social relationship. When someone notices the presence of a colleague, he often engages in an informal conversation that is usually linked to work. Thus, space concentration could improve the knowledge about company’s business of each employee by leveraging informal communication in social networks within the company.

The reduction of spaces pushes for better and increased organization of each employee’s personal agenda in terms of where and when to schedule the meetings. The increased organisation favors the engaged collaboration and its efficiency and efficacy.
The increase of space concentration together with the freedom of choosing where to work can create problems of crowding in areas where there is the anchor zone of particular business units, like the Enterprise Commercial that collaborates with almost all the other business units.

Furthermore, the space has been reduced also to favor the shift towards the Smart Working and the online collaboration.

**The Presence of dedicated spaces shared with customers and partners**

The Microsoft House has been designed thinking to the customers, the partners and the public community. In this light, there are two entire floors dedicated to and shared with them.

In particular, the first floor is the MTC (Microsoft Technology Centre) where the meetings with customers and partners happen. Indeed, Microsoft works into (or it is part of) an ecosystem or a cloud made up by partners and customers. Thus, the aim is to replicate this concept using their spaces that must be opened and must facilitate the communication (the link) with the other cloud members, and the extended collaboration.

Customers, partners and journalists do not come to Microsoft for “doing their stuff”, they come to collaborate with Microsoft [see quote 9]. Thus, the space dedicated to them is a value added to the extended collaboration. The company has a physical space to collaborate with the partners that will help to exploit market opportunities, and this space substitutes the space dedicated to the individual work, which is no more needed in a modern workplace.

Firstly, these shared spaces help the collaboration by facilitating the communication of what Microsoft can offer. Here they can show customers their technology by using it with them at the same time, in this way they could improve the efficacy of extended collaboration. The Microsoft House has become a more attractive place for clients, where Microsoft shows them how working life is radically changing. Moreover, these spaces increase the extended collaboration by enlarging the interaction space with customers and partners. Microsoft
became the home base for sit-in with both customers and partners, as a result they are willing to meet more often, so the relationships between Microsoft and all the other ecosystem’s members improved not only due to improved efficacy but also to increased amount of extended collaboration. It accelerates the relationship building with partners by helping the creation of intimacy and trust needed when you are going to perform investment together.

Furthermore, these spaces reduced the need for sales employees to move for collaborating with partners and customers, and thus it also has effects on the efficiency of this category of workers.

The same effects can be also found in other position in the marketing. Indeed, journalists and influencers, which previously never come to Microsoft headquarter in Peschiera Borromeo, now gladly come to the Microsoft House [see quote 11]. This factor increases the occasions of collaboration with them and the visibility itself of Microsoft.

However, few respondents pointed out that the ground floor, which should be open to the public, is not actually open, only one door is opened, the entrance is not so clear, and you must ask if you want to enter since a badge is needed. Thus, it is not used as it was thought to be, namely as a square where the community can gather and work [see quote 12]. Moreover, some respondents complain regarding the crowding of MTC rooms, in particular how often is difficult to find an empty room. For this reason, they have just evidenced the request of dedicating new spaces to the Microsoft technology Centre [see quote 13].

**Location centrality**

Location in the city has its main effects on extended collaboration. Microsoft by moving its headquarter to Garibaldi area, in Milan city centre, got physically closer to the ecosystem of partners and customers in which it operates. Indeed, most of its biggest customers have their headquarters in the same area, for them it is easy to reach Microsoft by walk. Anyway, the new location facilitates also the link with customers and partners located in other Italian cities directly linked Garibaldi train station. Some of the respondents told us they have even
saved travels to Rome and Naples thanks to the new location, which means that for doing the same meeting they used one hour and a half instead of an entire day [see quote 14, 15]. It represents a sensible improvement of external collaboration efficiency. Thus, the location largely participated to the increase in the amount of extended collaboration by reducing the collaboration cost for its partners and customers as well as for Microsoft itself.

The centrality of the Microsoft House cannot be separated from its internal design. The spaces dedicated to customers, partners, and the community would not have sense and would not improve the efficacy of collaboration if the headquarter were not positioned centrally. Indeed, since the location is central it is much easier to organise meetings and events with external entities in Microsoft [see quote 16]. If the same building was located in Peschiera Borromeo (the previous location) these external collaboration spaces would have remained almost empty since it was too uncomfortable to reach.

The central location also impacts the extended collaboration towards the city community itself. Indeed, the Microsoft House got closer to several facilities such as cafés and restaurants where Microsoft’s employees can go for having informal meetings. Thus, they are acting as an extension of Microsoft’s working spaces. They allow the company to get more into the city environment by reducing its boundaries to create a continuum between Microsoft and the ecosystem. This continuum leaves more space for cross contamination [see quote 6]. In particular, this aspect is enhanced by the ground floor openness to the public that would not have any reason to exist if the location was not central. Moreover, an iconic building in the city centre has a strong effect on the brand of Microsoft by the city’s community that are often also customers [see quote 17, 18].

The effects of the central location are not just limited to the external collaboration, but also to the internal one. Indeed, being closer to cafés, restaurants, bars, and pubs makes it easy for employees to have lunch out, or to hangout after work for a drink or a dinner, hence it favors team building. It favors the enlargement of each employee social network within the company, and thus it goes towards the One Microsoft culture.
4.1.2 Space adaptability

**Variety of solutions**

Space adaptability refers to the characteristics of the space that makes it satisfy several employees’ necessities. It can refer both to the possibility of a single space to change itself for best fitting the employees needs as well as the availability of a mix of different spaces responding to different needs and available when requested by employees. In short, it is a characteristic measuring how well the space is able to respond to any employee’s needs. The space must maximize the efficiency and efficacy of every meeting.

In particular, it facilitates every type of collaboration by offering different sets of spaces responding to the needs of each type of collaboration: formal large meeting rooms are typically used for engaged collaboration, that can be both internal in-team or extended collaboration; informal small rooms are used for internal engaged collaboration (both in-team and cross-team) among few employees; hubs and other open informal areas are used for internal casual collaboration (both in-team and cross-team) to exchange experiences among employees as well as for creative brainstorming [see quote 19, 20, 21, 22].

Informal areas are typically used to exchange experiences and enlarge employees’ social network within the organisation, and thus to improve the reciprocal trust among employees. These experiences can also concern work, an example could be to know what your colleague made with a customer in a certain context. Respondents really feel like they are learning even from these informal moments. These meeting can be scheduled in your agenda, but can also happen with unexpected people. Sometimes they happen in other organisational unit far from yours, and thus they facilitate casual collaboration that is particularly useful to trigger creative processes [see quote 21].

In the previous headquarter this space was represented by the canteen that was the unique fulcrum of the building where all employees from every organisational unit meet. In the Microsoft House the canteen has been substituted by the hubs. Due to the architectural shape of the building, there is not a unique hub, but they are three and distributed across the
floors. Thus, the informal areas are more sectorialized, and this is felt by some of our respondents [see quote 23, 24]. They are no longer used for the lunch by every employee, since most of them find more pleasant to have lunch out. Thus, now you choose with whom to have lunch and this could reduce internal casual collaboration. However, to partly substitute the functions of the canteen and to increase the use of the hubs, two times a week fruit can be found at each hub. It creates moments in which people gather in these spaces. There are informants that do not associate the hubs with the canteen, but with the coffee break areas of the previous offices in Peschiera Borromeo. In this regard, they are less numerous then before, and thus they result not as empty and sectorialized [see quote 25].

The Hubs are also used for brainstorming meetings and represent the most frequented spaces where people go to chat and where most of casual encounters happen. Thus, on one side they create more socialization, on the other side they are an occasion to talk about work in an informal and not engaged way.

The most appreciated Hub is the one at the fourth floor since it has no doors [see quote 26]. The absence of doors make it part of the open space: there are not barriers between the informal area and the open space. Indeed, even if you go there for a coffee or a chat there are often colleagues having a meeting there, you can see and listen what is going on, so it is kind of you are participating to that meeting. In so doing, it can stimulate you to participate or obtain information that can be applied to your work.

As we previously introduced, the Microsoft House is divided in anchor zones, and thus has been organically populated in consequence. There are areas that are more silent than others, and areas where there is more dynamism and noise. Thus, if an employee who needs to focus or to confront with a person he/she can locate in a more silent area, while if the employee needs to exchange opinions with more colleagues, he/she will find more people in other more crowded areas [see quote 27]. So, space adaptability improves both the engaged collaboration and the casual collaboration.

Most of the small meeting rooms are informal areas that are more reserved and very adaptable to different kinds of meeting. “The same room can guest a vice-president of a
multinational company as well as a colleague, the space does not have to change. While large modular spaces can adapt to the audience changing shape and appearance, so that they can receive a CEO of a bank as well as an elementary school classroom” [see quote 28].

**Space distribution**

The Microsoft House has been designed as a place for both internal and extended collaboration. It is not an office for working alone. This is reflected in the distribution of spaces, indeed most of them are dedicated to meeting rooms, large and formal as well as small and informal, where most of internal and external collaboration happens. The remaining space is mainly made up of open space areas that facilitate participation and some focus rooms. The distribution of offices should facilitate the possibility to work with people you need and not just the possibility to bump in everyone. Indeed, it is necessary to design the location of spaces to reduce confusion. Considering this objective, the largest meeting rooms are not located close to the open space so to avoid large group of people moving around the open space, close by the open space instead it is possible to find smaller rooms, which can be used for improvised calls [see quote 82].

The design of spaces did not start from Microsoft’s number of employees, but from the aim of these spaces [see quote 78]. Thus, The Microsoft House is made by many meeting rooms and few desks for individual work since the idea is that “this is not an office, but a space for collaboration where you come to collaborate”. Since spaces are few, to be well structured they must be thought for collaborating and meeting with partners and customers. However, some informants express the need of having more 4-5 people meetings rooms instead of a big number or 2-3 meetings room [see quote 43]. Moreover, the small rooms are often equipped with small soft armchair and small table that are not comfortable since most of the time you are using a PC even during informal meeting [see quote 30].
4.1.3 Transparency

Transparency within the building facilitates the sharing of information. Openness towards the others is extremely important, and the glass reduces the barriers letting you see what is happening in the meeting rooms. It favors spontaneous participation similarly to the open space, but at the same time guarantees more efficacy of the meeting by reducing the typical drawback of the open space of noise and confusion.

In particular, even when in a space engaged collaboration is happening, transparency facilitate casual collaboration by people outside the meeting. This aspect helps participation of everyone and helps creating and supporting the internal networking, it creates a continuum inside-out. One possible dynamic is an employee who passes by a meeting room, understands they are talking about a topic of his/her interest and so decide to enter the meeting for offering help or for improving his/her knowledge about it. Another dynamic favored by transparency is when an employee sees something on the whiteboard, understand what they are talking about, does not interrupt the meeting, but at the first occasion in an informal area come out with that topic and offers spontaneously useful information or their help. Most of the respondents found themselves at least once in these kinds of situation [see quote 31].

Space must be always open to reach the aim of mass collaboration in line with the One Microsoft value. If each room is screened and you can only see the people going out and in, for sure most of the interactions would not occur [see quote 32]. Employees are no more closed into their offices doing their stuff, but they are continuously receiving as well as providing solicitations, of extreme importance overall in areas like Marketing where creativity plays an important role.

By contrast, transparency also impact on extended collaboration. Indeed, 95% of collaborative spaces are transparent in Microsoft House. However, sometimes employees and customers need to protect sensible data, thus the physical space has to be flexible and respond to these needs. Technology can help to solve some problems that can derive from
these characteristics. The most common one is represented by privacy. Usually, company meetings include dashboards where customers or partner data are typically displayed; in order to have more confidential meetings some rooms have the possibility to provide glasses opacification which eliminate transparency. Moreover, Skype per Business have the feature to easily pass from dashboard to single device where each participant can watch colleagues’ desktop and modify or add feedbacks on real time.

4.1.4 In Site Technology

Technology creates a digital space for collaboration and enables the continuum from inside to outside the physical offices. It represents a tool that enable to collaborate outside the perimeter of physical spaces. It extends collaborative spaces everywhere. In this picture, the Microsoft House represents an important “n” point which must be able to supply everyone the same experience as it was physically present at the meeting [see quote 33].

The space is able to do so by leveraging its technology that must be characterized by no failures. If your remote connection is not excellent when you are engaging in collaborations with customers, their perception about your value proposition is poor. Furthermore, when you are introducing the modern workplace in a company you will probably meet cultural obstacles. Hence, to have a technology that has failure zero is important to focus on and support the change management process.

The Surface Hub is the most cited by our respondents as the main collaboration tool, it was referred as the “hardware” of Skype for Business of the Microsoft House. The pipeline of the Surface Hub is to “increase the potential of the team”, indeed it is not just Skype, but it also helps in the brainstorming activities and it also allows the immediate sharing of documents and meeting’s outputs.

Space technology can also be used to increase the efficiency of the building in terms of adaptability (through the possibility of booking rooms) and easiness of finding the people you need to collaborate with. The booking system is designed to promote the right way of
using the different areas by employees. Indeed, the length of the slot each room can be booked depend on its type.

To facilitate the finding of colleagues in the building, besides the internal chat, through the Skype application employees can report where they are inside the building if colleagues need to interact with them. On the other hand, Skype includes two important functionalities: the possibility of setting the “do not disturb option” for more focus activities or the possibility to sharing desktop whoever people want to and work together on them. Another interesting application is represented by “Find Me”. It is a not mandatory in-company application (depends on you if creating a profile or not) through which employees can see the location of colleagues who are in the building if necessary.

Technology can only facilitate the engaged collaboration both the internal and extended one. In the internal collaboration, Microsoft largely relies on this set of collaboration tools and thus on engaged collaboration, which roughly represents 80% of collaborations (based on our respondents’ answers). Hence, it is extremely important for them to identify ex-ante what they call the “extended team”, namely people that are not member of the team responsible for the project, but are the counterparties of other teams or organizational units. It is important that all the people who can add-value to a project are added to the extended team.

Regarding the extended collaboration, thanks to the new building’ technology, customer meetings become more effective and less time consuming. Indeed, it permits to accelerate all these sell cycle process activities, both in terms of efficiency and accuracy, which enable customer to understand the real potential of the new opportunity. Moreover, all the respondents argued that the new building was able to engage not only new customers but also to attract the old ones who were reluctant or basically they did not want to visit the previous headquarter. Thanks to the “wow effect” which Microsoft technology provide, customers are more willing to return to the new building and this permits them to understand the modern workplace [see quote 34].
As part of building technology can also be considered the ability of glass walls and floors to reduce sound expansion. Indeed, all this openness and transparency is possible because it does not mean to have a noisy and chaotic workplace. Soundproof rooms improve the efficacy of certain types of collaboration, when it is important to be focused with the people you collaborate with.

4.1.5 Organisational Structure Changes

Organisational changes have an impact on how spaces are used by employees. In particular, employees whose team or role changes need to spend more time in the building. Indeed, the change of team leads employees to spend more time together with their new colleagues to know each other and build the trust. At the same time, employees whose role changes need to collaborate and communicate more to learn how to better perform in their new role.

Thus, an organisational structure change temporary increases the need of both engaged and casual collaboration, and so the need to be physically present in the headquarter. This phenomenon was called as “new role set-up” by some of the informants and resulted quite diffuse after the large organisational structure change Microsoft faced [see quote 35].

A large organisational change induces the involved employees to collaborate more for learning new competences, and result in an overall enlargement of their competences. The company improves employees’ ability to understand more parts of the company’s business, and thus the ability to collaborate with more diverse organisational units.

A space like the Microsoft House better responds to organizational changes of this kind given the absence of space allocation and its high adaptability. Hence, it is less difficult and costly for the company and its employees to sustain these changes. In other words, the Microsoft House itself makes the entire organisation more flexible and able to respond to organisational changes. It is the kind of space that provides the possibility to continuously improve employees’ competences by performing organizational changes with a higher frequency.
4.2 Flexibility

The main space characteristics impacting on work flexibility are:

1. Facility to interact
   a. Level of spaces’ allocation
   b. Location centrality
   c. Space concentration

2. Space adaptability

3. In site technology

Microsoft refers flexibility not only in terms of spaces but also in terms of individuals. In particular, people must trust each other among and across teams in order to reach working flexibility. This topic is strongly linked to Smart Working, which Microsoft Italy has introduced since ten years ago.

Moving to the new building has impacted twice on face-to-face interaction. First of all, it has accelerated Microsoft Smart Working, which typically brings employees to work outside the headquarter. It negatively impacts on face-to-face interactions also due to the enabling technology that Microsoft is able to provide to its employees. Indeed, technology permits employees to collaborate with their colleagues in a flexible way. In fact, respondents argued that they could daily interact with teams and colleagues they have never met in two years. Moreover, employees are able to manage customers across different Italian region without directly interacting with them through Microsoft technology [see quote 14].

Secondly, since Microsoft House is smaller than the previous headquarter, employees are more willing to work in other locations reducing the possibility of face-to-face interactions. Indeed, they get used to come to the venue, beside customer meetings, exclusively for one-to-one meetings (states of progress or training activities) or for more informal meetings. Indeed, what we have seen, and then respondents confirmed us, is that Microsoft headquarter was less crowded after 8 months since they moved to the new Microsoft House [see quote 36].
In order to implement Smart Working an organization can rely on 4 main drivers: organizational policy, leadership style, physical layout and digital technologies. In particular, respondents often refer to the leadership style aspect of Smart Working: as opposed to the traditional and hierarchical leadership which defined clear guidelines to reach the desired results, new work models promote a more relationship-oriented leadership, based on collaboration and employee participation. The final objective is to empower workers to be autonomous in the decision of the most appropriate working conditions and tools to be used to reach the desired target. Therefore, flexibility means independency [see quote 37]. Indeed, the new model of working permits to manage every working day according to employees’ needs: being autonomous of deciding how, when and where you want to work to optimize the productivity level. For example, an interesting point that respondents argued is the fact that employees perceive to be most productive at home, overall when performing individual work activities [see quote 38, 39].

Thanks to the new headquarter, besides the flexibility given by the on-site productivity spaces, Microsoft is able to provide work spaces to its employees without, basically, renting them. Employees can work in customers’ places as well as at their homes without losing efficiency in their daily activities.

Furthermore, in the current work context, the reduction of costs caused by the resources spread on different locations represents a significant challenge. ICTs represent one of the key solutions to face this issue and to enable the introduction of Smart Working and work-life balance initiatives. Indeed, in order to realize the new model of working, an appropriate use of digital technologies can facilitate the development of the new practices. Indeed, a right mix of virtual and physical spaces, coming from the extension of the office through a network of locations connected by technological software, are fundamental for organizations to be in contact with resources.

By contrast some respondents evidenced that, basically, the modern workplace relies on their personal computers and their own devices [see quote 40, 41]. Indeed, they believe that personal devices permit to collaborate among teams and to be as productive as possible; the
new building simply is a workplace rented by Microsoft which provides real estate and technological services to its employees, customers and partners.

The Microsoft new way of working derives from a strongly and progressive change management. First of all, Microsoft has moved its headquarter from outside the city to the city centre. Secondly, it has permitted to manage a team without any physical presence but through setting mid and long-term objectives. Result based model, or goals based model, means that employees are only evaluated on the basis of the goal itself. In particular, Mediterranean working culture relies on monitoring employees’ physical presence. According to Microsoft managers, “if IT companies want to be competitive in the market, they need to extend the concept of productivity shifting from typical working hours (9:00-18:00) to the possibility to work the entire day”. This approach must not be imposed from the top management, but guided especially by middle managers and supervisors who are working side by side with employees daily. In particular, managers are in charge of defining, facilitating and encouraging performances: such responsibility has always been important in a traditional work environment but now becomes indispensable in this new context.

Microsoft has implemented Smart Working since ten years ago, nowadays they are totally integrated in this new type of working (no badge monitoring, closest customers, 24/7 headquarter, goals oriented approach, etc..). Moving to the new headquarter has permitted to accelerate this approach. Indeed, according to Microsoft employees, the Microsoft *modern workplace* take place both in office and out office equally [see quote 38]. Obviously, since they have adopted a customer and partner first policy, and they mainly provide business-to-business products and services for the Italian ecosystem, the transformation was simpler than companies operating in other industries (i.e. manufacturing). Moreover, the new headquarter is really helpful in showing to customers, partners and Milan community how *modern workplace* can be easily applied. By contrast open space is not for everyone. Indeed, companies with high number of employees are not willing to implement it due to the high level of noise that can be generated. They basically organize a semi-open space with 40/50 people or create cubicles in order to limit the noise. Anyway, the main difference compared
to the previous location was represented by attracting customers. Meanwhile employees had
to “forcibly” bring customers to visit the old location, nowadays they directly ask by their
own even though customers are well-spread out over the country. Indeed, it seems quite
obvious Microsoft’s employees are not able to reach them all.

New building spaces have been designed in order to reach any type of possible business
and productivity goal both from customers’ and employees’ perspective. The starting point in
the project development was customers, not employees. “What is modern workplace for
Microsoft? Basically, it is a work place where employees bring their customers, where they
collaborate with them and organize meetings for them. In fact, there are even more
meetings room than individual desk where to work in”.

4.2.1 Facility to interact

Facility of face-to-face interactions are one of the most important aspect of collaborative
spaces. In particular we refer not only to employees’ interactions but also customers’ and
partners’ interactions. Moving in the new Microsoft headquarter has totally transformed the
way employees interact to each other, to the customers and to the community. Aim of our
interviews was also represented by understanding the dynamics of this change and which
factors have impact on flexibility.

Level of Spaces’ Allocation

No fixed desk (+): One of the main new aspects of the Microsoft House and, generally, of
the modern workplace culture is represented by the possibility of seating wherever
employees want to. The idea on which this principle is based is represented by increasing
interactions across divisions due to the lack of personal desks. Therefore, employees simply
seat according to their momentary needs or on the basis of their daily activities. According to
respondents, it happens that they change their place more than once per day. By contrast, in
order to not introduce a total disruptive change, Microsoft board has decided to create the so
called “anchor zone”: they are part of the building dedicated to each division (enterprise
commercial 3rd floor, one commercial partner 4th floor, staff and marketing 4th floor etc...). For this reason, the new building has been populated in a certain way: noisier floor (3rd floor) where generally employees go if they need to have feedbacks or discussing about a project with the enterprise commercial, more focused area for more productive activities (MTC) [see quote 44]. Moreover, employees get used to go to their anchor zone not only because their team is there but also to have directly the information they need without wasting time. They are also useful in “hybrid situations”, when the employees use the Microsoft House as home base between two meetings at the customers’ locations, they go directly in their anchor zone. It means that employees more often seat to the same area limiting the possibility of cross-divisional face-to-face interaction.

**Territoriality behaviours (-)**: There are some sort of conflicting point of view regarding territoriality. *Modern workplace* culture includes that employees should change every day seating because there are no personal desks in order to collaborate with the highest number of colleagues and having the right mix of collaborations. Some respondents evidenced that some employees started to personalize desks with family photos or teacups [see quote 45]. On the other hand, most of respondents argued that they have never seen this type of behaviour.

**Location Centrality**

**Central position (+)**: The Smart Working approach was effectively implemented in the previous headquarter but the new one has permitted to be more customer centric and to be more effective in the customer management process. Moving to the new headquarter has permitted to increase the number of customers, partners, and Milanese community interactions. Thanks to its centrality, customers themselves are more willing to visit and organize meetings in Microsoft building. Moreover, it has permitted to have stronger relationship with them and to optimize different sell cycle activities both in terms of
efficiency end accuracy [see quote 14, 46]. Indeed, according to an internal survey, 80% employees claim that its productivity has improved since moving in the new headquarter.

The majority of the respondents argued that they spend most of their working time in customers’ companies (some respondents have also customer company badge to directly enter in their venue) [see quote 47, 48]. Thanks to stronger relationships, it can happen that employees go to the office once a week, only for administrative and bureaucratic stuff.

Furthermore, the new position is easily accessible by employees by public transportation, so it is likely that employees go there more than once a day for shorter period. This did not happen in the previous headquarter [see quote 49].

An interesting point, which emerged in our interviews, is that thanks to the centrality of the new building there is plenty of places nearby where employees can have more informal meetings, brainstorming and creative activities (bar, co-working spaces etc..). Indeed, we also notice that it is quite common to find Microsoft’s employees having meeting in the surrounding area. They have been perceived as an “extension” of Microsoft House assets provided to employees [see quote 50].

Parking (-): Parking was one of the most discussed topic during interviews. Almost all the respondents concern about the parking issue. In particular it represents a huge problem especially for people that continuously go and come back to Microsoft headquarter during the day, since it is very difficult finding a free parking slot in city centre area. Anyway, Microsoft has its private parking: it is able to host no more than 90 cars. For this reason, employees prefer staying at home or working from customers locations [see quote 51].

Moreover, employees ask for the possibility of having an application able to reserve your parking slot or, at least, the possibility to see which are the available slots.

By contrast, some respondents do not perceive it as a problem. First of all because the headquarter area is one of the most linked by public transportation. It is very easy reaching all the most suburban areas [see quote 52]. Secondly, it is not taken for granted that companies have to provide services to its employees in reaching the building in its welfare program, while Microsoft does it. Thirdly, respondents believe that people who concern
about parking problems are those who are not able to organize their working activities: thanks to the Smart Working there is no need to come in Microsoft House, just in few cases. Therefore, employees can connect to company meetings through remote working or making calls wherever they are [see quote 79]. Moreover, they believe that parking problem is more related to the recent moving period in the new headquarter, nowadays (Oct 2017) they have already got used to it.

**Space concentration**

The perception about the new building is that it is in under capacity, and there is not a space where all employees can stay together for company meeting. Anyway, respondents evidenced that they always find a place where to work in the new building.

*Reduced spaces:* Microsoft House is really smaller than previous headquarter in Peschiera Borromeo in term of spaces, 7500 mq versus more than 25000 mq. In fact, according to Microsoft manager, the modern workplace is based on time more than physical spaces [see quote 53]. Better managing their time is a fundamental asset for employees to foster their productivity. Some respondents concern about the number of phone boots available. By contrast, according to the *modern workplace* culture, Microsoft permits you to work in a flexible way: if employees’ working day is based on calls or Skype calls employees should do it at home without occupying any space in the Microsoft House. Moreover, employees perceive to be more productive at home rather than at office, mainly due to the commuting time. Respondents in fact prefer having remote meetings instead of necessary coming at the office [see quote 54].

*New spaces:* Although Microsoft House is smaller than previous headquarter, it includes new spaces which have introduced new types of interactions especially with external actors. Microsoft Technology Centre is always occupied by any type of customers and partner meetings, Digital Class is able to host more than 40 children for their digital interactive lessons, the Loft is used to host high-level event, and Hubs are extremely important
especially for casual encounters during daily breaks. These spaces have been designed in order to satisfy any type of interactions. Moreover, the building’s technology is able to impact on face-to-face interactions thanks also to space modularity, one example is the envisioning centre. Employees are able to modify meeting rooms’ setting according to their needs. Furthermore, the lower number of spaces typically brings to higher number of casual face-to-face encounters in the building. By contrast the perception of the new building is that it is under capacity, that it is not able to host all Microsoft employees at the same time. In fact, there are three floors (second, third and fourth) dedicated only to Microsoft employees. While, the second and fifth floors are not available, as they are occupied by the MTC and the “the Loft”, respectively.

4.2.2 Space adaptability

Modern workplace in Microsoft vision is based on the physical workplace as productivity asset, not just an office where employees daily work in. It must be designed according to employees’ needs. In particular, spaces must enable this vision: they should be able to satisfy every type of situation maintaining the same productivity level, both inside and outside company building. Moreover, the new building requires that employees can seat and work wherever they prefer. So basically, they choose where to work according to the type of activity or the colleague they need in order to be as productive as possible. Another main difference with the previous headquarter is the 24/7 availability of Microsoft House. Indeed, in Peschiera Borromeo employees must ask for special authorization, which was provided only under certain conditions during the weekend. This negatively affected employees’ independency on which modern workplace rely on.

Microsoft House spaces was designed to realize modern workplace and all these activities needed to make this vision happens: they include collaboration moments, flexibility aspects and all the technological tools needed to be productive at office, at home and in customers building. For this reason, Microsoft has a several number of different collaborative space.
- *Phone boot*: small size rooms designed for Skype calls, individual and more focused moments.

- *Focus rooms*: they typically are 3-person rooms for more focused activities or one-to-one “private” meeting. They include also monitors for data display.

- *Meetings rooms*: Big and middle size rooms for more formal or business meetings. They were designed also for customer and partner meetings. Meetings room are very useful for collaboration activities, especially with people who works outside the building where data can be displayed.

- *Meeting rooms including the Surface Hub solution* for more engaged and interactive meetings. It is an useful tools for international and national meetings especially in business case activities.

- *Hubs*: open spaces for informal meetings and brainstorming activities. They are the most appreciated spaces especially thanks to its informality. They inspire and stimulate customer creativity. They were designed as break and lunch areas or for leisure activities, people go there for having a snack and chatting.

- *Envisioning centre*: spaces which allow the possibility to create modularity environments for customer meetings. The setting of the space can be changed according to the type of meeting employees want to have.

- *Open spaces* for daily and “routine” activities. Each floor also provides soundproof sofas for un-programmed calls close to the open space. This tool is very useful to avoid high level of noise in that area.

- *Loft*: A space that combines privacy, concentration and attention to details aiming at hosting the most relevant events and high-level clients.

- *Creative gardens*: soundproof spaces for one-to-few meeting and more productive activities.
Therefore, there is not the most efficient space, it totally depends on employees’ activities. According to our interviews, all the respondents are very enthusiastic about the right mix of choice that they have for their working activities [see quote 76]. It seems it is really difficult for them to imagine new spaces typologies able to satisfy their needs. The main difference with Peschiera Borromeo building, regarding space adaptability, was represented by the open space. In the previous building Microsoft managers had their personal office otherwise you should work in the open space area.

Anyway, from second round interviews we conducted, several spaces related problems arise:

- There are too much small size rooms, especially focus rooms. Respondents concern about the layout design of these rooms. In particular, even though they were designed to collaborate or having one-to-one meeting, there are not tables, and chairs are really uncomfortable for working with personal computer. Respondents believe that they are more useful for chatting or brainstorming activities [see quote 30].
• Microsoft House includes 12 people-meeting rooms, or 2/3 people focus rooms in terms of capacity. Respondents concern about the possibility to have a middle ground room. In fact, respondents argued that they have a lot of 5/6 people meetings but they need to reserve a bigger room. Another interesting point that arises from our interviews was related to the sense of awe coming from transparency. Indeed, in order to avoid problems in using bigger rooms than needed, employees have two different meetings in the same rooms that is not optimal for each meeting productivity [see quote 43].

• Absence of canteen: previous headquarter in Peschiera Borromeo provided canteen service to its employees which represent the core space for cross division interactions. Moreover, there were other break and lunch areas where employees could interact during the day. Therefore, according to respondents Hubs are not able to replace this type of spaces in terms of interactions opportunities [see quote 23, 24].

4.2.3 In Site Technology

Technology represents a fundamental asset for Microsoft, not only because it basically promotes and delivers technological solutions to its customers but also because technology is an enabling aspect of Microsoft employees’ way of working. Indeed, technology strongly impacts on employees’ flexibility. It must give employees the possibility to collaborate in an easy and fast way with their extended team wherever they are. Skype for business, Delve, Yammer and all communication tools provided by the company permits employees to be engaged and to actively participate in company meetings.

Every company has its modern workplace vision. Microsoft modern workplace vision is really innovative and relies on its technological assets; not all companies can afford to build it with their own technological resources. Some respondents try to provide us a definition of what modern workplace is in terms of technology: “modern workplace means that my personal computer is my workplace. Modern workplace means having all the technological
tools, including telephone and e-mail, that permits you working both physical and outside the office. *There should be no difference between the Microsoft House and customer offices or bars, co-working spaces, home etc.*. Since Microsoft has implemented Smart Working around five years ago, employees get used to have daily remote meetings. It is very difficult having meetings without remote participants. Surface Hub is perceived by respondents as the main productive tool in-company meetings for more engaged activities.

On the other hand, Microsoft have to provide the employees security in remote working context by permitting them to safely share documents with their colleagues. It needs to protect personal document, customer documents, and company documents, both classified and not classified.

Being technological flexible in modern workplace means also providing technological tools which permit to adapt to different context, maintaining the same productivity level, inside the building. Besides the modularity meeting setting that we have already explain before, an important productivity tool can be the booking rooms apps. The app is able to provide the empty room in the building and the possibility to book them for one-hour reservation. According to employees, it is very important having a scheduled calendar otherwise it’s very difficult finding an empty room so that meeting productivity decreases.

### 4.3 Technology

Microsoft is focused on the technology aspect of modern working both as user and as producer and distributor. It not only promotes the *modern workplace* culture internally, but it also delivers technology solutions to customers for their workplace transformation. Indeed, the new building not only permits Microsoft to implement the *modern workplace* internally, but also to show Italian customers how to do it. Since our focus is analysing how collaborative spaces impact on the so-called *modern workplace*, it is necessary to make a distinction between the technology which Microsoft offers and delivers to its employees and customers (Office 365, Skype per business, Yammer, Delve) and the building’s technology of collaborative spaces.
Obviously, technology (both of them) is a fundamental aspect of the *modern workplace* transformation. According to some respondents, it is the most important pillar not only because Microsoft makes and delivers technology to its customers, but also because it is able to provide a comprehensive and stimulating working experience [see quote 55].

In particular, technology has several advantages. The most relevant one regards the employees’ productivity. Being productive in every moment and wherever you are through tools enabling-technology is fundamental for enabling Smart Working. Indeed, the on-line working experience must be the same than the on-site one, especially during companies meeting, otherwise the lack of technological tools force employees to go to the office. According to one manager, “*IT companies that want to be competitive in the market need to extend the concept of productivity shifting from the typical working hours (9:00-18:00) to the possibility of working during the entire day*. In order to do so, companies have to implement all those technological tools which permits employees to work in customer offices, on public transportation, at home, or wherever they prefer. Working experience does not rely on physical spaces anymore.

Indeed, Microsoft provides, also through the Microsoft House, not only their own devices (smartphones, tablet and personal computer) but also different software and programs to reach the maximum level of working experience. Share Point (which permits to easily sharing documents on cloud platform or directly having access to customers desktop), Skype for business, OneDrive, an efficient mail system, and all the extranet and intranet services are fundamental in the modern workplace transformation, both in mobility and on-site working. According to the majority of respondents, this is the first step of the transformation, the first challenge to face: the technology adoption. If companies do not have a supportive technology as a valuable asset, they cannot realize any type of modern workplace.

The second step is represented by having a technology-oriented culture. Although companies can have the right technological standards or the right technological tools, without having managers who infuse this type of culture the *modern workplace* becomes
really ineffective. All the technological supports must be reliable. They are part of a generalized platform able to connect several devices and that permits to efficiently collaborate whenever people are. “We have had also struggling some problem in developing this type of culture and in approaching customer meeting”, Microsoft manager said, “some customers did not like or perceive Skype meeting or in general having remote meeting instead of participating physically ineffective. This is a huge wall that can limit the efficiency of our meetings” [see quote 56, 57].

In particular, technology should be seamless. An interesting issue is that some respondents did not include technology among the pillars of the modern workplace. Not just because they perceive it as not important or not necessary but because they believe technology as taken for granted in the new building. Indeed, modern workplace culture can be applied only if technological assets work [see quote 60]. Employees should neither question if technology works in a particular room nor perceive it as something that could not be efficient. Technology must afford the effective usage of all those tools which permits employees to collaborate from around the world. Moreover, organization should allow employees to bring their personal devices rather than organization’s one without any connection or accessibility problem [see quote 59]. Indeed, “how can employees be productive or collaborative by home if they cannot access to SharePoint documents?” [see quote 58]. All these procedures/processes have to be implemented and appropriate to employees needs in order to accept the new way of working.

Technology must permit to have the same working experience whenever you want. Microsoft is working a lot on this field especially regarding the accessibility and the security of data from outside the company. Around 4 years ago, in order to have access to a company resource by home, employees had to carry out complex procedures: taking the personal smart card, taking an appropriate reader, put the smart card inside the reader and login the personal account, and then waiting for the connection (five minutes). This procedure took around 7-8 minutes. This totally reduced the modern workplace since employees preferred
going to office, where they could have access immediately. Nowadays, “offices are where employees are, and your need is just a personal computer, without any limitations, thanks to the cloud”.

**4.3.1 In Site Technology**

Microsoft House technology includes a set of different tools. The most relevant is surely represented by the Surface Hub. The Surface Hub is a multi-touch collaboration device that unlocks the power of the group. It is basically a digital blackboard with a huge number of functionalities. It can be seen as a platform that brings the tools people rely on to the centre of the discussion and let them interact in new ways, also from remote. Employees can write down the information, save and send them via email. Meetings become more engaging and productive at the same time. It is particularly suitable for business cases analysis and brainstorming activities. One respondent said that the Surface Hub is able to save 2 hours of activity for each meeting [see quote 80]. Although they understand how much it is expensive, employees perceive the lack of Surface Hub rooms. It becomes very difficult booking this type of meeting rooms because they are always occupied. Moreover, Surface Hub is an on-site technological tool. Since it is only in a few number of meeting rooms, it limits people who want to use it for working outside the headquarter, it forces them to go there. Obviously, respondents perceive its great potential and how it impacts on the efficiency of different size meetings rather than joining just through Skype calls. Furthermore, since it is very expensive, until now it is not so common to exploit it during customer meetings. Therefore, it is more used for in-company meetings.

Another important tool is the booking room application. The application is linked directly to personal outlook and it permits to see which are the empty rooms in the building and their “state”. State not only means the disorder degree of the room, but also all its technological and physical assets that the room is able to provide. In fact, it was one of the most discussed topics during our interviews due to the heterogeneity of felling about it. Some respondents argued that the booking application is working very well since it has permitted to reduce the
mess level at the building. It is an effective way of managing spaces and the “hardware technology of the building”. By contrast, a consistent number of respondents are extremely disappointed about the booking app. First of all, they complain about the app functionalities: quite often it does not work, and it is easier to verify physically if the room is empty [see quote 61]. Moreover, the majority of the employees does not use the booking application. They basically go and enter in the first room available even if the capacity is really higher (sometimes we see one person in 12 size meeting room). Indeed, often when we needed to conduct an interview we entered in an available room without booking, or when we booked, we found someone in that room.

Technology must work. Anyway, some of respondents argued that technology at Microsoft House are not at failure zero. Indeed, they have revealed that video/display wireless sometime does not work or is too slow, even during customers’ meeting. Therefore, if Microsoft goal is showing and spreading out the modern workplace culture, technological tools must be perfect. Not only it can create embarrassment with clients, but it also brings to inefficient meetings. For this reason, the company has introduced some labels for each technological object, including description, instructions and what to do in case of recurrent problems.

In the new Italian headquarter all the collaborative spaces are transparent. The main problem regarding this topic is organizing meeting with customers which can have opportunistic behaviours. Since the first floor that is dedicated to MTC is visited continuously by partner and customers, who typically walk around to see the most recent technology, it can happen that data, especially confidential data, are displayed in meeting rooms. For example, once it happened that two relevant players belonging at the same industry were having a meeting just in the opposite rooms, due to the fact that the two organizing employees do not necessarily have to be aligned. In addition, also middle management meetings require more privacy than daily meetings. Necessarily, there are some circumstance that are more confidential than other ones. For this reason, in some meeting rooms Microsoft has adopted a new type of technology that provides glasses opacification.
Until now, it has been adopted only in a limited number of rooms (5 in the entire building) but it is expected to increase just starting from the next year.

On the other hand, some respondents retain that transparency does not represent a problem for them [see quote 29]. First of all, because when a particular meeting requires a certain level of confidentiality, people can choose to use the Skype meeting on personal computer without any data displayed in bigger screens. In this way everyone can share on Skype your data, putting comments or just typing ideas keeping the level of privacy. Moreover, this type of transparency is in line with the One Microsoft culture, no secrets, everything clear, everything transparent [see quote 62]. Also in case of heated discussions it testifies how much people are engaged in company’s objectives and their willingness to reach them. It permits to better know each other and create trust among the teams. Basically, this segment of clusters does not perceive transparency as a limit.

4.3.2 Space Adaptability

Collaborative spaces adaptability permits employees to satisfy all their working needs obtaining the maximum level of productivity. In the new building there are different room typologies:

- **Phone boot**;
- **Focus rooms**;
- **Meetings rooms**;
- **Meeting rooms including the Surface Hub solution**;
- **Hubs**;
- **Envisioning centre**;
- **Open spaces**;
- **Loft**;
- **Creative gardens**.

[see page 79 for the detailed description of each space]
As we said before, technology in collaborative spaces is designed in order to reach the highest level of productivity. When employees decide to book a room, they have basically decided which technological assets they need. Besides the highspeed connectivity, Surface Hubs’ screens, which act as microphone, and Javars are present in all the rooms. Javars are basically an environmental speaker which permit to have call with people who are not physically there. Moreover, employees who prefer having a certain level of privacy can create a more confidential meeting through rooms technology.

4.4 Growth Mindset

Modern workplace pillars start from the culture that is the basis on which everything else is built. We wanted to understand whether spaces are able to facilitate the flourish of this culture, and in this case which are the main characteristics involved and how they operate. We spotted the following:

1. Facility to interact
2. Transparency
3. In site technology

As previously anticipated, one of the pillars enabling the modern workplace is the so-called growth mindset. It refers to an individual way of seeing things, thinking and interacting with colleagues. Who has a growth mindset is a learner, his/her goal is to enlarge his/her competences from mistakes, from the resources he/she has access to, and most importantly by listening and confronting with others, indeed it is strictly linked to the one Microsoft culture that aims at improving cross-function collaboration. Thus, it is a culture based on the ability to change that promotes diversity, inclusiveness, and error toleration.

An important aspect is the strong empowerment of employees reflected in a very flat organisational structure. At the basis of the empowerment there must be trust, it is both required by, and given to, colleagues. However, trust itself is not enough, employees can be empowered only if they are valued based on clear, transparent, and measurable objectives.
The ability to reach these objectives must be the only driver for evaluating their work, so that it is not valued to be physically present at the meetings and technologies are really used at maximum efficiency [see quote 63].

The working space at disposal of employees must be aligned to the philosophy and culture of the modern workplace. Everything that facilitates employees’ growth, through the improvement of their ability to learn as well as their empowerment, facilitates the diffusion of the growth mindset. The ability to learn is strictly related to collaboration, the ability of taking risks and the fear of changes, while employees’ empowerment requires the building of trust and the understanding of company’s objectives among

Clearly physical space characteristics are not the main leverages when promoting culture across organisations, however it can support this process when its design is aligned with it. The main space characteristics supporting the spread of the growth mindset are facility to interact, transparency and in site technology.

4.4.1 Facility to interact

The presence of informal areas as well as the ease of interaction are other physical aspects reducing barriers among business units, indeed they facilitate the birth of cross-function social network through casual encounters. If there is more communication, more collaboration, and more flexibility the employee feels like part of a family. Thus, he/she is more willing to take risks and try new things, it learns from mistakes and grows, so it works in an environment that facilitates the diffusion of a growth mindset.

Furthermore, the absence of space allocation eliminates the idea that “if you are sitting at your location, it means you are working”. This enhances that fact that you are “working for goals”, not based on the time you are spending on the desk, which means that you are only “judged” on the basis of your ability to reach the objectives. Hence, with no space allocation people really feel more empowered and responsible for their objectives since there is not any other way for measuring their contribution.
Objectives must be clearly defined, but how and when is left to employees’ freedom. Anyway, it is important to develop internally a relationship of mutual trust among employees as well as between employees and the organization. In order to reach high level of job empowerment there should not be any form of monitoring of any forms of objective pursuit except the objective itself. It is the reason why in the Microsoft House there is not any form of specific and punctual monitoring [see quote 64]. Trust is fundamental for guaranteeing complete work flexibility to share clear and transparent objectives. In the trust building process, the physical presence and face-to-face interactions are important, you need it to get to know better your team. Employees are assigned to specific targets; these targets are really ambitious, and they are valued only on the basis of these. This increases meritocracy but also start a process of “natural selection” and quick position changes [see quote 64].

However, when there is people empowerment and thus responsibility towards defined targets, full delegation of all necessary actions, full trust, and there is not micro-management, employees are happier and pride of working for the company.

The Microsoft House tries to avoid the arise of habits and routines that put employees in comfort zones. Employees are no more closed in their offices doing their “stuff”, but they are continuously exposed to external solicitations and provides solicitations to others, thus they are enriched by these continuous exchanges [see quote 65]. The absence of space allocation, the possibility to move wherever you want within the organization together with the increasing concentration of workers in the building helps the encounter with diverse colleagues coming from different organizational units. It helps enlarging employees’ knowledge of company’s business in all its parts in order to understand better the competence areas of the colleagues working in different areas of the organisation. Moreover, it improves their professional development possibilities.

### 4.4.2 Transparency

Microsoft partly overlapped business units’ objectives with the aim of creating micro-challenges between them that push to the general improvement of their output. However,
this competition introduces the risk of creating strong boundaries isolating each unit, the physical space should try to reduce these boundaries.

In this light, transparency partially participates to the development of the one Microsoft aim of improving internal collaboration. The one Microsoft culture is intended to improve the collaboration among employees belonging to different areas within the organisation, thus when business units collaborate their overall result improves, each unit learn from the others, for example about common customers’ needs. It is an approach that tells you that “your problems are also others’ problem, and that the problems of your colleagues are also your problems”. This brings to the discussion great value because everyone contributes, employees facing a problem have to step back and look at it with the broader point of view of the organisation.

The growth mindset is a culture based on the organisational hierarchy flattening as well as the valorisation of the employee and its contribution. The total transparency of the Microsoft House towards the outside and the inside is in line with this culture. It gives the feeling of a company where there is not hierarchy, there are not floors or rooms where the access is given just to the CEO. In particular, transparency and space adaptability give this feeling of an organisation where there is not “the boss” or a vertical hierarchy, there are not off-limit areas, it signals the existence of one unique company [see quote 74].

Physical transparency belongs to the more general concept of openness, one of Microsoft’s main values. It means transparency of objectives as well as transparency of information, thus physical transparency facilitates a more open behavior towards colleagues. However, it must start by the way employees perform their work.

As we previously showed, this transparent design of offices facilitates the increase of internal collaboration. Furthermore, it facilitates the building of trust since employees can see what happens during a meeting and have full visibility over their colleagues’ activities. It means that whatever you do or say can be seen or heard by anyone, and consequently anyone within the organization can do what he/she wants with that information. It means that there must be trust, and thus transparency means that employees work following standard and
coherent with compliance criteria so that employees feel safe and in line with Microsoft’s policies. This ability to see what is going on in the company facilitate the “learning by others” of the growth mindset and helps to interiorize the company’s mission creating the sense of being part of a family that shares the same overall objectives. In particular, it improves the effectiveness of the “lead by example” mechanism, coming from the observation of and feedbacks from other colleagues. In particular, it increases the people propensity to point out any incorrect use of the space, this can be seen as an act of helping each other to learn how to better exploit the use of the space for maximizing the overall productivity.

4.4.3 In Site Technology

While building’s technology helps employees in the organization of their work within the building, in particular, we refer to the possibility of looking for available rooms, booking rooms and finding people within the building. By increasing the organization capabilities of employees, it improves the ability to exploit the benefits of a more concentrated space without incurring into the typical drawback of a crowded workspace where the unexpected is more difficult to manage [see quote 66].

In the end, the physical space adaptability helps the organisation to shape itself on its employees’ needs. This improves employees’ satisfaction, and strengthens the commitment to the company improving employees’ motivation, their willingness to work for a longer time and to improve themselves, and thus the overall productivity.

4.5 Employee Engagement

The main space characteristics impacting on employees’ engagement are:

1. Facility to interact
2. Space adaptability
3. Transparency
As we previously introduced, employee engagement refers to a positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of the business context, and works with colleagues to improve performance within the job for the benefit of the organisation. Thus, the organisation must work to develop and nurture engagement by improving employees’ job satisfaction, internalisation of company’s culture, enlargement of their competences, and empowerment. Indeed, informants consider themselves to be more productive and work more if they are happier in doing it [see quote 75].

We investigated how collaborative spaces affect engagement and found that the main characteristics are space adaptability, facility to interact and transparency.

### 4.5.1 Space Adaptability

One of the way in which it operates is by facilitating the Smart Working or work flexibility. Indeed, time and place flexibility of employees plays an important role, the employee can work when he/she is more comfortable and when it is more useful, due to the company result based policy. Smart-working firstly increases productivity, since the employee is free to organise work by maximising his/her productivity, but it also offers the possibility to employees of organising their time considering their particular needs. It is very different to the standard case with fixed timetables where employees often work lazy just to make the time go, so productivity is enhanced, and being more productive also improves employee’s job satisfaction. Furthermore, the employees are empowered having in their hands the organisation of their timetable, they can better fit their personal life and passions with their work tasks.

Thus, the organisation by adapting on employee’s needs improves their engagement through the improvement of their job satisfaction.

The Microsoft House is open at disposal of its employees whenever they need it 24h/day. Moreover, its space adaptability improves employees’ engagement by providing the facilities employees need when they need them. Indeed, as previously explained the strong
adaptability of the new headquarter is an enabler of employees' flexibility. The space must have the right tools fitting with the type of activity, it means that collaborative spaces need to be composed by several different rooms (meeting rooms, focus rooms...) not allocated to any particular employee or business unit, and the employee chooses what best fits with the activity he/she has to perform in that specific moment. Hence, collaborative spaces must exhaustively map all the possible requirements and necessities of a common user, a worker, to offer a space for the focus, a space for collaborating, a space for the brainstorming, a space for online communication and so on [see quote 67]. It must consider all the possible work scenarios and must be subdivided by activity typologies rather than by divisions.

4.5.2 Facility to interact

The absence of space allocation also facilitates flexibility in collaboration as you can easily seat and collaborate close by who you need that time. Furthermore, the sense of responsibility of employees in reaching their goals is enhanced by the absence of space allocation, since there is no more the idea that your contribution is measured by the time spent on your desk.

4.5.3 Transparency

Transparency gives the feeling of a company where there is not hierarchy, so that employees feel more empowered. It also helps to create the sense of being part of a family that shares the same overall objectives and have no secrets, participating in the culture internalisation process as well as the building of trust. The trust must be reciprocal, on one side it refers to the responsibility of the employee and its engagement towards his/her goals aligned with company's strategic objectives. On the other hand, it is extremely important the company adopts a meritocratic approach. This reciprocal trust is based on the sharing of the objectives with all the employees in full transparency, since it is reciprocal its transmission to all employees is of crucial importance. Transparency represents the most culture
representing physical characteristics of the Microsoft House and it supports this transmission.

In order to improve the engagement Microsoft considers important the contagious effect of new entrants’ passion on senior employees. This effect is amplified by collaborative spaces where transparency as well as the ease of interaction get senior employees more occasions to engage with new entrants [see quote 68].

If there is more communication, more collaboration, more flexibility, you are fundamentally more a family. Therefore, you are stimulated because you can manage your time, you see your colleagues working on other interesting projects to which you can participate learning new things and enlarging your competences [see quote 68].

### 4.6 Well-being

The main characteristics impacting on the employees' well-being are:

1. Facility to interact
2. Space adaptability
3. In site technology

Well-being in organizations often relates to productivity and work-life balance activities. What companies basically should do is to provide a suitable working environment, which is able to satisfy employees’ needs, behaviours, their familiar status and their individual characteristics.

According to Microsoft, employees' satisfaction relies on a simple principle: the most companies are able to meet these needs on large scale, the most you obtain a higher level of productivity. Indeed, the right working environment, both structural and organizational, is able to increase the willingness to work more and share experiences. People, especially millennials, love working in a modern and transparent workplace, without any traditional offices.
The basic tool to realize the “modern workplace” and to satisfy employees lifestyle needs is represented by Smart Working. In fact, it means through questioning various stereotypes related to the workplace, timetable and work tools it allows people to reach both a greater professional efficiency and a better balance between work and professional life. According to Microsoft Italy vice president, Smart Working impacts mainly on employees’ well-being and productivity [see quote 69].

It represents the opportunity to drastically increase the employees’ quality of life: spend more time with their children, not having entry office hour and exit office hour. “I don’t need to go to the office because it is not my office, Microsoft House is a workplace”, he says. “For example, in July, I had to do a Skype call with Western US on Friday evening and, instead of having it at the Microsoft House, I went to the park just behind the building. This is what modern workplace means, being free to decide where, when and how to work”. Indeed, people usually perceive going to work as it is strictly necessary. Besides partners and customers meetings or other team meetings, there is no need for physical interactions [see quote 81]. In fact, the commuting time and the time needed to reach the venue would negatively impact on my working day and, basically, on their work-life balance.

Anyway, employees must be able to manage their work life balance, from younger people to top managers who have family and different duties. The main problem, especially for new entry level employees, is represented by the risk of working “24 hours” per day [see quote 69]. The modern workplace is built not only on the space issue but also on the time issue. Time and productivity are strongly correlated: the best you manage your time the most you increase your productivity. Space is just an asset that employees exploit to be productive at the right time.

On the other hand, 3 out of 12 respondents believe that Microsoft corp. does not care about your work-life balance, employees are in charge of their work-life balance [see quote 69]. Employees can work also 2 or 24 hours per day as long as final goals can be achieved and customers’ satisfaction is reached. It means that if customers require employees in not working hours, employees should adapt their work-life to customer need. There is not any
form of specific and punctual control, especially for workers whose goals rely on customers or partners objectives.

### 4.6.1 Facility to interact

Hubs and break zones are the highest turnover areas of the Microsoft House. What we observed is that employees get used to go there after lunch, playing ping-pong or just going for chatting with colleagues before starting to work again. They represent an important point for casual encounters that aims at creating general talks, but also informal meeting that basically represent the extension of the typical office. They permit to increase socialization and team building and natural collaboration: for these reasons, they are spaces that employees have enjoyed without any discontinuity.

An important aspect that strongly impacts on well-being is represented by the centrality of the new building. Microsoft House is located in the “Design District” area, one of the most important economic area of Milan. Thanks to its position, employees can easily enjoy the city centre and create several opportunities for team building or just leisure activities (lunch, aperitivo, dinner...). Moreover, some respondents get used to arrange their meetings with customers during lunch time [see quote 70]. The area is easily accessible thanks to the capillarity of the public transportation network, so that customers can reach the venue in very short time periods.

By contrast, the centrality of the Microsoft House brings several disadvantages. First of all, since the new building do not provide the canteen, having lunch is more expensive. Even if the welfare program provides different lunch ticket and has restaurant “partnership”, employees have to consider an average cost of 10 euro per meal at least. Moreover, it is more difficult adopting a healthy diet, restaurants and cafés nearby typically offer fixed menu or “fast food” solutions.

Microsoft have designed the HUBs as recreational areas with fully equipped kitchen in order to replace the absence of canteen. Almost all the respondents do not perceive them as lunch areas but more as break areas. Moreover, to sponsor the use of them and improve
employees’ well-being, twice a week fruit can be found there. However, it is very difficult finding people eating there during lunch hour.

Another aspect due to the scarcity of physical space is represented by the absence of an office gym. In the previous headquarter of Peschiera Borromeo, Microsoft provided a gym and different sport areas where people can relax during possible breaks. The building change was an opportunity to rethink Microsoft Italy’s welfare offering moving from a set of services close to the building like the Company Gym, the Kindergarten and the Shuttle Bus to an offer more linked to the needs of each person and Microsoft Italy decided to launch a flexible-benefit offering giving to employees the possibility to spend their budget in different welfare areas from children education to free time services, answering to diverse needs of a diverse population thanks a customized benefit portal. However, about sport facilities, respondents basically prefer having in-building areas in order to do not waste time. Quite often employees perceive this lack in different form of leisure activity (yoga, pilates or meditation courses) which could impact negatively on their productivity and creativity [see quote 71, 72].

The last aspect that impacts negatively on employees’ productivity and well-being is the parking place scarcity, also related to the centrality. Microsoft provide a small parking site which is able to host no more than 90 vehicles. In particular, there are two different opinions regarding this topic. The first one is more common among employees who work a lot in customers venue, so that they do not spend a lot of time in the Microsoft House. Since they continuously transfer from the Microsoft House to other locations, they have some troubles in finding parking in the local area during day hours. On the other hand, especially those one whose job activities are are mainly spent into the Microsoft House, around 40% of the respondents, do not perceive it as a problem. Firstly, because Microsoft House is easily accessible by different type of public transportation, so that people can quickly reach any part of the city. Secondly, because they believe that it is very difficult to find an organizational that is able to provide public transportation welfare and parking at the same time. According to them, it is not strictly necessary that Microsoft provides services for reaching the venue, but
they perceived as a differential and extra-services offered by the organization, which care about its employees' well-being compared to others companies [see quote 72, 73].

4.6.2 Space Adaptability

Thanks to their adaptability, all the spaces are well appreciated by employees, especially Hubs. Typically, this type of spaces is the most appreciated when there are changes of companies' venues since they represent an element of continuity.

Most of respondents prefer going there since they are very flexible in terms of satisfaction of employees’ needs [see quote 22]. Indeed, they can be used for: informal meetings, brainstorming and creativity moments, leisure time, but also Skype calls and other more formal activities. Each Hub is designed according to the topic which refers: sports, nature and city.

As we said before, hubs include fully equipped kitchen where employees can warm up their meal, having break etc. It permits to better control a strict healthy diet rather than the majority of the restaurants nearby that provide fast food solutions or lunch fixed menus.

4.6.3 In Site Technology

The link between technology and well-being rely on productivity. In the new Microsoft headquarter there are collaborative spaces and there are tools aimed at evaluating your time. They basically evaluate how much you are focused, how much employees are multitasking, how many mail you are receiving and sending, and how much time you spend to answer to an e-mail on average. This is just a small part of the evaluating tools that facilitate employees to balance their work life.
4.7 Findings Conclusions

<table>
<thead>
<tr>
<th>Collaborations for innovation</th>
<th>Flexibility</th>
<th>Technology</th>
<th>Growth mindset</th>
<th>Employee engagement</th>
<th>Well-being</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility to interact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Adaptability</td>
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<td>In site technology</td>
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Table 6. How collaborative spaces characteristics impact on Microsoft modern workplace pillars

Employees’ interviews have permitted to validate most of our initial hypothesis about collaborative spaces’ impact on modern workplace pillars.

**Collaboration**: collaboration, as expected, represents the most impacted pillar by collaborative spaces at all its levels (internal collaboration, external collaboration, casual etc..). In particular, adaptability concerns mainly the internal collaboration: employees have a wide range of space options in order to satisfy their collaborative needs. Collaborative spaces adaptability improves the quality of scheduled (engaged) collaboration. Since employees must schedule meetings to exploit spaces functionalities and improve collaboration quality, the quantity of scheduled collaboration increases. On the other hand, the effect on casual collaboration is more unclear: the concentration of space, the absence of space allocation, and the transparency increase casual collaboration among employees within the building, however employees come less often to the new headquarter than to the previous one. Furthermore, respondents always refer to in-site technology and facility to interact as facilitating the external collaboration. In site technology is extremely useful in showing customers how modern workplace happens and Microsoft workplace
transformation. Moreover, employees get used to organize customers and partners meetings inside Microsoft House thanks to more engaging technology and its central position.

**Flexibility:** flexibility for Microsoft employees refers mainly on two main topics: Smart Working and the possibility to have several types of spaces able to perfectly match the working needs inside and outside Microsoft headquarter. Indeed, although in site technology permits to work without the physically presence of colleagues, building’s technology (i.e., Surface Hub) also permits to have a more engaging and productive meeting when physically present in the building, this could limit the possibility of working remotely. It constrains people to come in company building in order to fully exploit some in site technologies. Moreover, we expected that facility to interact does not directly impact on Microsoft flexible way of working. By contrast, this aspect has been fully addressed by respondents. Indeed, level of space allocation, space concentration, and location in the city are aspects that both negatively and positively affect flexibility.

**Technology:** the new building not only permits Microsoft to implement the modern workplace internally, but also to show Italian customers how to do it. For most of the respondents, it is the most important and taken for granted aspect. It has been confirmed that the characteristics of building’s technology and adaptability facilitate the use of technological tools by employees. However, we expected a reverse negative relationship between technology and the facility of face-to-face interactions, since it permits employees to work remotely. By contrast, respondents did not argue this aspect since they did not find any link among them. In particular they often referred to the customer interaction aspect of technology. Indeed, customers typically do not get used to work remotely and perceive Skype meetings, or in general having remote meetings, ineffective.

**Growth mindset:** while the effect of transparency and facility to interact has been confirmed, an interesting issue that emerged from Microsoft employees’ interviews was represented by the relationship between in-site technology and engagement. In particular, we expected that in site technology would have impacted on employees’ engagement, since, according to the literature, workforce is highly capable and engaged by the environment and
tools that liberate and not to restrict them. By contrast, employees linked this topic to the growth mindset. In site technology permits to improve employees’ satisfaction, and strengthens the commitment to the company improving their willingness to work for a longer time and to improve themselves, and thus the overall productivity.

**Engagement:** we did not expect any correlations between engagement and transparency. However, transparency gives the feeling of a company where there is not hierarchy, so that employees feel more empowered. It also helps to create the sense of being part of a family that shares the same overall objectives and have no secrets, participating in the culture internalisation process as well as the building of trust.

**Well-being:** it has been addressed by respondents as finding the right work life balance (mix of productivity and personal activities). Indeed, thanks to its central position, employees can easily enjoy the city centre and create several opportunities for team building or just leisure activities (lunch, aperitivo, dinner...) By contrast, the new building has less recreational areas than the previous headquarter. Moreover, transparency could be perceived as a way of monitoring by employers, which could negatively affect employees’ well-being.
CONCLUSIONS

Our first literature review helped us to identify collaborative spaces’ main characteristics (facility to interact, on-site technology, adaptability, transparency) and to put in light the literature unbalances between the different kinds of collaborative spaces. In particular, the literature is broad and rich of findings for co-working spaces and universities research centres, while is rather poor for companies’ offices and their relationship with the broader topic of the modern workplace.

Thus, we focused our research on the role of companies’ physical space in reaching the goals of the modern workplace.

The Microsoft House is included into the category of companies’ offices; however, it confirms findings coming from different topics of the collaborative spaces’ literature (co-working spaces, research offices, science parks, and city communities).

Indeed, the research on the Microsoft House case shows that most of literature findings regarding co-working spaces can also be applied to companies’ offices. In particular, it is possible to do an analogy between the dynamics within co-working spaces and the Microsoft House. Indeed, many of the mechanisms that are triggered and facilitated by co-working spaces were also found in the Microsoft House. They are both collaborative spaces that have the main objectives to facilitate collaborations. In co-working spaces collaboration happens
between different start-ups (or freelancers), while in the Microsoft House it takes places between different divisions (or employees) or by collaborating with Microsoft customers and partners. As co-working spaces, the Microsoft House contributes to creativity, innovation, and learning (often not intentional) for its employees. Both facilitate new business opportunities by enhancing cross-team collaboration, and both improve the well-being of workers, as well as the trust among them. Our case study also confirms the findings from the literature of research offices. In fact, the Microsoft House presents all the characteristics of flex-offices. It positively affects both the quality and the quantity of collaboration among employees leaving space to ideas’ crosspollination, and it favours work flexibility. On the other hand, as expected, there are some complaints about the noise in open spaces and the lack of privacy. The case also confirms the literature about city communities. In particular, the findings highlight the importance of the location in the city to be connected with communities as well as the existence of a middleground where Microsoft can interact with the underground community. Indeed, in the case the middleground is represented by the Microsoft showroom. Thanks to its openness and free internet connection, it has been used by startups as a co-working space where entrepreneurs, freelancers, students can work and collaborate in a stimulating environment, and where public events are organised.

However, our research objective was not only to confirm the existing literature, but to expand it by considering the collaborative spaces as a tool within the new broader topic of the modern workplace. In order to do so, we introduced a first definition of the modern workplace and identify its main pillars (employee engagement, flexibility, collaboration, and well-being). Our results show that collaborative spaces are mainly affecting the two pillars of collaboration and flexibility, and their most impacting characteristics are the facility to interact and the spaces’ adaptability. Anyway, each pillar is needed and complementary to the others. Indeed, to obtain spaces adaptability a certain set of building’s technology tools are required, as well as transparency is important for the internal facility to interact.
The case offered several interesting insights about the role of physical workspaces by enlarging the set of variables to consider, proposing new relationships among them, and suggesting further research directions.

In particular, our research highlighted some space characteristics that were not largely addressed by the literature. In particular, one characteristic of primary importance is represented by the location of the headquarter within the city. This characteristic facilitates the extended collaboration. In fact, both being closer to the ecosystem of partners and customers and the existence of dedicated physical spaces for the extended collaboration resulted important aspects. While the physical location mainly impacts the quantity of extended collaboration, the presence of dedicated spaces improves its quality. On the other hand, considering the characteristics affecting internal collaboration among workers, we found out that there is also a relationship between these variables and the proportion of engaged and casual collaboration. Indeed, space concentration together with space adaptability favour engaged rather than casual collaboration.

Our research has its limitations in terms of “generalizability” or external validity. Indeed, a cross case analysis involving more case studies is necessary as a good basis for analytical generalization. Hence, we suggest equivalent studies to be conducted across other Microsoft headquarters in different countries as well as in different organisations adopting the modern workplace. However, since Microsoft is not only adopting the modern workplace, but it is also sponsoring it to its customers as it is part of its value proposition, there are aspects improving external collaboration that are rather particularistic.

We analysed the Microsoft House case study and its adaptability to the Microsoft modern workplace. In particular, the Microsoft modern workplace, besides the main pillars we previously mentioned, is based on two new pillars: technology and growth mindset. Thus, this case represents a peculiar case that suffers of generalizability limitations. Indeed, the benefit of using the Microsoft House as an asset for showing their modern workplace solutions to customers is difficultly generalizable in other contests.
Moreover, a further limitation is represented by the lack of perception of benefits coming from the headquarter change due to the typical humans’ resistance to change. Indeed, people could have perceptions that are different from reality. For instance, some respondents provide different information concerning the availability of particular types of rooms. In particular, to avoid this limitation in future studies, we suggest measuring also the actual occupancy rate of the rooms whether it is possible.

Since we conducted the research during a large organisational structure change, we could appreciate how the space adaptability reduces the required costs and time for organisational changes. This could have great effects on company results over the long term. Indeed, organisational changes of this kind generally enlarge the competences of a great proportion of employees. They increase their knowledge about company’s business and their ability to collaborate with other divisions. Thus, we believe our research could be a starting point for future studies more focused on the organisational change aspect and how the physical space design may represent a supporting tool for change management processes.


Bodin Danielsson C., Bodin L. (2009) Difference in satisfaction with office environment among employees in different office types. *Journal of architectural and planning research*


Fabbri J., Charue Duboc F. (2013) The role of physical space in collaborative workplaces hosting entrepreneurs. *WP.*


MacEachen E., Polzer J., Clarke J. (2008) "You are free to set your own hours": Governing worker productivity and health through flexibility and resilience. *Social Science and Medicine.*

Marroquin Cruz H. A. (2016) The Importance of Spaces to Sustain Open Source Innovation. *WP.*


APPENDIX A
QUOTES AND INTERVIEWS

The following sections represent the description of respondents and the quotes (translated in English) that has been used in the “interviews findings” section. The respondents’ identities were anonymised for privacy issues.

A.1 Respondents’ description

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Division</th>
<th>Tenure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Enterprise commercial</td>
<td>GM-2</td>
</tr>
<tr>
<td>B</td>
<td>OCP &amp; SMC</td>
<td>GM-3</td>
</tr>
<tr>
<td>C</td>
<td>OCP &amp; SMC</td>
<td>GM-1</td>
</tr>
<tr>
<td>D</td>
<td>Customer success</td>
<td>GM-2</td>
</tr>
<tr>
<td>E</td>
<td>STU</td>
<td>GM-2</td>
</tr>
<tr>
<td>F</td>
<td>Enterprise commercial</td>
<td>GM-3</td>
</tr>
<tr>
<td>G</td>
<td>Services</td>
<td>GM-2</td>
</tr>
<tr>
<td>H</td>
<td>OCP &amp; SMC</td>
<td>GM-2</td>
</tr>
<tr>
<td>I</td>
<td>Public sector</td>
<td>GM-3</td>
</tr>
<tr>
<td>L</td>
<td>STU</td>
<td>GM-3</td>
</tr>
<tr>
<td>M</td>
<td>OCP &amp; SMC</td>
<td>GM-3</td>
</tr>
<tr>
<td>N</td>
<td>Marketing and Operations</td>
<td>GM-2</td>
</tr>
<tr>
<td>O</td>
<td>Services</td>
<td>GM-2</td>
</tr>
</tbody>
</table>
A.2 Quotes

<table>
<thead>
<tr>
<th>N.</th>
<th>EV’s name</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
<td>I have the possibility to choose, at every moment of my working day, to move in different space in the building according to the type of options that i need... It can be a specific technology feature, a space or anything else.</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>... during the first days in the new headquarter, I have seen in a few time many people it was a long time I haven’t work with, because in the old one I was used to go in the same area, because after several years you stay always there where there are your closest colleagues [...] I saw many people it was a long time I haven’t met because of this fact of having less space and hot having a space of your division. Thus, this fact of not having allocated spaces, that it is always open [...] and that is totally transparent.</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>In the new building, there are some spaces and features dedicated at improving interaction between people who do not typically bump in [...] I get in contact with people who i would have never met probably if i had my office. It brings to a faster collaboration and faster knowledge to people you work with.</td>
</tr>
<tr>
<td>4</td>
<td>L</td>
<td>As collaboration I mean also to be able to fully understand what are the competence areas of people [...] Thus we can say that this changeover to a workstation that is no more fixed gives the opportunity to have a broader overview of the business.</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>Having a reality that is so dynamic, that let you be always connected, but that does not force you to be present, sometimes makes it more difficult to know new colleagues who have just come. If you are at your office, when someone new arrives you see him for six days sitting there, and thus you ask about himself and he enters.</td>
</tr>
<tr>
<td>6</td>
<td>H</td>
<td>The fact that the Microsoft House moved here in the centre, I believe it creates an important contamination on the territory that pushes us to be also outside here interacting. Thus, I think that if you take walk close by you will certainly find 6-7 small meetings of colleagues, outside here in the open-air, at Feltrinelli, or in other places nearby.</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
<td>The Microsoft House has been designed as a place for both internal and extended collaboration. It is not an office for working alone. [...] This is not an office, but a space for collaboration where you come to collaborate.</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
<td>Yes, [the anchor zones are] a suggestion for division, simply because some divisions collaborates between themselves more often than others, [...] because the tool shows you the mainly the rooms of the floor where you are. If you are doing a meeting with the most of people coming from your floor, it is more efficient to use a meeting room at that floor. [...] the smart choice was to maximize the likelihood that the people you collaborate more often are logistically closer, and thus when you book a room, one does not have to climb three floors of stairs.</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
<td>We do not dedicate space for customer meetings with their customer.. We dedicate spaces for customers and partners meetings with us.</td>
</tr>
<tr>
<td>10</td>
<td>C</td>
<td>This is not an office, but a space for collaboration where you come to collaborate</td>
</tr>
<tr>
<td>N.</td>
<td>EV's name</td>
<td>Quote</td>
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</tr>
<tr>
<td>11</td>
<td>E</td>
<td>In peschiera journalists and customer were not willing to come to visit our headquarter. Now, they really want to come at the Microsoft House and they always told me: “it is always a pleasure coming here”. Never happened before.</td>
</tr>
<tr>
<td>12</td>
<td>F</td>
<td>Theoretically the first floor should be open to visitors. Actually, it is not...it is totally close. People do not even understand where the entrance is and, therefore, they do not get in. [...] They are scared to get in, not only in the first floor but also in the showroom.</td>
</tr>
<tr>
<td>13</td>
<td>D</td>
<td>MTC is always crowded. I should increase the number of spaces dedicated to MTC or generally dedicated spaces to clients with even basic technology. Just one floor is not enough...i would expand to at least one floor and an half, even two floors.</td>
</tr>
<tr>
<td>14</td>
<td>G</td>
<td>The space helps me because instead of me going to the customer, it is the customer who sees this marvelous headquarter, and thus he wants to come here, he saves me traffic; understanding where, how, time, parking [...] he takes them on.</td>
</tr>
<tr>
<td>15</td>
<td>G</td>
<td>From Naple they take a train and come here [...] Once a customer wanted to see the technology with his eyes before closing the deal, although we sent it to him he wanted to know how it works [...] he takes a train and came here. [...] I did not go to Rome, so I did not spend the day on that [...] I came here and in half an hour I got away with it, instead of a day.</td>
</tr>
<tr>
<td>16</td>
<td>C</td>
<td>The fact that we moved from the suburbs to the centre of Milan has its importance. Because it helps the extended collaboration, Microsoft is a company that collaborates with partners. Microsoft is not an autonomous entity, it is an entity that must do business with other entities. Having a place here facilitates this collaboration, having a place far away does not facilitate it. Thus, the location is a relevant fact.</td>
</tr>
<tr>
<td>17</td>
<td>H</td>
<td>[...] milanese territory, and thus the italian one since it is the city most visited by tourists [...] brought a broader engagement thanks to the Microsoft House.</td>
</tr>
<tr>
<td>18</td>
<td>A</td>
<td>Here you are in the centre of Milan, you are comfortable, and people gladly come here and also the headquarter image helps in the customer's brand perception...</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>I personally like a lot the Hubs, because even if you go there for a coffee break, sometime if I have to talk informally with people, and it often happens, [...] you also learn there, [...] you can talk about work, but also get to know them personally.</td>
</tr>
<tr>
<td>20</td>
<td>I</td>
<td>Here since everyone is closer to each other, you get in touch more frequently. Indeed, the Hub is just one per floor, at the corner, thus from the entire floor you have to do the same path to reach the Hub. The interactions and connections are much more frequent.</td>
</tr>
<tr>
<td>21</td>
<td>H</td>
<td>They [the Hubs] are an important point because you do that famous unexpected encounters that, on one side creates more socialization, but on the other side sometime it gives you the possibility to speak about work topics in an informal way [...] they create well-being.</td>
</tr>
<tr>
<td>22</td>
<td>E</td>
<td>There are spaces designed for informal collaboration creative brainstorming [...] I love these informal spaces [...] I use them a lot, if one of my guys asks me to talk I go to the Hub.</td>
</tr>
<tr>
<td>N.</td>
<td>E/V's name</td>
<td>Quote</td>
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<tr>
<td>----</td>
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</tr>
<tr>
<td>23</td>
<td>E</td>
<td>[the canteen] that is the place of total conviviality. The fact that there is not a unique informal meeting space is something that I often feel [...] [meeting with someone] is more based on the initiative in this place. [...] It is no more casual as before.</td>
</tr>
<tr>
<td>24</td>
<td>I</td>
<td>Here indeed there are three Hubs, one for each floor ... in the other headquarter there were the canteen, the café, and the vending machines areas ... thus the canteen becomes the fulcrum of cross-divisional interactions that here are more sectorialized maybe.</td>
</tr>
<tr>
<td>25</td>
<td>A</td>
<td>They [the Hubs] are more than one, and there were already something similar, [...] there were spaces with vending machines.</td>
</tr>
<tr>
<td>26</td>
<td>B</td>
<td>The Hub at the fourth floor is one of the most appreciated because it does not have closed doors, [...] it has been left more open. [...] people usually go to the Hub to talk, to chat because it is closed and no one hear you. While there, it can happen that you are having a coffee and at the table there are people having a meeting, and you are there, and while you are there you are working with them... The Hub is an example of the removal of these barriers [...] that increases the facility to interact.</td>
</tr>
<tr>
<td>27</td>
<td>H</td>
<td>Usually, if I want to “stay clear” I go to other floors [different from his division], if I have to talk with my colleagues I go to my floor [of his division].</td>
</tr>
<tr>
<td>28</td>
<td>G</td>
<td>The same room can guest a vice-president of a multinational company as well as a colleague, the space does not have to change. While large modular spaces can adapt to the audience changing shape and appearance, so that they can receive a CEO of a bank as well as an elementary school classroom</td>
</tr>
<tr>
<td>29</td>
<td>H</td>
<td>Do you have a problem if people outside see that you are in a meeting with 3 colleagues and you want to put your feet on the table? It can be, but I don’t think [...] Or because you are having a lively discussion? I believe it has to be seen, because it makes us know each other better. So I see it [transparency] positively.</td>
</tr>
<tr>
<td>30</td>
<td>A</td>
<td>[...] there are rooms that have fancy but unusable chairs [...] because you cannot work there, you must sit with the back... it is uncomfortable. They are too much for informal meeting, because in the end we do also informal meetings with PCs.</td>
</tr>
<tr>
<td>31</td>
<td>L</td>
<td>It happens to me many times to me, both as an active and passive party, of getting inside a room with people because maybe I knew someone at the meeting. Even to do a chat and ask how is it going, then you may look at the whiteboard to see what they are talking and working on [...] and so this space so open facilitates a lot the understanding of who is working on what</td>
</tr>
<tr>
<td>32</td>
<td>M</td>
<td>Because if everything was screened, if we were all in the rooms, and you don’t see anything, you just see who get in and out the room... for sure there would not be many ways for interacting...</td>
</tr>
<tr>
<td>33</td>
<td>A</td>
<td>And thus it [the Surface Hub] is an “n” point, and the fruition from any device is similar, so the others that are connected to the meeting see exactly what we are doing on the Hub side</td>
</tr>
<tr>
<td>34</td>
<td>I</td>
<td>I see as efficacy, you invite them [the customers] because you know you will have the “wow effect”. Thus they come back home with the idea that something must change in their way of working.</td>
</tr>
<tr>
<td>N.</td>
<td>EV’s name</td>
<td>Quote</td>
</tr>
<tr>
<td>----</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>35</td>
<td>M</td>
<td>Now I come here more often than I was used before because I am in a new role, and thus now I need it more to talk with my teammates because it is easier in the routine [...] you confront with the others, exchange ideas... [...] I am learning a lot [...] I would say that organisational changes create more collaboration.</td>
</tr>
<tr>
<td>36</td>
<td>M</td>
<td>Since we changed headquarter this has completely changed. The people who are at the office are much less [...] in my opinion this headquarter has extremely accelerated our way of doing smart working to conform us to the modern workplace [...] Now much less people come to the office, and if they come is exclusively for specific necessities.</td>
</tr>
<tr>
<td>37</td>
<td>N</td>
<td>To guarantee greater flexibility and openness in the management of your working activities there must basically be absolute reciprocal trust. And this trust is based on the sharing of objectives with all the people. There is a great empowerment [...].</td>
</tr>
<tr>
<td>38</td>
<td>G</td>
<td>When I come to the office is to increase my networking with colleagues. When I have to work seriously, I work at home. Here I do half of the hours. I do not come in office to work alone, it is not useful.</td>
</tr>
<tr>
<td>39</td>
<td>M</td>
<td>For example, when I work at home I can do as much as three times</td>
</tr>
<tr>
<td>40</td>
<td>A</td>
<td>The technological theme is fundamental, meaning that if you do not have the supporting technology you cannot realise any kind of modern workplace, thus the fruition of all company’s services in mobility through mobile devices is essential if you think of doing a workplace.</td>
</tr>
<tr>
<td>41</td>
<td>C</td>
<td>I can be at home, at the office, at a customer, at a partner, or at a friend place, but these do not define my workplace. The modern workplace makes so that my computer is my workplace.</td>
</tr>
<tr>
<td>42</td>
<td>N</td>
<td>We feel we have increased our productivity, everyone says he works better since there is this new model of modern workplace, which consists also in the smart working model that we adopted and took to extremes.</td>
</tr>
<tr>
<td>43</td>
<td>D</td>
<td>The most productive meetings are the ones of 4-5 people, and we do not have the spaces for the most productive meetings. We have spaces for meetings with many people. [...] Then, we can do them online, so we can go in a small room for 1 or 2, but when they are already used it annoys me to book a meeting room for 12 people.</td>
</tr>
<tr>
<td>44</td>
<td>M</td>
<td>All the people, for this research of collaboration, go to the third floor where there are all the Enterprise Commercials who maybe need more it.</td>
</tr>
<tr>
<td>45</td>
<td>F</td>
<td>I saw desks with some people’s things... and so it means that they recreated their old method their... and it is not nice. Because I do not feel free to sit at their desk.</td>
</tr>
<tr>
<td>46</td>
<td>I</td>
<td>It [the Microsoft House] becomes an attraction pole of the customer to make him understand how the way of working really changed. Thus, meetings with customers become more efficient, I was able to engage customers with whom I did not have much to bring along after all</td>
</tr>
<tr>
<td>47</td>
<td>D</td>
<td>Thus basically, in terms of modern workplace we work a lot at customer’s place, and so clearly the use of advanced collaborative tools and the resources that the company provides us are fundamental because we do not come here for 95% of our time.</td>
</tr>
<tr>
<td>N.</td>
<td>EV’s name</td>
<td>Quote</td>
</tr>
<tr>
<td>----</td>
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<td>-------</td>
</tr>
<tr>
<td>48</td>
<td>A</td>
<td>If I am at Fineco and I know there is no parking available [...] maybe I do at first in Unicredit and I stay in one room, I find a way, but I have the Unicredit’s badge ...</td>
</tr>
<tr>
<td>49</td>
<td>H</td>
<td>Even when I leave [...], let’s say that tomorrow I am in Rome all day, it is very likely that in the evening I stop here because it is in the centre and it can happen I pass by, thus for whatever reason, because I can, while previously I did not do it.</td>
</tr>
<tr>
<td>50</td>
<td></td>
<td>Giacomo bar e pub tanti bei meeting di Micro in giro</td>
</tr>
<tr>
<td>51</td>
<td>I</td>
<td>I believe that by now several people work much more from home than before. In part because the headquarter is smaller, in part because who comes from outside the city it is a bit more difficult to reach it and thus you are incentivized to work from home.</td>
</tr>
<tr>
<td>52</td>
<td>D</td>
<td>Many of my colleagues [...] that do not live in Milan take public transports, the train, the metro, there’s who comes by the bicycle, by moto, thus it is that many have been penalized by the parking space, but many other have gained far more. And even who goes to the customer [...] has to find a parking place [...]. Now it is everything close by [...] you can take the metro, and come back by public transports. In the end, the public transport is very efficient and I have always been favorable pf using it.</td>
</tr>
<tr>
<td>53</td>
<td>G</td>
<td>The modern workplace is based on time more than physical space: as you manage your time, as you are more productive. Time and productivity are together. The most you are able to manage you time, the most productive you are. Spaces relates on being productive in the right moment.</td>
</tr>
<tr>
<td>54</td>
<td>D</td>
<td>If I have meetings one-to-few [...] the likelihood to be here [in the office] is very low.</td>
</tr>
<tr>
<td>55</td>
<td>C</td>
<td>Surely i believe that technology is the most important pillar. Not only because we are a company which provides technological solution but also because employee experience should be catchy. Therefore, in my opinion, the 4 aspects that you mentioned were extremely important, but i would highlight technology since it is the enabler of the others.</td>
</tr>
<tr>
<td>56</td>
<td>D</td>
<td>We have had also struggling some problem in developing this type of culture and in approaching customer meeting some customers did not like or perceive skype meeting or in general having remote meeting instead of participating physically ineffective. This is a huge wall that can limit the efficiency of our meetings</td>
</tr>
<tr>
<td>57</td>
<td>D</td>
<td>It can happen that you propose a skype meeting to your customer and they refuse it or there are some customers that they would like to know if there are remote participants at the meeting. Even if there are participants who do not speak italian.</td>
</tr>
<tr>
<td>58</td>
<td>N</td>
<td>how can employees be productive or collaborative by home if they cannot access to SharePoint documents?</td>
</tr>
<tr>
<td>59</td>
<td>N</td>
<td>There are some companies which do not permit to bring your personal device. This means that they cannot also have access to company’s data. Modern workplace cannot be applied at this conditions.</td>
</tr>
<tr>
<td>60</td>
<td>H</td>
<td>An important modern workplace technology should be seamless, taken for granted. Technology is expected to work anywhere at anytime without any problem.</td>
</tr>
<tr>
<td>N.</td>
<td>EV’s name</td>
<td>Quote</td>
</tr>
<tr>
<td>----</td>
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</tr>
<tr>
<td>61</td>
<td>G</td>
<td>There is a booking app which it works really bad. Thus, I have uninstalled. Indeed, i lost more time in booking a focus room than finding one. It is obvious but in a building with few spaces as MH having a good booking app can make the difference.</td>
</tr>
<tr>
<td>62</td>
<td>H</td>
<td>If anyone wants some privacy regarding data displayed, and it happens, I have decided to use the Skype meeting on our PC without displaying any data. We always have a device which include Skype where you can share your desktop to your colleagues. Shifting to Skype mode permits to have an higher level of privacy.</td>
</tr>
<tr>
<td>63</td>
<td>N</td>
<td>And trust is based on sharing company objectives among different people. Therefore empowerment is really important in reaching company it brings people to be evaluated on the basis of their goal...it is really important in terms of meritocracy since employee is empowered only by goals</td>
</tr>
<tr>
<td>64</td>
<td>F</td>
<td>[...] Since evaluation method is based only on company objectives and Microsoft has no control on employees who are totally independent, they need to set individual objectives...and they are really ambitious. Obviously, it seems obvious having ambitious objectives in companies like Microsoft, but the company is really stringent on this topic and it brings to natural selection.</td>
</tr>
<tr>
<td>65</td>
<td>O</td>
<td>[...] This is casual collaboration, not scheduled one. Since everything is open, transparent, there are some moments in which people have to hide. Especially if they have transversal role, like my role, there are always people looking for you.</td>
</tr>
<tr>
<td>66</td>
<td>B</td>
<td>Everything depends on you organization capability...the problem is the unexpected. Since there are less spaces compared to Peschiera Borromeo, in the MH it becomes more important scheduling very well you agenda. Being prepared in what you have to do and which are you daily activities</td>
</tr>
<tr>
<td>67</td>
<td>D</td>
<td>There are two different school of thinking: spaces dedicated to customer and partners and spaces dedicated to employees. [...] These spaces should be for focus activities, collaborating moments, spaces for informal meetings and spaces for schools and space for online communication.</td>
</tr>
<tr>
<td>68</td>
<td>G</td>
<td>MACH program are new people with are willing to heavily work, to get engaged. It doesn’t matter if they do not have experience, Microsoft is investing a lot in them, but the have passion, especially for technology. And if they need help due to the lack of any experience, there will be someone who will provide them.</td>
</tr>
<tr>
<td>69</td>
<td>D</td>
<td>It is not important if you work 2,3 or 20 hours. What it is important here is the result. How do you get it, it totally depends on you. The company gives you 100% autonomy in deciding which are the main actions to achieve it. On one hand working in this way it is very stimulating. On the other hand the risk is working 24 hours.</td>
</tr>
<tr>
<td>70</td>
<td>M</td>
<td>Thanks to our central position, we are able to organize formal and informal meetings with our customers during lunch hours. And this is amazing, I really like it.</td>
</tr>
<tr>
<td>71</td>
<td>N</td>
<td>In my opinion i feel the lack of some spaces dedicated to sport or recreational activities such as yoga, pilates and meditation. In the previous headquarter, thanks the availability of spaces we have this type of benefits. We have a welfare program which includes sport activities but brings to some sort of time inefficiencies for the commuting time.</td>
</tr>
<tr>
<td>N.</td>
<td>EV’s name</td>
<td>Quote</td>
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<tr>
<td>72</td>
<td>E</td>
<td>Microsoft is one of a few companies which provide parking facilities to its employees. We have a fantastic welfare program. The MH is in the heart of Milan city and can be reachable by any type of public transportation.</td>
</tr>
<tr>
<td>73</td>
<td>M</td>
<td>There are only 90 spots available for more than 700 employees. We are customer facing, therefore there are some employees that move from MH to customers building more than once per day. In this area, it’s basically impossible finding a spot available during daily hour.</td>
</tr>
<tr>
<td>74</td>
<td>C</td>
<td>Transparency provides you the feeling of a modern workplace, the feeling of the absence a general manager, “the boss”. There is no a hierarchy, there is no floor dedicated only to our CEO.</td>
</tr>
<tr>
<td>75</td>
<td>C</td>
<td>It is not the organisation that forces you to be shaped to it, but it is the organisation that tells you “I shape on your needs”. This makes employees happier. This creates a stronger attachment to the company [...] and this leads to overall productivity.</td>
</tr>
<tr>
<td>76</td>
<td>D</td>
<td>The most efficient space depends, if I have to make a call it is the focus room, if I’d have to do a meeting to decide something an area like this one, if I need to have a brainstorming the Hub that is at the corners, if I’d have to give a presentation with several people there is the hub downstairs at the ground floor that can be set as I need. There is not one space, the question is “what do I need to do? Thus, which is the best space for doing it?”.</td>
</tr>
<tr>
<td>77</td>
<td>D</td>
<td>Ant then, the facility to reach the meeting rooms based on their capacity [...] close to the open space there are the small meeting rooms, thus the ones for 2-3 people for the unexpected calls. To the antipodes there are the large meeting rooms, thus with 8-12-16 pax at disposal, because if you have to bring several people, gather several people, you don’t walk back and forth in the middle of open spaces bothering who is working.</td>
</tr>
<tr>
<td>78</td>
<td>C</td>
<td>The third aspect is that we decided to allocate spaces not based on the number of employees we have, but for the aim.</td>
</tr>
<tr>
<td>79</td>
<td>H</td>
<td>Then, the salesperson saying that if he comes at 11:00 he doesn’t find a parking place, first you know it so you can organize it better, then if you have been out do you really have to come back here? Thus, it has to be clear how one organizes himself.</td>
</tr>
<tr>
<td>80</td>
<td>G</td>
<td>It [the Surface Hub] eliminates the need of taking a picture, re-write it down, re-do things etc. all these activities can be eliminated by that instrument. And these are about 2-3 hours you save, for each person in the meeting. You compute the total [...] in one week you have bought one [Surface Hub]. [...] If you are doing a business case, it takes a second, you understand that is the collaboration instrument.</td>
</tr>
<tr>
<td>81</td>
<td>D</td>
<td>It is hard for me to isolate a condition that needs physical presence in the same room [...] Because, from my point of view, communication is perfectly itinerant.</td>
</tr>
<tr>
<td>82</td>
<td>D</td>
<td>[...] And then the facility of reaching meetings room according to the capacity. Close to open space, there are some small focus room (2-3 people max) for unexpected calls.</td>
</tr>
</tbody>
</table>