

Graduate Program in Sustainability Science

Global Leadership Initiative

Graduate School of Frontier Sciences

THE UNIVERSITY OF TOKYO

2019

Master's Thesis

ANALYSIS OF CO-WORKING SPACE MANAGEMENT STRATEGIES FOR  
FOSTERING INTERACTION AND CREATIVITY - A CASE OF 23 SPECIAL WARDS  
OF TOKYO, JAPAN

Submitted August 23, 2019

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## ABSTRACT

With access to a fast internet server and personal devices, people can complete work assignments without commuting to one specific workstation. Transformation of work practice is affecting workplaces in a way that the work environment is becoming a commercial product, that offers space and service in exchange for value. Over the last one-decade co-working space has been evolved as a major trending workspace service with drastic expansion rate through all over the world. Co-working space is defined as a collaborative consumption of office environment, in which a group of individuals with heterogeneous backgrounds co-locates themselves and works side by side. Modern workers thrive to co-working spaces because of its flexible and well-designed features and a community of co-workers. Social interaction at co-working spaces enables serendipitous encounters and access to a necessary network, knowledge, and other sources that modern professionals seek.

The recent studies have been focusing on the potential role of co-working space to contributing a process of generating creative and innovative outputs. As creative individuals and innovative firms explore or create new ideas and products by articulating co-working space amenity and community of diverse workers. However, there is a lack of research study interrogated the practical tools that entice creativity at co-working spaces. Thus, this study focuses on management strategies and their impacts on the process of formulating an interactive and collaborative work environment that harness creative outcomes. The research emphasizes on following specific questions to fill the research gap: 1) Which strategic management tools are used in co-working spaces to stimulate interactions and collaborations? 2) What is the process of implementation of management tools? 3) To what extent management tools enable the individual or collective creative behavior?

The main research objective is to clarify the role of co-working space to enhance the

interactive and creative work environment by implementing management strategies. The research undertook two specific objectives to address this. First was to identify the interactive type of co-working spaces. The second was to assess the role of managerial strategies related to individual and collective creative behavior.

The author used both quantitative and qualitative methodologies. First, a conceptual framework was proposed to build a theoretical background and structure a research design to conduct an empirical study. Second, a selected case study area, in which the author assessed the conceptual framework, was introduced. In order to investigate the existing co-working spaces in site selection area, the research systematically collected and analyzed a data set gathered from secondary sources. Next, the author conducted a key informant interview with managers from purposively selected ten co-working spaces to investigate practical management tools and their functions. Overall, the research is exploratory in nature due to the lack of previous studies conducted both in the research topic and selected site area.

The research contributes to both academic and practical level of discussions on co-working space by developing on a ‘work environment for creativity assessment model’ as a conceptual framework and conducting a case study in Tokyo, Japan. Japan is facing various complex social and economic issues such as aging and shrinking population, labor shortage, and slow economic growth. Because of that the Japanese government and major corporates have started implementing new policies to change the traditional workstyles and emphasizing on creativity and innovation for social and economic prosperity. It is unique as well as significant to study co-working space and their potentials in a society which has been experiencing dynamic transitions.

The research findings revealed the major managerial elements that affect the creativity prone work environment. Each management strategies consists of different approaches to build

a community of interactive and collaborative co-workers. The results outline the four major managerial elements which are manager's engagement, spatial features, user's attributes, and services and activities. Holistically, management tools influence on user's creative capability by offering opportunities to access to a flexible workplace, a community of network, new knowledge and skills, serendipitous encounter, and personal and professional support system.

Lastly, research findings noticed that the provider's motivation is one of the most crucial factors that define the nature of co-working space and thus the managerial strategy. The key informant participants shared their co-working spaces' strategic objectives. Interestingly, many of the co-working spaces are aim to solve major social and economic problems, such as slow economic development, increasing vacant property, and lack of proper workplace that suits modern workers in Japan. Based on the findings, co-working space can be recognized as a sustainability-driven urban enterprise that it resolves current economic and social constraints through its innovative services and the act of empowering a community of inventors.

*Key words:* Co-working space, Creativity, Collaboration, Interaction Strategy, Tokyo

(Word Count: 757 )

## ACKNOWLEDGEMENTS

First and foremost, I thank my academic advisor, Prof. Atsushi Deguchi, for giving me an opportunity to study at The University of Tokyo. I have been lucky to have a supervisor who has an enormous knowledge and experience with working on various exciting and influential projects in the field of urban development. I would also like to thank my co-advisor Prof. Shogo Kudo for his guidance, encouragement, and useful critiques of this research work. His projects on the Global Field Exercises widened my perspective on the field of academic research and educated me with practical research techniques to conduct a social study, which later I employed in this study.

I would like to take this opportunity to express my sincere gratitude to all of the Department faculty members and staffs for their kind assistance and support.

A very special thanks to Ven Paolo Bruno Valenzuela and Nakano Taku for their mentorship and endless optimism. This accomplishment would not have been possible without them. Thankful for everyone who went through an exciting journey together as for accomplishing the graduates from the GPSS-GLI Program.

I am extremely thankful to the survey participants, who have willingly shared their precious time during the process of interviewing.

Finally, yet importantly, I would like to thank my loved ones, who have supported me throughout the entire process, both by keeping me harmonious and helping me putting pieces together. I will be grateful forever for your love.

## DEDICATION

Towards every individual who creates and inspires by power of creativity

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## **1. INTRODUCTION**

This research explores the modern workplace and the influence on society through empowering creative individuals and communities. It is a case study conducted in Tokyo, Japan. Japan is facing aging and shrinking population, labor shortage, and slow economic growth. It is uncommon to explore how the recent trend of co-working spaces, which is now a global phenomenon, have been applied in a society with a very specific traditional workstyle.

The structure of this thesis study is as follows. First, the author introduces an origin and definition of co-working space. Co-working space is a trending supply of workplace service, in which a group of individuals with different backgrounds co-locates themselves in the same work environment. Moreover, it is regarded as a creative hub that fosters creativity and innovation through the implication of various management approaches. Later, this study reviews related literature on management practices that foster interaction and collaboration among users to promote the generation of creative ideas and products. Based on the previous research studies and theoretical inputs the author develops a conceptual framework to assess management implications that effect on creative outcomes at co-working spaces. Next, empirical research analyzes the management practices at the interactive type of co-working spaces in 23 special wards of Tokyo, Japan. Finally, before concluding, the author reflects on the conceptual framework and the findings and toward the recommendation for further research studies.

### **1.1 Literature Review**

Co-working space is a recently trending space-based service that it provides modern workers with creative work environment and assistance. This literature review aimed to identify what co-working space is and why it is attracting modern workers from all over the world. Literature review started with the origin of co-working space and major discussion

points by the previous scholars. Next, it explained what makes people thrive for co-working spaces by investigating management strategies and values offered to users. Lastly, the literature review ended with identifying research gaps and focusing on the research aim and objective of this study.

### 1.1.1 Workplace Reform

Work practice has been changing due to technological advancement. With access to fast internet server and personal devices, more and more people able to complete work tasks without commuting to one specific workplace (Isin & Ruppert, 2015; Mariotti et al., 2017). The current generation has much more opportunity to choose from where, how, and whom to work with (Deal et al., 2010; Garrett et al., 2017). At the same time, younger workforce as millennials prefers work flexibility, authority, and better work-life balance than any other generations (Asghar, 2014; Gillen & Cheshire, 2015). The transition of work practice is prompting to change in workplace concept and people's workstyle in general.

The need for companies to run their own office space is becoming less important as people can do their work in various other locations than in the main office (De Paoli et al., 2013; De Been & Beijer, 2014; Waber et al., 2014). Which leads the companies to re-think and re-design workplace environment. For instance, there may not be assigned seats for every worker by doing so it encourages more multi-use purpose by filling the gap of under-utilized office area. The future of the workplace should and will be designed with more emphasis on diversity, choice, flexibility, and sustainability (Gillen & Cheshire, 2015). In fact, it is said that redesigning for functional and flexible space may encourage creativity, well-being, and productivity of the users (De Paoli et al., 2013; De Been & Beijer, 2014; Waber et al., 2014).

Hence, the concept of the workplace is becoming a highly functional space where it doesn't only provide well-structured physical layouts but also offer soft measurement which involves

support for user's work accomplishments and well-being (Gillen & Cheshire, 2015; Jylha et al, 2015). As Gillen and Cheshire (2015) discussed that a workplace will be as much about experience and service provision as the physical space facilitates people holistically for a sociable and workable place with improved well-being and work productivity.

Technological advancement and people's preference over work are shifting from place-based labor to mobile and flexible work-style. Thus, the modern workplace considers optimization and sustainable use of physical space by providing multi-use flexible functions and delivers service and experience through facilitating workers needs to stay creative, productive, and happy.

### 1.1.2 Co-working Space Origin and Definition

Transformation of work practice is affecting workplaces in a way that the work environment is becoming a commercial product, that offers space and service in exchange for value. The number of co-working space is increasing all over the world as a legitimate and creative workspace. According to the online platform GCUC (2017), the number of co-working space has been growing from only three spaces recorded in 2005 to approximately 18,000 spaces in 2018.

Co-working space is defined as a collaborative consumption of office environment, in which a group of individuals with heterogeneous backgrounds co-locates themselves in the same workplace (Spinuzzi, 2012; Kubotova, 2014). Co-working space users usually rent a work desk exchange to membership or one-time use fee (DeGuzman & Tang, 2011; Jones et al., 2009; Suarez 2015). Moreover, co-working spaces emanate the concept of 'working alone-together' and encourage interactions among users (Capdevila, 2015). Individual professionals from creative or technology intense industries tend to be the common users of such spaces (Spinuzzi, 2012; Parrino, 2015). Thus, co-working space can be a flexible and interactive

workspace where people from diverse industries generate creative outcomes alone or collectively.

The current co-working movement is originated in San Francisco and spread through other major cities since 2005 (Gandini, 2015). Moreover, the earliest pioneer of co-working space founder is software engineer Brad Neuberg. He felt that the spaces provided by coffee shops and home environments are inadequate for freelancers such as himself lead him to develop the idea of co-working spaces, of which he is credited as the idea's founder (Moriset, 2013). Co-working space itself an innovative solution which provides an appropriate work environment in addition to that sense of community for independent workers.

Since then co-working space is becoming a worldwide trending phenomenon and the development of spaces is becoming creative with services that they provide. It is believed to increase more in the future with various design and social implications that attracts modern workers' needs of flexibility, creativity, and social connection (GCUC, 2017; Spreitzer et al, 2015).

### 1.1.3 Co-working Space as a Creative Hub

Creativity is a process of producing a novel and useful idea and it is a seed to innovation (Amabile, 1988; Amabile et al., 1996). Creativity and innovation are often linked to co-working space where it process inter-disciplinary collaboration and promotes open innovation which caused by combination of knowledge from several domains (Schmidt et al., 2015). Often times individuals or firms from creative or technology intense industries flood to co-working spaces to find new ideas, knowledge, partnership and other desired resources at relatively low cost (Cabral et al., 2016; Capdevila, 2014; Rosenbaum and Howard, 2016; Schmidt et al., 2015).

Rosenbaum and Howard (2016) discussed that co-working space applies methods to enhance collective creativity through provider-driven activities. Other words co-working space

takes the top-down initiative that provider facilitates the exploration and development of creative capabilities of the users. Moreover, according to a study done by Capdevila (2014), co-working space is intermediary between creative individuals and innovative firms by articulating place, space, events, and projects. Similarly, Brown (2017) and Cabral (2016) described co-working space as a focal point where interdisciplinary collaboration and combination of knowledge from multiple fields of expertise produce creative ideas and open innovation. Schmidt et al (2015; 2017) summarized that co-working spaces provide spaces to develop and commercialize creativity, promote collaborative work, enable access to critical resources, such as financial capital, market knowledge, market access, equipment, and technologies. Overall, a mix of users from multidisciplinary and their interactions at co-working spaces are the crucial points that ensure creativity.

For instance, socialization at co-working members enables the circulation of information or known as knowledge sharing that leads to valuable outcomes (Gandini, 2015). For instance, both ‘Instagram’- online platform and ‘Uber’- transportation network services are the most successful and innovative businesses launched from co-working spaces. Both companies have more than millions of users from all over the world and influence many other businesses through their services. It is said that co-working spaces assisted young start-up companies to keep their cost low and find the right connections (The Yard, 2019). As such a process of social engagement and its deriving results are the factors that thrive users to choose co-working space beside of its flexible work environment feature (Garrett, Spreitzer, & Bacevice, 2015).

#### 1.1.4 Co-working Space Management Strategies

Co-working space may seem as average shared or rental office if that is the case why people call it co-working space? The main point what differentiate co-working space than other office services by promoting and providing incentives that encourages users to interact with each other. Co-working space is for working yet it is a place to socialize, experience unexpected

encounters, or create novel and useful ideas or end products as a result of a collaboration born from diverse users.

### *Social interaction*

Social interaction is defined as a process of acting and reacting to those around us and it happens when a social exchange occurs between two or more individuals (Goffman, 1955). A significant feature of what makes a co-working space is 'an open source for a community approach to work' (Leforestier, 2009), or simply process of intentionally establishing 'communitarian social relations among the members' (Gandindi, 2015; Parrino, 2015). One of the explanations for why social interaction occurs at co-working is because it is simply required by the contemporary knowledge workers, among which networking is a crucial part of their career (Gandini, 2015). On the other hand, co-working space is perceived as a movement or a philosophy which values community, collaboration, openness and sustainability (Rus & Orel, 2015). Hence, it is a process of like-minded people to gather at a certain space and act on their shared value.

Garret et al (2017) conducted a research study to explore how social interactions are formed in the co-working space. As a result, researchers identified three common types of interaction that take place at certain co-working space. Followings are the interaction types, which are endorsement, encounters, and engagement, and the definitions (Garret et al., 2017).

- *Endorsing*: the act of being aware of community at co-working spaces
- *Encountering*: the act of passive participation by observing, identifying commonalities, perceiving potentials
- *Engaging*: the act of active participation by forming shared routines, taking part in social events, accepting responsibilities

As a matter of fact, social interaction implies something simple as acknowledging people and activities happen at the co-working space to actively engage with other co-workers (Garrett, LE; Spreitzer, GM; Bacevice, PA, 2017). Daily interaction at a co-working space develops a sense of community or belonging within the users.

### *Co-working space as a catalyzer*

Social interaction may emerge naturally as people be aware of their surroundings and express their will to interact with other co-workers in order to enjoy a company of community or to build connections. Notwithstanding, a co-working space stimulates the probability of encounters and collaborations by making mindful decisions towards the implementation of soft measures and space designs. Other words co-working space focuses on the community and its exchange of knowledge and ideas (Capdevila, 2015) through constructing a creative physical and social atmosphere (Balakrishnan, 2016; Fabbri, 2016).

Physical designs influence how people behave and react to the spatial features surrounding them (Edward, 1966). Thus, intentionally curated design choices at co-working space can have an impact on users' mood and action. The primary purpose of co-working space is to provide proper workspace. Instead of a conventional cubicle or fixed installations, co-working spaces are creative with the design. It is common that co-working spaces offer open flat layouts, flexible, and multi-usable spaces (Monaghan & Ahmm, n.d.; Schmidt & Brinks, 2017). Such environmental aspects are to produce creative atmosphere by allowing different patterns of use as well as uncertain intersections (Brenn, Krzywinski, & Noennig, 2012; Fabbri, 2016). Adding to that some co-working spaces apply encounter platforms such as kitchen or lounge (Brown, 2017; Jakonen, Kivinen, Salovaara, & Hirkman, 2017). Consequently, users' motions are directed to common areas where chances of people coming close proximity in spatial and social dimensions. Proximity is considered as a potential catalyzer to transmit tacit knowledge and

opportunism; thus, evokes creativity and innovation (Boschma & Boschma, 2010). Co-working spaces can foster social interactions through thoughtful assessments towards design applications.

However, physical attributes alone are not enough to curate a place where people efficiently engage and exchange values. Co-working space has managers whose role is to facilitate social interactions (Brown, 2017; Cabral & Winden, 2016; Fuzi, 2015; Gerdenitsch, Scheel, Andorfer, & Korunka, 2016; Parrino, 2015). Managers use different techniques to foster a better relationship between users and assist people to create the right connections faster and effectively. Co-working spaces with effective management systems influences on worker's performance, social and professional network building, and new idea creation or business development (Ivaldi, Pais, & Scaratti, 2018). Successful management strategies satisfy existing user's needs, attract people, and increase the reputations of the place. Therefore, it will feed both provider and user's interests.

There are few management tools commonly used at co-working spaces. First, managers act as a connector and coordinate different parties to intersect through co-working space. It can build connections beyond one's industry or profession, fasten the process of finding the right match, and escalate the chances of connection being valuable (Bouncken & Reuschl, 2018). In addition to that, some managers not only connect people within the space but also introduce to firms and individuals outside from the co-working space (Bouncken, Laudien, Fredrich, & Görmar, 2018; Capdevila, 2014). Second, managers organize social gatherings such as community lunch events that users can gather together and make an interaction. It is another opportunity where people get to build connections, exchange ideas and knowledge, or even find business partners to collaborate with (Garrett, Spreitzer, & Bacevice, 2017; Moriset, 2013; Spinuzzi, 2012). Third, some co-working spaces select users meticulously to optimize the probability of creating a desired community and collaboration (Cabral & Winden, 2016).

Because researchers mentioned that managers may increase the serendipitous encounters but it can be discouraged if users avoid from any kinds of interaction and want to focus on their own work (Jakonen et al., 2017). Also, in some cases, if users are too diverse without no commonalities it is difficult to bind them, at the same time if users have exactly the same skills and knowledge, there is less chance to gain new ideas and knowledge (Moriset, 2013). Therefore, some providers try to achieve an interactive and collaborative type of co-working space by selectively managing the mix of users.

Overall, co-working space provides a physical space for modern workers who might be interested in the potential of being exposed to new ideas, knowledge, encounters, and collaborations. Co-working space facilitates social interactions and foster encounters that people can find what they want faster or run into unexpected opportunities.

## **1.2 Research Problems**

Previous researchers have succeeded to clarify and explain a recent social phenomenon of an increasing number of co-working spaces. Modern workers thrive to co-working spaces because of the flexible feature and interactive working environment. Social interaction at co-working spaces enables serendipitous encounters and access to a necessary network, knowledge, and other sources that modern professionals seek.

The recent studies have been focusing on the potential role of co-working space to contributing a process of generating creative and innovative outputs. Significantly, the entrepreneurial sector is addressed to become a frontier force to creating a sustainable world, especially acting as a source of innovation and creativity (Robinson, 2004). In other words, individuals and firms' innovative complex problem-solving ability and the nature of creating novel and useful ideas are being highlighted to break through social, economic, and environmental challenges. In regards to that co-working space has been defined as an

innovative medium to cultivate a creative capability. As creative individuals and innovative firms explore or create new ideas and products by articulating co-working space amenity and community of diverse workers.

However, there is a lack of research study interrogated the practical tools that entice creativity at co-working spaces. Thus, this study focuses on management strategies and their impacts on the process of formulating an interactive and collaborative work environment that harness creative outcomes. The researchers undertook the following specific questions:

- 1) Which strategic management tools are used in co-working spaces to stimulate interactions and collaborations?
- 2) What is the process of implementation of management tools?
- 3) To what extent management tools enable an individual or collective creative behavior?

### **1.3 Research Objectives**

The main research objective is to identify *the role of co-working space to enhance the interactive and creative work environment by implementing management strategies*. The research undertook 2 specific objectives to address this. Each specific objective has a prescribed methodology. These 2 specific objectives and their respective methodologies are the following:

- **To explore interactive type of co-working spaces.** Assessing the status quo and dynamics of co-working spaces by validating it with typology analysis is done using a secondary data collection and analysis
- **To assess the role of managerial strategies relation to individual and collective creative behavior.** Key informant and group interviews were conducted to explore the provider's perspective on interactive community and how they employ different

strategies to induce creativity.

#### **1.4 Significance of the Study**

On the academic level, most of the previous studies focused on explaining the co-working space phenomenon. By conducting this research, it provides empirical findings that extends the discussion on co-working space and its potential to influence individual and collective creative behavior. On the theoretical aspect, the research contributes to the assessment of the work environment creativity model by developing a conceptual framework.

On a practice perspective, the research contributes to co-working space providers to evaluate their management strategies and explore influential practices that fit their mission. Also, companies can learn how to manage their workspaces and employees more effectively to improve the process of creating novel and useful ideas to solve issues as well as to create new services and products. The methods applied in this study can be followed by managers as they not complex and does not require special tools that are not available to them.

The research contributes to the overall understanding of creativity. Creativity is a seed of innovation. ‘All innovation begins with creative ideas’ (Amabile, 1998). Creativity is one of the most fundamental human natures. Also, it is one of the highly required skills of the modern workforce (World Economic Forum, 2018). Due to technological development and various social and economic dynamics, the current generation faces unpleasant uncertainties and complex issues. Therefore, human beings innovative complex problem-solving ability and our nature of creating novel and useful ideas are being highlighted more than ever before. This study aims to empower individuals to create and inspire society through the power of creativity.

Lastly, this study contributes to the development of ‘sustainability entrepreneurship’. It is a relatively new concept which has been evolved from the concept of social entrepreneurship

and ecopreneurship since 2000. Sustainability entrepreneurship means that (Abrahamsson, 2006)

*the use of entrepreneurial activity in a determined action orientation towards solving a sustainability-related problem with creative business organizing as a means to solve the problem(s) – **business with a cause**'.*

In other words, sustainable entrepreneurship is a concept of contribution to solving societal and environmental issues through the realization of a creative business (Schaltegger & Wagner, 2011). It credits small and large any scale of contribution to sustainable development.

Initially, co-working space was a workplace-based business activity provided by the private sector which noticed the social and economic issues that modern workers had been struggling with. As co-working space has been evolving in the last one decade, it is now being recognized as a place that encourages others to be creative and innovative. Hence, co-working space is a practice of sustainability entrepreneurship that promotes and supports individuals or small enterprises to produce creative value which eventually contributes to sustainable development. Therefore, it is significant to investigate and identify practical management implications that foster creativity at co-working space. So that co-working spaces can create an interactive and creative work environment that can produce positive creative values to the world we live.

## **2. METHODOLOGY**

This research focuses on management tools which enable the process of forming interactive and creative co-working spaces. The author used both quantitative and qualitative methodologies. This is a case study which is known to be suitable for exploring unfamiliar ideas or relatively new concepts with limited background knowledge on the topic (Yin, 2013). Moreover, a case study helps to construct an empirical study where the author can focus on a specific area with the detailed observation while overcoming the time and money constraints

that many researchers have difficulties with.

First, a conceptual framework was proposed to build a theoretical background and structure a research design to conduct an empirical study. Second, a selected case study area, in which the author assessed the conceptual framework, was introduced. This study was conducted in Tokyo, Japan. In order to investigate the existing co-working spaces in site selection area, the research gathered necessary data from multiple secondary online sources. Followed by data analysis to detect co-working spaces that are no longer exist or not relevant to the focus of this study. Next, the author conducted semi-structured interviews with managers from purposively selected ten co-working spaces which are active and innovative in the business. This study involved interviews in order to explore the existing management practices and discuss the outcomes. Overall, the research is exploratory in nature due to the lack of previous studies conducted both in the research topic and selected site area.

## **2.1 Conceptual Framework**

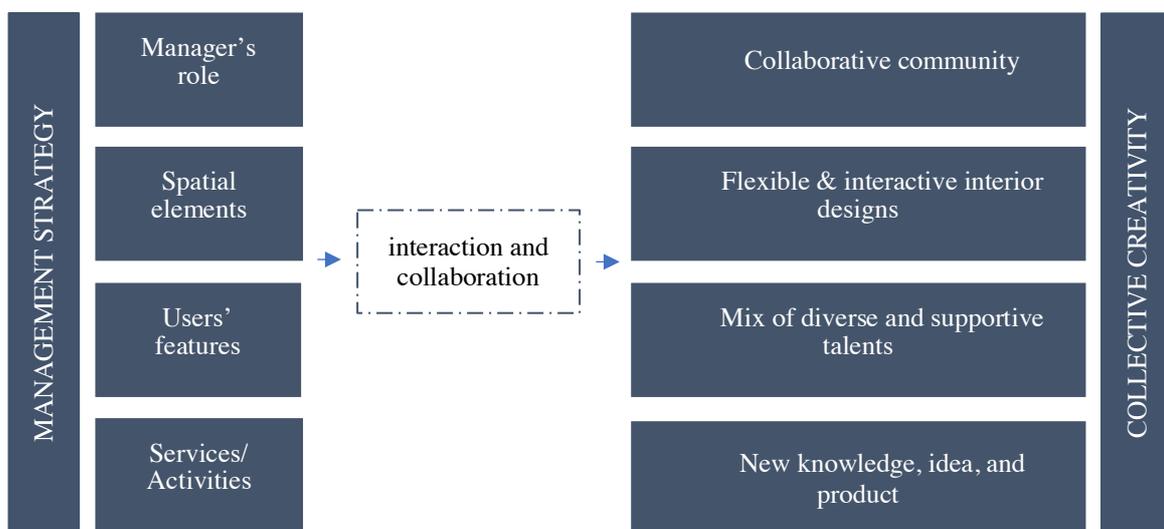
According to decades of research study on the relationship between work environment and creativity, there are fundamental management elements that influence an individual's creative behavior (Amabile, 1988; Amabile et al., 1996). It is known as 'the Work Environment for Creativity' model. In this concept, creativity is determined as creating novel and useful ideas and ability to transform imaginative ideas into reality. Within every individual, creativity is a reception of three segments: expertise, creative thinking skills, and motivation (Amabile, 1988; Amabile et al., 1996).

- *Expertise*: domain relevant knowledge and skills
- *Creative thinking skills*: implicit or explicit knowledge of heuristics for generating novel ideas
- *Motivation*: Intrinsic attitude and perception to undertake tasks creatively

Managers can influence these components by creating a work environment that offers opportunities to gain knowledge and skill and evolve one’s creative ability within a motivated and supportive community.

Based on the creativity model assessment and the findings from the previous literature studies, this research purposes a conceptual framework that analyzes creativity at co-working spaces. Conceptual framework consists of four main elements that assist interaction and collaboration. As a matter of fact, users are able to transform knowledge, experience encounters and collaborations, and produce new ideas and products. Followings are managerial practices to explore further in the empirical part of the study.

- 1). 'Manager's role', 2). 'Spatial features', 3). User's accessibility, 4). 'Services and Activities'



*Figure 1. An Assessment on Co-working Space Management Strategy for Interactive and Collaborative Work Environment*

As frequently mentioned in previous studies that managers have an influential role to facilitate users’ relations. Thus, co-working space users can interact with others spontaneously and find the right connections relatively easily compare to working on their own in an isolated

condition (Bouncken, Laudien, Fredrich, & Görmar, 2018; Capdevila, 2014). It is crucial to employ managers who engage with users and are familiar with their information so that they can coordinate people efficiently. Right matches enable co-workers to stretch individuals' abilities by using their expertise or creative skills and ignite intrinsic motivation (Amabile, 1998). Also, managers are recommended to acknowledge and encourage the act of interactions and creative outcomes with a positive attitude. Such actions cultivate an environment where creative values are appreciated and promoted. Moreover, it inspires others to take actions to produce more creative results (Amabile, 1998).

Spatial features can contribute to an interactive and creative atmosphere at co-working space. Some of the favored design elements are open office layouts with flexible and multi-usable spaces (Brenn, Krzywinski, & Noennig, 2012; Fabbri, 2016). Also, later the researchers have recommended installing communal platforms such as lounge or kitchen to entice serendipitous encounters (Brown, 2017; Jakonen, Kivinen, Salovaara, & Hirkman, 2017). This study investigates whether these applications are available in case of co-working spaces in selected areas and whether above mentioned spatial features function as have been discussed in the literature reviews.

Co-working spaces regulate the mix of users to achieve the desired community attributes (Cabral & Winden, 2016). When a co-working space wants to create an interactive and collaborative community, there are few elements that providers should concern with. According to the work environment and creativity model, users should have a diverse background to and mutually supportive attitude (Amabile, 1998). Hence, it is not only about individuals' background such as knowledge or skills, but also personal feature and attitude that they are bringing to the environment.

Social gatherings at co-working spaces promote the opportunity to encounter with other users, build connection, and exchange information (Garrett et al., 2017; Moriset, 2013; Spinuzzi, 2012). Except for community events, there are not many examples or outlines regarding types and functions of such social gatherings. Therefore, this study explores the available services and activities provided at co-working spaces.

Overall, in order to fulfill the research objectives, this research uses a conceptual framework to guide further investigations. By analyzing four management elements from the conceptual structure and each of their attributes in the empirical part of the study helps to identify the management roles and the effects on creative value production. The following section introduces a case study area, where the conceptual framework is assessed.

## **2.2 Site Selection**

### **2.2.1 Japan**

Japan has one of the most unique employment structure known as a lifetime employment system since the Showa era. It implies the nature of a loyal employee who dedicates his or her career life to a single company. As an exchange to his or her dedication, a company offers a secure work position as well as promotion and bonuses based on one's length of service. However, in present, Japan is facing several crucial social issues such as low birth rate followed by a labor shortage, aging society, and slow economic growth (OECD, 2019). In fact, traditional employment system seems no longer sustainable (Murakami, 2019; OECD, 2019).

Hence, both government and private sectors are taking lead to transform long kept traditional workforce practice to overcome labor shortage issues and accelerate businesses to catch up rest of the world. For instance, Japan enacted a new labor law- 'Work Style Reform' in June 2018 (JILPT, 2018). The legislation aims to facilitate a society in which individuals can create a workstyle in line with one's circumstances. By promoting flexible work practices,

a government hopes for better labor management and results.

In addition to that Japanese top companies, Mizuho Financial Group Inc and Softbank Corp, are wavering human resource practices by allowing employees to have side jobs. Company heads believe that projects and experiences earned outside of the company will have positive effects on employee's skills and development. Also, multiple workplace experiences may foster synergies and the creation of novel and useful ideas for a company (Kyodo, 2019).

At least but not least, people are making career choices based on their lifestyle preferences without considering the mainstream social norms. The number of part-time and contract workers has doubled over the last 30 years of the Heisei era and now these type of workers makes 40% of the labor force (Murakami, 2019). Growth of technological development, world economic trends are emerging labor policies are shaping the new way of working in Japan. Slowly yet definitely Japan's conventional work practice is transforming.

### 2.2.2 Tokyo

Tokyo is the capital of Japan and a hub for major economic activities. It is home to 13 million people, which makes it one of the populous metropolis in the world. There are over 660,000 businesses with approximately 9.6 employees in Tokyo. Thus, Tokyo attracts both domestic and international business with diverse industries and further business development opportunities. Also, Tokyo is recognized as a global city where it occupies the highest share of fortune 500 companies. In addition to that, 75% of the international companies' headquarters are located in Tokyo (JETRO, 2019). Currently, the capital is preparing for the 2020 Tokyo Olympics. It is a crucial moment for Japan to welcome the world and create an opportunity to adopt a new economic growth potential (Tokyo Metropolitan Government, 2019).

Tokyo is utmost responsive to the latest trends and new discoveries as an international city. The recent trend of the modern workplace has been expanding in the eastern part of the world

as well. Hence, Tokyo has the highest distribution of co-working spaces with constant growth in Japan (Furuuchi et al., 2017). Tokyo is suitable for this case study because this is a place where the diverse and the most up-to-date information on co-working space business can be gathered. It is also significant to study co-working spaces in a period of time that Japan is emphasizing innovations and experiencing various workstyle related transformations.

### **2.3 Data Collection and Analysis**

In order to investigate the current status quo and dynamics of co-working spaces in Tokyo, the necessary data was gathered through multiple secondary sources online. Data gathering process was conducted in July 2018 and followed by minor modification in April 2019. The author gathered names, locations, and contact information of co-working spaces located in 23 special wards of Tokyo, through online search engines, specifically designed for co-working spaces. The online websites were previously used by Japanese researchers (Uda, 2015, 2016; Furuuchi et al., 2017). Followings are the websites used for this study: *<http://co-working.com/>* ; *<https://co-co-po.com/>* ; and *<https://www.coworking.coop/>*

Except for above-mentioned websites, the author updated the data set with additional data from the fourth source which was WeWork (*<https://www.wework.com/>*). WeWork is an international co-working space provider originated from the United States since 2010. The company is spreading its operation through 86 cities of 32 countries. In February 2018, the company opened its very first office in Tokyo. Since then with fast growth, there are overall 15 spaces open for co-workers. Due to its unfamiliarity and first launch in Japan, there was no information by the time of the data collection. Therefore, the author made a minor modification in order to make data set as up-to-date and inclusive as possible. Based on the data, a geographical distribution image was produced by Geographic Information System software to get some perspectives in what areas co-working spaces are located in. Overall, the result from the data collection process would show a general overview of co-working space in Tokyo.

The second stage was to create a profile for each co-working spaces. A profile included co-working space name, location, provider information, user's features, monthly fee, and services. In order to create a profile, the author examined each co-working spaces' websites or social pages, sometimes over a phone call if there was no available information online. By developing an information data set, it would help to recognize whether a certain co-working space is under operation or not, or even relevant to this study based on the definition derived from the literature review.

Finally, a typology of co-working spaces was created based on the management commonalities. The typology was adapted from a study done by co-working space and manager types by Ivaldi and fellow researchers in 2018. This study identified three co-working space types which were infrastructure, interactive, and family-friendly spaces. The objective of this study is to focus on management strategies which encourage interaction among the users. Thus, based on the result from the third space, this study would only focus on the interactive type of co-working spaces to explore services and activities taken by different providers.

Data collection from diverse online sources would provide a general overview of the existing condition of co-working spaces in Tokyo. After analysing the data set, it would illustrate more detailed information including the current state of business condition as well as available types of co-working space. The author focused on the interactive type of co-working spaces for the purpose to prepare in-depth qualitative studies with managers to investigate management tools thoroughly.

## **2.4 Key Informant Interviews**

Key informant interview was conducted with an interactive type of co-working space managers. Prior to the interview, the author contacted to 14 co-working spaces and was able to make 10 co-working spaces to participate in the research study. The interviews were taken

place between May 7-18th 2019. The interview duration was around half an hour to one hour for each co-working space including the facility tours. The interviews were conducted in Japanese except for one case in English. Semi-structured questions were prepared in advance to the interview. Interview questions were applied from a conceptual framework which consisted of four major sections: the manager’s role, design, user’s features, and services/activities. Questions were not necessarily asked in any specific orders. Followings are the major themes and sub-topics discussed during the interviews.

Manager	1. Motivation	(motivation, background)	Case 1
	2. Objective	(vision, objectives of the co-working space)	Case 2
	3. Roles	(manager’s roles)	Case 3
Space	1. Multi-use functionality	(variety of space functions)	Case 4
	2. Flexibility	(flexibility to spatial changes)	Case 5
	3. Encounter platforms	(communal areas)	Case 6
User	1. Accessibility	(target group, existing users, diversity)	Case 7
	2. Willingness	(user’s motivation of use, willingness to interact)	Case 8
Services/ Activities	1. Events & activity	(types, frequency, themes)	Case 9
	2. Value creation	(successful outcomes, challenges)	Case 10

*Figure 2. Key Informant Interview Question’s Guide*

## 2.5 Scope and Limitation

This research offers the most up-to-date information on co-working spaces in 23 special wards of Tokyo, but a constant update is highly recommended. Co-working space is a fast transforming trend sensing that perpetual changes and fluctuations might be observed with frequent emerge of new co-working spaces in every month. As a matter of fact, any discussions on co-working spaces ought to be supported with the latest looks on the topic. Moreover, the case area and selected interviews might be limited to the subject of urban studies. Therefore, further analysis on other spatial and cultural contexts should be explored.

### **3. RESULTS**

In this section, the author outlines the results from both secondary and primary research investigations. First, it displays the findings from secondary data sources. Findings reveal the current condition of co-working spaces in 23 wards of Tokyo. The number of co-working spaces, spatial distributions, and existing trends and dynamics is the major analysis outcomes. Second, key informant interview results are introduced. Interview survey findings provide a deeper understanding of co-working space's functions and management systems. Thus, it covers the central research objective which is the connection between management strategies and enhanced creative capability of co-workers at co-working space.

#### **3.1 Secondary Data Collection and Analysis**

This study employed data collection from secondary sources, followed by data set analysis. First, due to the lack of available information on the research topic in the site selection area, the author created a data set which consists of co-working space information in 23 special wards of Tokyo. Afterward, data analysis performed to identify geographical distribution, business operation status, and different types of co-working spaces. Findings presented a general overview of the current status quo and dynamics of co-working spaces in Tokyo. Also, these results are a crucial step in selecting co-working spaces to conduct semi-structured interviews to gain an in-depth understanding of managerial practices.

##### **3.1.1 Data Collection**

Tokyo is the major economic region that consists of the highest share of businesses in Japan. Similarly, the capital has the largest distribution of co-working spaces. After collecting data from four different sources, there are 320 co-working spaces recorded in 23 special wards of Tokyo. Each online source provides name, address, and contact details. Data collection was conducted carefully in order to avoid double counting. Followings are major websites that provide co-working space information in Japan.

Table 1. List of Secondary Data Sources

Sources	Co-working space (count)	
	Online link	Count
Coworking.com	<a href="http://co-work-ing.com/">http://co-work-ing.com/</a>	183
Coworking	<a href="https://co-co-po.com/">https://co-co-po.com/</a>	84
Coworking	<a href="https://www.coworking.coop/">https://www.coworking.coop/</a>	38
WeWork	<a href="https://www.wework.com/">https://www.wework.com/</a>	15
Total		320

Figure 3 illustrates the geographical distribution of co-working spaces based on the data derived from secondary sources. The yellow area shows the commercial zone, whereas the dark grey section represents the residential zoning. Moreover, the red dots and lines indicate the train stations and lanes, respectively. According to the map, co-working spaces most likely to concentrate on places with easy access to public transportation and commercial facilities.

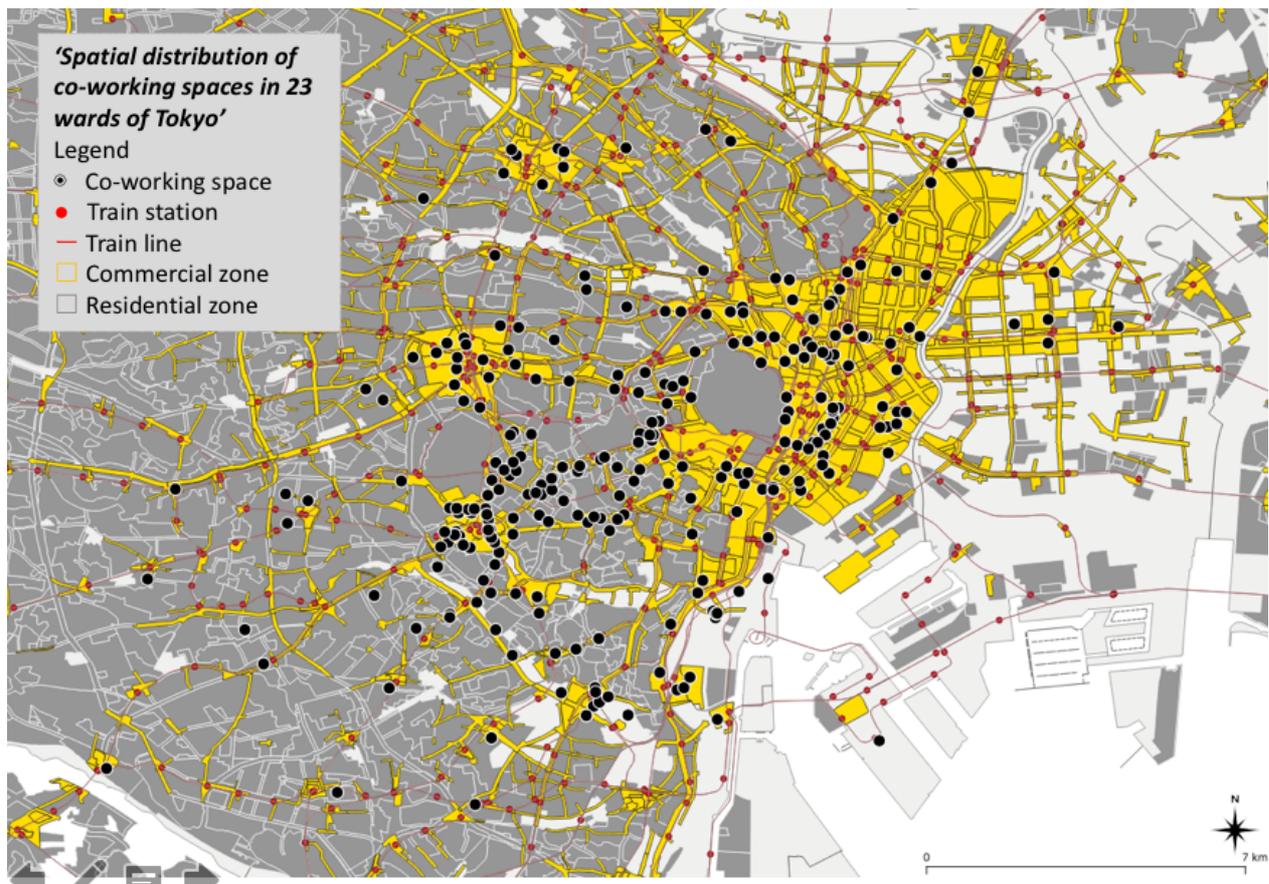


Figure 3. Spatial Distribution Map of Co-working Spaces in 23 Special Wards of Tokyo

Figure 4 shows a graph of comprehensive information on the spatial distribution by 23 special wards of Tokyo. Among the total of 320 units, major business districts of Minato (21.6%), Shibuya (19.7%), and Chiyoda (16.3%) take half of the co-working spaces by their joint value. Whereas, the eastern peripheral wards of Edogawa and Itabashi have no records of co-working spaces.

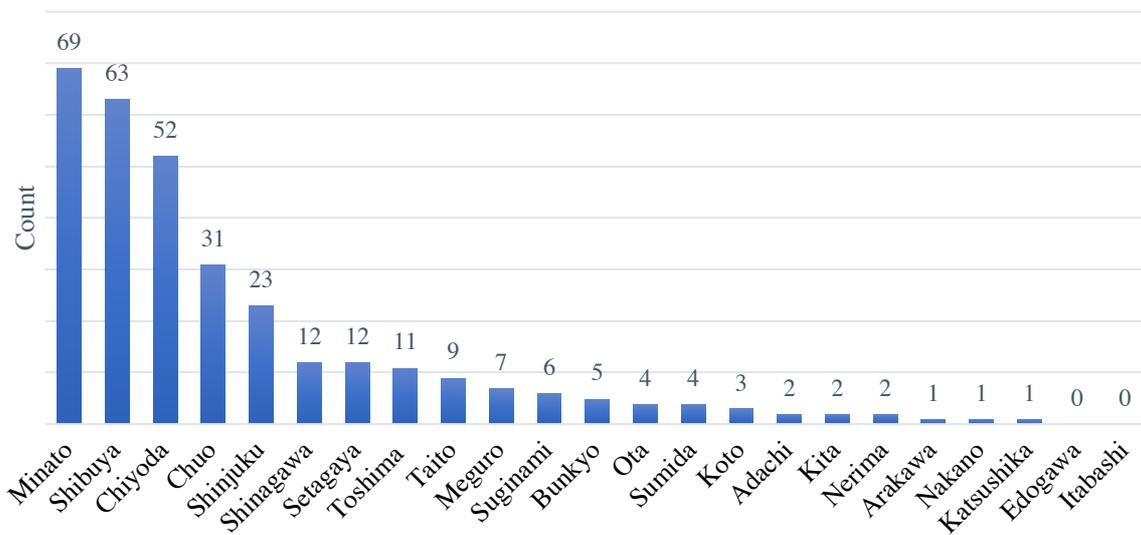


Figure 4. Column Bar Count of Co-working Spaces in 23 Special Wards of Tokyo

### 3.1.2 Data Analysis

Data collection is followed by further analysis focusing on current business operation status and existing major trends in co-working spaces.

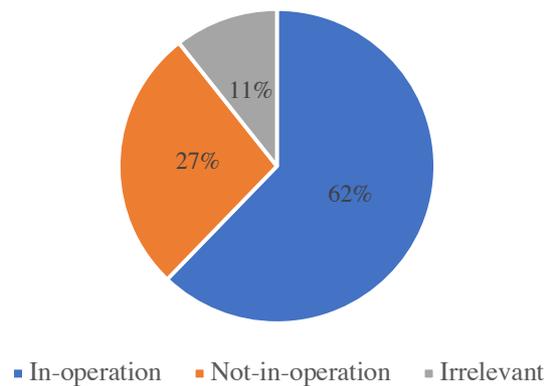
#### ***Business operation status***

A total of 320 co-working spaces are identified from the four different sources. However, the Table 2 shows that less than two-thirds of the co-working spaces are under operations. After analyzing each of the co-working space's websites or making phone inquiry, it became clear

that one-third (27%) of the co-working spaces are out of business. Furthermore, a remaining 11% of 34 units are considered irrelevant to this study. These units are mainly recreational in purpose or rental spaces for events. Many of the enterprises are cafes, study stations, or game complexes. However, in this study, the definition of co-working space is a place-based service which provides a work environment for users. It is important to use a generalized definition of co-working space in order to avoid any kinds of bias which may result from different interpretations by different entities.

*Table 2. Count and Ratio of Co-working Space Business Operation Status*

State of business; relevance		Co-working space	
		Count	Ratio
	In-operation	199	62%
	Not-in-operation	87	27%
	Irrelevant	34	11%
	Total	320	100%



*Figure 5. Pie Chart of Business Operation Status*

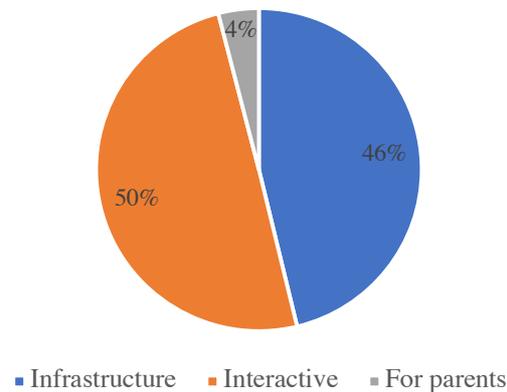
### ***Typology***

There are three distinctive trends of co-working spaces which are interactive, infrastructure, and nursery kinds. First one is interactive co-working spaces where users can find themselves participating events and seminars or being able to network with new people through manager's connections. Second category is infrastructure type of co-working spaces. These spaces provide

physical amenities such as work desk and internet servers, but not necessarily offer any additional services that encourage social interactions. Third one is nursery type meaning that it is a co-working space for parents with young children. These spaces offer childcare services. Parents are able to check on their children any time they want, at the same time focus on their work assignments. Figure 6 illustrated the count and ratio of each of the co-working space types recorded in 23 special wards of Tokyo.

*Table 3. Count and Ratio of Three Co-working Space Typologies*

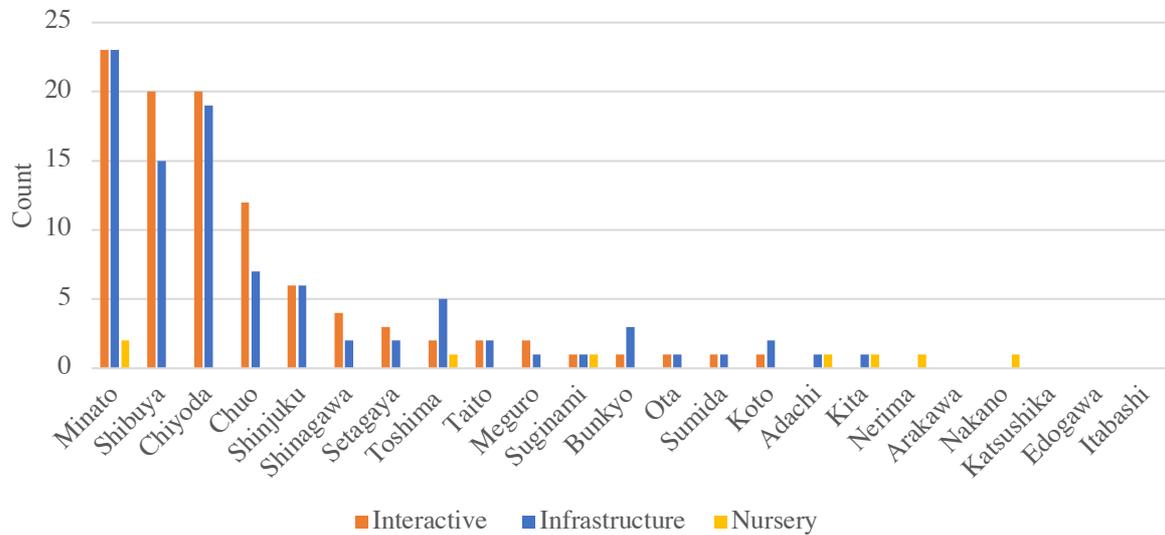
Typology	Co-working space	
	Count	Ratio
Interactive	99	50%
Infrastructure	92	46%
Nursery	8	4%
Total	199	100%



*Figure 6. Pie Chart of Three Typologies of Co-working Space*

Findings show that percentage of interactive and infrastructure types of co-working spaces are almost equal of 50% and 46% respectively. Nursery spaces for parents takes 4%. Half of the co-working spaces function just as an infrastructure base for workers. Remaining half of the enterprises offer additional soft measurements such as events and seminars. There are eight co-working spaces for working fathers and mothers by providing childcare next to the work

space areas. Figure 7 displays spatial distribution of co-working spaces' locations and types more in detail.



*Figure 7. 3-Axis Bar Graphs of Distribution of Co-working Spaces by Typologies in 23 Special Wards of Tokyo*

Minato ward has the highest share of co-working space and equal distribution of both interactive and infrastructure types. Followed by Shibuya and Chiyoda wards both have the higher share of interactive type of spaces. Whereas the eastern wards have more co-working spaces for parents with childcare services. The eastern part of Tokyo is more industrial in nature that area has more manufacturing facilities rather than office buildings.

### ***On-site observation***

In order to reassure the features of different types of co-working spaces, this research employed an on-site observation. A total of ten co-working spaces were selected through convenience sampling. Infrastructure type of co-working spaces are quiet, and users don't seem to talk to other people. Users are mostly focusing on their own as pictured in Figure 8. There are no social gathering events organized by the provider. These types of co-working units are

most likely located in the lounge or common area of the office buildings, as an extension of rental office facility. On the contrary, interactive co-working spaces arrange various social gathering occasions and even allow people who are not the users. There are co-working staffs who take care of the smooth flow of the event while facilitating participants' interactions. Figure 9 portrays the open and vibrant atmosphere at an interactive type of co-working space.



*Figure 8. Co-workers at Infrastructure Type of Co-working Space in Minato Ward (left)*

*Figure 9. Social Event at Interactive Type of Co-working Space in Minato Ward (right)*

In terms of co-working space for parents, these units only operate during limited days and hours in the week. Also, some co-working spaces allow only working mothers. Primary purpose of the space is to enable parents to focus on their work by taking care of their children. Therefore, nursery type of co-working space are not necessarily focused on interaction and collaboration among users.

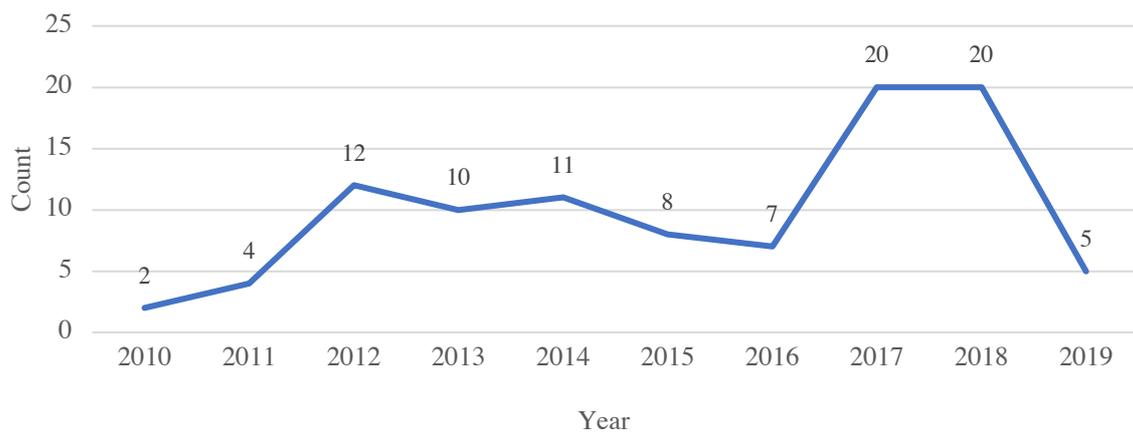
### 3.1.3 Focus Area: Interactive Co-working Spaces

There are three types of co-working spaces. Among these spaces, this research study focuses on co-working spaces that encourage interactive and creative work environment by articulating various managerial tools. Therefore, this study emphasizes on only interactive co-

working spaces where not only working amenities are allocated but also interactions and collaboration among members are encouraged by the providers.

### *Trends in time*

Following findings are derived from the closer look on interactive type of co-working spaces identified from the data analysis. Figure 10 displays the increasing trends in the emergence of interactive co-working spaces. The earliest co-working spaces that still operate today are started from 2010. Many of the co-working spaces started since 2017. Thus, it implies a trend of growing numbers in co-working spaces. The Graph captures only first quarter of the newly established co-working spaces in 2019. Data is collected from only one secondary sources. Therefore, it is proper to prospect the more co-working spaces by the end of 2019.



*Figure 10. Line Graph Count of Capturing Trends in Co-working Space Establishment Year*

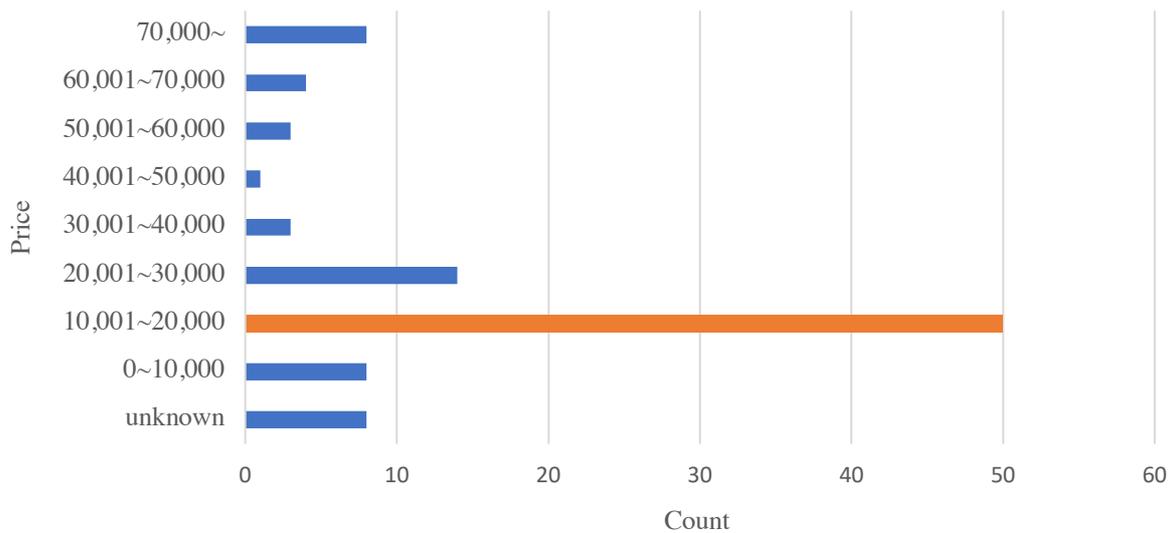
### *Cost*

Co-working space price ranges greatly. The monthly fee for free desk costs the lowest of 0 Japanese Yen to the highest of 88,000 Japanese Yen. A common charge of monthly fee is between 10,000~20,000 Japanese Yen and these prices is same to 51% of the co-working spaces in Tokyo. In general, more than two-thirds of the co-working spaces ask less than 30,000

Japanese Yen. Start-ups and independent workers benefit from the co-working space's flexible contract condition and reasonable price.

*Table 4. Distribution of Monthly Cost Price Ranges for a Co-work Desk*

Price range (JPY)	Co-working spaces	
	Count	Ratio
unknown	8	8%
0~10,000	8	8%
10,001~20,000	50	51%
20,001~30,000	14	14%
30,001~40,000	3	3%
40,001~50,000	1	1%
50,001~60,000	3	3%
60,001~70,000	4	4%
70,000~	8	8%
Total	99	100%



*Figure 11. Column Bar Graph of Monthly Cost Ranges of Co-work Desk*

### ***Providers***

It is necessary to investigate the provider of co-working space, if providers who affect the vision and management features of the enterprise. The common provider of co-working space is business entities from different industries such as finance and consulting firms and IT. The

next major provider is from real estate related companies and companies manage space related services. There are small proportion of co-working units are provided from the collaboration between firms and government initiatives. Based on the result ten most active co-working spaces are selected to conduct a semi-structured interview. The selected units are provided by different industries to capture different segments and their strategies. The next part provides more detailed information on co-working space operation and management tools.

*Table 5. Count and Ratio of Different Types of Providers*

<b>Provider</b>		<b>Co-working space</b>	
		Count	Ratio
	Real estate/ space management	46	46%
	Business	50	51%
	Government initiated	3	3%
	Total	99	100%

### **3.2 Semi-structured interview results**

To be able to gain extensive information on co-working spaces and management strategies, the research employed in-depth semi-structured interview with key informants. A total of ten interviews conducted with managers from purposively sampled co-working spaces. The objective of each interview is to focus on participant’s job role, points of view, and unique lived experience. This would provide an overview of both the manager’s roles involved and the strategies taken at each selected sites. The semi-structured interview results are outlined in five subcategories: Prefaces, Manager’s role, Spatial features, Users, and Services/Activities

#### **3.2.1 Background**

This part outlines the selected ten co-working spaces and provider’s background information. Managerial strategies align with provider’s motivation and vision. According to the results from the data collection and analysis part that if providers only sublease the spaces to gain profit, these places are less likely to have an interest in added value creation process. Therefore, the co-working spaces function only as an infrastructure base. In contrast,

interactive co-working spaces aid and arrange various social activities. However, there are not many explanations why these places perform such extra activities for their users. In this section, the findings reveal supplier's background, motivation, and vision for a co-working space of each ten cases.

### *Overview of selected units*

Table 6 profiles the ten units selected for the semi-structured interview. Due to confidentiality matter, actual enterprises' names are substituted by coded names. Designated units are spread through major commercial areas of Chiyoda (3 units), Shibuya (3 units), Minato (2 units), Shinjuku (1 unit), as well as area with the highest share of residential population of Setagaya (1 unit) ward. The location of each spaces are plotted in the Figure 12.

Co-working spaces are in business the shortest for three years and the longest for seven years. Prior to opening co-working space services, provider companies operate business in their respective field of industries. In fact, providers are from distinctive sectors of design, IT, finance, consulting, real estate, and even governmental subdivision.

*Table 6. Summary of Key Informant Interview Cases*

		Co-working space	Location	Establishment	Provider background
		coded name	ward	year	industry
<b>Semi-structured interview</b>	Case 1	A	Chiyoda	2017	Information technology
	Case 2	B	Chiyoda	2017	Real estate agency
	Case 3	C	Shinjuku	2017	Design firm
	Case 4	D	Minato	2012	Start-up community
	Case 5	E	Minato	2014	Co-working space; Business consulting
	Case 6	F	Shibuya	2012	Office design & supply
	Case 7	G	Shibuya	2012	Design firm
	Case 8	H	Shibuya	2017	Co-working space; Real estate consulting
	Case 9	I	Chiyoda	2016	Real estate agency
	Case 10	J	Setagaya	2014*	Public-Private

\* co-working space 'J' started share office enterprise since 2004. From 2014, the concept of co-working space has been introduced newly into the business set-up.

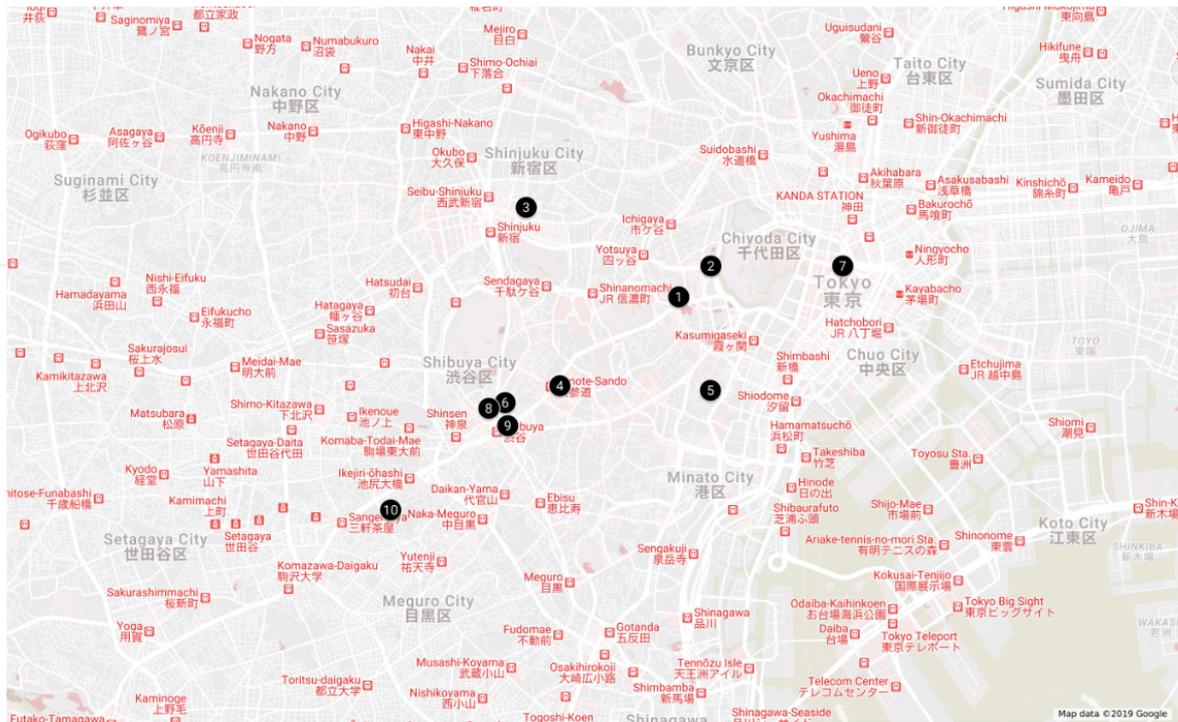


Figure 12. Geographical Distribution Map of Ten Selected Co-working Units

### Provider's background

This part summarizes the provider's brief information regarding business activities and factors associated with managing a co-working space business. Based on the interview results and company profile, providers are categorized into five main field of industries: Design firm (3), IT and Start-up (2), Co-working space & Consulting (2), Real estate agency (2), and Public-Private initiative (1)

Table 7. Summary of Provider's Background Profile

Industry	Provider's main business activities	Co-working spaces
Design firm	Architectural design firms that offer not only physical design but also management operation system focusing on community and business development. Major works: office design and management	C, F, G
IT, Start-up	IT: Originally, the company was a byproduct of a merger between major American and Japanese corporations. It is an internet web server company and one of the most visited web portals in Japan. The company promotes the concept of open innovation to accelerate the process of creating new ideas and products.	A, D

*Start-up:* The company runs a start-up community in Japan and it launches and sells start-ups in Japan and the USA. The company provides resources, expertise, and guidance to start-ups by providing an open innovation community, corporate sponsored accelerators, and Japan LaunchPad projects- (connects global start-ups and Japanese enterprises).

Co-working space & Consulting	Main initiators have a background in creative industries of construction and interior designs. The current business direction is co-working space development and management. Both companies have an average of three to four co-working spaces in Tokyo. Each branch serves different concepts based on the uniqueness of the area. Besides workplace services, these places provide business or property related consulting services because of their rich career experiences.	E, H
Real estate agency	The firms provide comprehensive domestic and international real estate management services through their multiple subsidiary business lines. Some of the business subdivisions are real estate information webserver, revitalization projects focusing on vacant slots, and sharing economy platforms.	B, I
Public-Private partnership	Both the government and private divisions take part in the growth of the co-working space service. The private sector leads the operation part, whereas the government side gives support by subleasing facility and promoting its activities. Before running a co-working space, the operator company used to work on the various urban renovation and public space development projects.	J

### ***Motivation***

The reasons why provider companies supply co-working space enterprises vary yet all tend to contribute to the social and economic improvement. Suppliers want to solve social issues by providing necessary supports through co-working spaces. Companies have noticed issues with incompetent domestic and international economic progress, increasing vacant properties, and a shortage of proper workplace to support modern workers. Followings are the concerns shared by the providers and the triggering points that motivated them to manage co-working spaces.

#### **Economic challenges and potentials**

- Due to the ageing population and low birth rate, Japan has been discussing to welcome professionals and workforce in general from overseas. Also, Japan is hosting one of the largest international event- Olympic Games 2020 in next year. Based on these factors, our company is forecasting increased exchange flow between Japan and overseas. Our

company wanted to create a workplace, with multipurpose utility, where it facilitates inbound business. (C)

- Our company is one of the most reputable IT company in Japan. However, the recent competition and technological advancement are causing severe competition among both international and national IT companies. In order to be proactive in new production and development, our company started focusing on open innovation. Thus, we wanted to have an open collaboration space, where we can optimize our resources at the same time welcome outsiders to collaborate and generate innovative ideas and products. (A)
- Japan's old traditional business models, such as mega-corporations and their life-time employment system, can't escape from the current fast progress in economic and technological transformations. There was no start-up community and eco-system for ventures, when we first launched our company. We used to manage business development programs on online. Gradually, we noticed the importance having a physical space where users can have an opportunity to work and meet partners and clients. (D)
- We support the "Japan Revitalization Strategy 2016" advocated by the government. Our company assist start-ups and venture companies to grow and find right partners and resources. (I)

Vacant property and renovation

- Vacant properties are increasing in Japan due to the shirking population. As a company we have been working on renovation projects that old or abandoned buildings get reformed and commercialized. (B, J)

Workplace demand and reform

- The main founder of the company is an architect, who works in the creative industry. He had his community of creators who struggle with finding a cheap and flexible place

to work. The founder started sharing a place with other creators and gradually opened his open co-working space business. (H)

- The company was originally an office supply company which literally used to focus on physical aspect of office environment. Up until now the need of workplace for any kind of business was definite and important. Thus, our clients were simply happy when we just provided the hard infrastructure of the office facility. However, now, things have been changing including the economy and way people work. Instead of moving or enlarging a workplace, making the most of any given place by efficient and productive strategy become important. Therefore, from now on as a company we want to create workplace environment that supports new way of working by both combining hard and soft measurements. (F)
- As a design firm, we work on office design and construction projects. We wanted to have a workplace to experiment office details from interior designs to management systems. Co-working space seems right fit to test various creative design and management ideas and observe user's reaction. (G)
- One of our client who runs an inbound consultant business wanted to have a space where he can run various seminars and workshops. Initially, he consulted to us to have a space for multi-use purposes. Gradually, his request developed into a co-working space where it can facilitate and support various enterprises. (C)

### ***Vision***

The visions for operating co-working spaces are to create a space for open innovation, assist domestic and international business expansion process, revitalize regional economy and community, and support talented professionals in need. The stated visions are directed to solve the issues that taken under consideration by the providers.

Open innovation / Collaboration

- The vision is to create a place where members from different professions, nationalities, interests, and ideas can gather, encounter to each other, and work together. We want to connect people, things, and information. At the same time, we want to provide a fruitful individual experience where an user work in a very diverse and creative atmosphere. (A, E, F, G)

#### Local-Global business opportunity

- Co-working spaces aim to assist global and local firms to expand the business in different region of origin. Primarily, the co-working spaces focus on inbound business or start-up operators by assisting with workplace, network, and other consultation services. (C, D, I)

#### Regional revitalization

- Our vision is to contribute to regional social and economic development through co-working space operation. (B)
- Co-working space have a potential to support business, empower community, and be a successful renovation role model. Followings are the objectives and operations shared by the provider:

*Support business:* be the place where business and new production born

*Empower community:* function as a public space to strengthen the community

*Become a tourist spot:* welcome national and international visitors and share our renovation journey (J)

#### Creator's community and support

- The objective of the co-working space is to facilitate and promote a community of creators to succeed in their business and activities. (H)

So far, we have discussed the provider’s background and motivation to run a co-working space. Also, we revealed supplier’s visions. The following part highlights the strategical management practices to achieve the mission statements.

### 3.2.2 Manager’s Role

The following part examines the managerial roles at co-working spaces. These are the people who actively engage in business operations and tend to spend most of their working hours with same space as with users. Community manager or facilitator is the common work title because of their mission to boost social interaction and collaboration between users. Thus, community manager is a key person to interview because of his or her extensive managerial experiences with users. This part provides co-working space manager’s demographic information and job descriptions.

#### *Participant profile*

Table 8 summarizes participant’s general demographic information including job position and employment duration at a co-working space. An average co-working space provider would be Japanese female, who is in her twenties, graduated from university, and works as a community manager at co-working space for a year.

*Table 8. Summary of Key Informants’ Profile Sheets*

<b>Co-working space</b>	<b>Gender</b>	<b>Age</b>	<b>Nationality</b>	<b>Education background</b>	<b>Position at the co-working space</b>	<b>Employment duration</b>
<b>A</b>	F	29	Japanese	Secondary school	communicator	6 months
<b>B</b>	F	26	Japanese	University	community manager	2 years
<b>C</b>	F	27	Chinese	University	community management coordinator	6 months
<b>D</b>	M	34	Japanese	University	community director	7 years
<b>E</b>	F	30	Japanese	University	community manager	1 year
<b>F</b>	F	29	Japanese	University	assistant manager	7 years
<b>G</b>	M	23	Japanese	University	staff	4 months
<b>H</b>	F	25	Japanese	University	community facilitator	6 months
<b>I</b>	F	25	Japanese	University	staff	1 month
<b>J</b>	M	32	Japanese	University	PR director	6 years

## Managerial roles

Co-working space managers have two main commitments, which are work tasks on space maintenance and operations management.

*Space maintenance:* monitoring space appliances and regular functionality

*Operations management:* implementation and operation of services and activities

Most of the manager's working hours are given to accomplish smooth and efficient business operations. These include something simple as introducing space amenities to users, but also something complicated as contributing to users' business growth. Figure 13 illustrates a graph of the complete managerial duties at interactive type of co-working spaces. Results shows six key managerial roles: (1) assist users, (2) facilitate events and activities, (3) connect users with other users, (4) connect users and people from outside of the co-working space, (5) promote user's activities, and (6) constantly update managerial strategies.

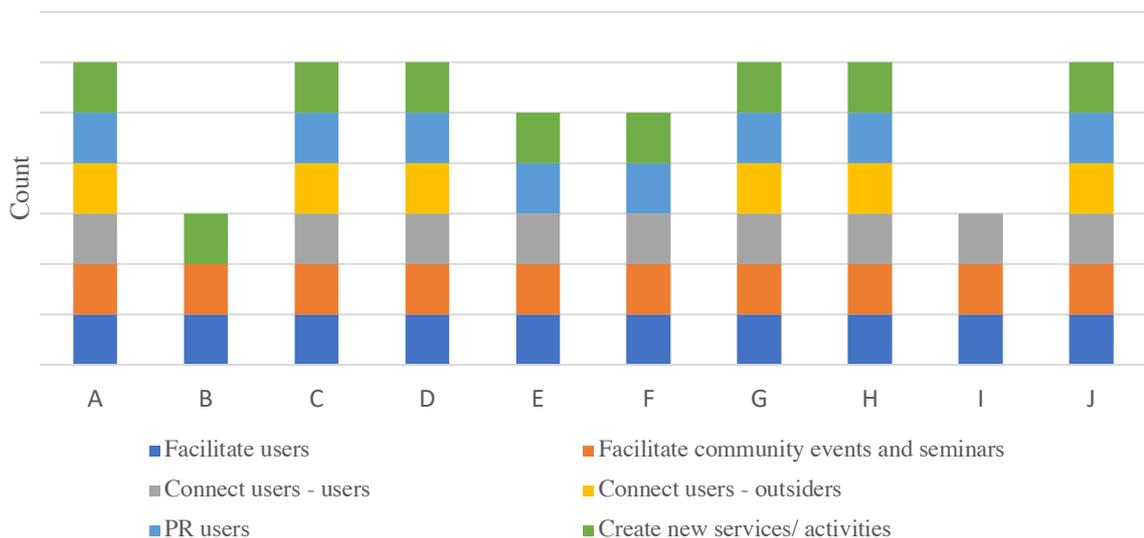


Figure 13. Stacked Bar Graph Count of Managerial Roles at Ten Interactive Type of Co-working Spaces

Managers are mostly located in the reception area within direct access to users. When users need some help they can easily approach to managers and consult their issues. Managers can keep on with co-working space atmosphere, activities, and interaction immediately.

Managers act as an intermediary between users and directly connect people to each other. Hence, managers keep user's information which help to result effective matchmaking. For instance, if a user who lacks with certain knowledge or skill to achieve a goal, managers introduce another user who is professional in that field. Managers judge compatibility of users from the information they collected. Most interview participants mentioned that their job roles include connecting users to accelerate the process of finding right connections.

Also, more than half of the co-working spaces' managers act as intermediary between users and outsiders. Outsiders means that people who aren't member of the co-working spaces. For instance, these people can be employees from the provider company or partnership companies.

*'A' 'We introduce users to our provider company's employees'*

*'C' 'Our provider company runs a hotel enterprise. We connect our co-working space members to foreign tourists who stay at our affiliated company's hotel'*

*Eg. co-working space member, who is a sushi chef and offers cultural culinary experience for foreigners*

*'D'. 'We introduce users to our partner enterprises or entrepreneurs who are looking for collaborations or a start-up to invest in'*

Managers are only responsible for connecting individuals to the relevant parties. Therefore, most of them don't intervene or follow-up the collaboration part. However, some managers are concerned with whether they should do a follow-up or not.

*'E' 'Even though I don't have to do a follow-up after connecting two parties, yet I feel concerned. It is up to them whether they decide to work together or not. However, sometimes I feel like I should act as a project manager and take care of their collaboration.'*

Interestingly, this concern is common among other managers as well. One of the co-working spaces find solution by creating a holistic management strategy to assist efficient collaborations among different parties by providing additional consulting services.

*‘D’ We only do the matchmaking part. Though, the after part is important to make sure that people can collaborate and show some results that benefit to the involving parties. However, we can’t follow up every single collaboration that are born from this co-working space. That’s why we are focusing on creating environment where users can have easy access to lawyers and other consultation services. So without our presence, but by using our services, we are supporting collaboration and its further development.*

Co-working space managers promote (PR) user’s activities through offline and online modes. Managers actively use both offline and online modes to update information and create an efficient way to communicate with people. Especially, online modes are used to promote not only co-working space’s activities but also commonly used to advertise user’s work to the general public to reach a greater audiences. Followings are the two main interaction and promotion mediums. Interestingly, some of the co-working spaces publish articles in English. Thus, even foreign audiences can have an access to it.

*Offline:* display user’s products or flyers at the co-working space

*Online:* publish articles about user’s profile and activities on their public websites or other social network platforms such as Facebook and Instagram



Figure 14. Offline PR: Display of User's Products at the 'H' Co-working Space's Reception Area

**NEWS** ARCHIVE >



**June 10** [INTERVIEW] We Work Here case#13 "It's tough at times, but I feel like I'm living a life that I've paved myself."



**June 10** [INTERVIEW] We Work Here case#13 "大変だけど、すごく自分の人生を生きているような感じがします"



**June 10** [EXHIBITION] unknowns \_ Exhibition of Misako Taoka & Jesse Hogan

Figure 15. Online PR: User's Interview Articles on the 'E' Co-working Space's Official Webpage

Last but not least, managers always look for new ideas and activities to implement at co-working spaces to support further development. Co-working space is a recent phenomenon. Thus, the community manager is also a relatively new job description. There is no universal guide book on how managers do their jobs. Managers create their own job responsibilities based on their judgement on what's good for the company and needed for the users. Managers constantly experiment with new ideas and approach certain issues with a try-and-error mindset.

### 3.2.3 Spatial Features

Co-workers respond to multi-use, flexible, and creative design and atmosphere. This part explains the basic amenities and spatial features that stimulates interactive and creative work environment. To cover up spatial features, each interview consists on-site visits and facility tour provided by the managers.

#### *Place*

Co-working units are placed in the office or commercial buildings and occupy one to two floors of the facility. Also, some construction units are entirely consumed for co-working space purpose. Table 9 explains the factors associated with the choice of places. Co-working space locations prioritize easy access to people and resources.

*Table 9. Summary of a Geographical Attributes of Co-working Space Location*

<b>Office building</b>	<b>Commercial building</b>	<b>Entire construction</b>
A, B, D, F, H, I	G	E, J, C
Co-working unit locates same place as with provider companies' main offices. It helps to keep a close proximity and easy access to management. The area of choice is mostly in business districts, which is convenient for arranging a meeting with clients and partners.	Co-working unit is located in commercial areas with large flow of people. Providers take advantage of the convenience to attract users easily.	Co-working space is placed in the renovated facilities. Often times, the construction unit is fully used for co-working space operation. For instance, a former school facility transformed into a shared office facility and has a co-working space section.

#### *Basic facilities*

Every co-working spaces provide basic three amenities, which are work desks, meeting rooms, and event spaces.

- Co-work desk/ Hot desk/ Free address desk
- Meeting room
- Event/ Rental space

Shared work areas are known as hot desk or free address desk where workers can change seats based on their moods. Besides that, a several co-working spaces provide fixed desk which

is a dedicated workstation for a specific user. Fixed desks are convenient for leaving work related items at workplace and modifying workspace based on one's interests and creativity.

Co-working space provides meeting rooms where users can arrange a meeting with clients from the outside. Meeting rooms affect user's reputation positively by bringing a professional atmosphere into the meeting. Moreover, it brings trust and confidence to the arrangements.

One of the important parts of co-working space is an event space where most of the interaction takes place. At the same time event space is a source of profit to the firms. Often, it is available for rentals to users as well as to outsiders.

Additional to the primary physical amenities, different co-working spaces apply other facilities depending on supplier or user's needs. For instance, co-working spaces provide silent zones for people who want to focus, storage rooms to keep user's work-related voluminous instruments, and studio rooms to work on with technical equipment. Since co-working space has a flexible environment, it is common to change the design of the space from time to time, as mentioned by the managers.

### ***Encounter platforms***

Managers perceive event spaces, co-work desks, and communal areas are the common encounters platforms. Social gathering organized at event space is the focal point of communication and networking. It is a prearranged and facilitated occasion which is specifically to generate encounters. When users are their own managers assume that open share desk is a place for members to communicate with each other. However, in reality, people usually don't. Perhaps, the immediate purpose of open desk is for working. Thus, users feel reluctant to interact with others. On the contrary, managers with communal areas such as lounge or break rooms noticed that people are more likely to take communications in those areas.



*Figure 16. Co-work Desk at the 'A' Co-working Space*

### ***Creative space***

Creative space has two dimensions. First, users can create their own space by modifying the space features based on their interests. The other meaning for creative space is a place to display creative works done by the users. According to the interview results, 60% of the co-working space managers allow users to modify their work environment based on individual's tastes and needs. It helps users to feel and be creative. Also findings show that 80% of the co-working spaces provide a physical space where users can display or showcase their products. It implies that creativity is acknowledged and encouraged; hopefully such action will inspire others as well.



*Figure 17. Interactive Digital Wall by the ‘H’ Co-working Space User at a Showcase Area*

### 3.2.4 User’s Accessibility

Co-working spaces take different policies regarding the accessibility of users. In general, co-working space is open to the general public. Yet some co-working spaces select users based on professional backgrounds and individual characteristics, to regulate the mix of workers and community attributes.

*Table 10. Frequency Count User’s Accessibility and Interpretation of Requirements and Features*

Co-working space	Requirements on user’s applicants		User’s field of industry	Willingness to interact
	Business profile	Personality		
<b>A</b>	x	x	IT	less likely
<b>B</b>	x	x	n/a	less likely
<b>I</b>	x	x	IT	less likely
<b>D</b>	x	x	IT	certain
<b>C</b>	O	x	Inbound business	certain

<b>F</b>	O	x	Diverse	equally likely
<b>E</b>	O	O	Diverse	certain
<b>G</b>	O	O	Diverse	equally likely
<b>H</b>	O	O	Creative	certain
<b>J</b>	O	O	Creative	equally likely

Co-working space that has a specialized theme allows workers whose background is compatible with the content. Notwithstanding, there are co-working units favor users from diverse industries and select workers in order to balance the mix of industry clusters. On the contrary, spaces that access users without requirements are most likely have workers from the IT industry. Also, managers perceive that users are less likely to communicate with each other.

Another way to regulate the mix of user is to define and accept users that can enhance the community's value. Managers at 'E' and 'I' co-working spaces are interested in bringing diversity by extending the user's variations and creating connections with other co-working spaces to expand the network. To give an example, managers mentioned their interest in attracting younger users from colleges to refresh the community's atmosphere. Managers believe that older generations can mentor the youths meanwhile younger users can bring new trends and ideas to the mature users.

Co-working space managers are willing to accept users with open and supportive characteristics who would be interested in community events and supportive of the community. Users are asked to describe themselves and their motivation for use in words or carry a brief interview with managers. Since co-working space is adaptable, if users or managers don't see any compatibility then voluntarily or forcefully users are dismissed from the space.

*'E' We offer a tour at our co-working facility and ask to have a consultation to people who want to be a member. We ask questions regarding the applicant's work activities and his or her interests in our place. Based on the screening and interview, we make our decisions. Even if we make a mistake by accepting people who don't like what we do or don't match our vibes, we politely reject the right to use by eliminating their access. Because members who show negative presence at our office he or she may*

*influence other user's and the entire community's atmosphere. Managers are responsible for maintaining a healthy community.*

Overall, co-working spaces, which ask for both business and personal characters of applicants, tend to have members who are open for interaction and collaboration. Some co-working spaces eliminate user's membership right, if an individual considered as not right fit for the community. Overall, control over user's accessibility helps managers to adjust diversity, potential collaborations, and quality of community.

### ***Internationalization of users***

Interestingly, each co-working spaces have a small population of foreign users. Foreign firms and professionals find co-working spaces supportive and convenient as some of the places assist the domestic and international business to expand in the different region of their origin. This process allows for creating a new flow of economic, professional, and cultural exchange.

### 3.2.5 Services and Activities

Managers entice networking and support new learning and knowledge transformation by articulating different events and activities. There are three main managerial tools, which are community events, seminars, and consultation hours, widely used at co-working spaces.

*Table 11. Summary of Implementation Methods and Purpose of Co-working Space Services and Activities*

<b>Services/ activities</b>	<b>Community events</b>	<b>Seminars</b>	<b>Consultation hours</b>
<b>Purpose</b>	To stimulate social interactions and collaborations	To provide with necessary knowledge and skillset	To create an ecosystem individuals or groups can receive professional support for their business/ activity
<b>Implementation tools</b>	<b>Casual:</b> lunch gatherings <b>Semi-casual:</b> business (presentation meeting), pitching events, networking events with people from the outside of co-working space	Seminars mostly focusing on business development topics	Consultation service with lawyers, tax accounts, psychiatrist

### ***Community event***

All the co-working spaces in this study provide community events where users gather together and build connections. Community events include casual gatherings such as having lunch, break, or happy hours together. The frequency of the gathering varies in space to space, but it is common to arrange meeting at least once in a month. Social gatherings at co-working spaces allow a chance to meet and talk to with people from different generations, disciplines, nationalities, and so forth.

*‘A’ One time, a high school student participated in our weekly community event to get a career advice from our IT specialists.*

*‘A’ One of the user’s project was released on the largest online news platform, as a result of participating weekly community event and networking with another participant.*

*‘I’ We have users from overseas. We encourage cultural diversity and arrange exchange activities as part of community event where people can learn from each other’s uniqueness.*

Also, there are semi-casual community events where users are asked to make a presentation about introducing personal and professional profiles. Presenters are asked and prepared prior to the event. Free discussion hours often provided after the presentation section. In this event, not only co-working users participate but also previous members, partnership firms, and sometimes even outsiders are welcomed to attend. It is an opportunity to gain new knowledge about different industries, build network, and be exposed to new experience and ideas.

*‘H’ We organize a presentation event once in a two months, mainly focusing on new member as a guest speaker and let the user introduce his/her activity for 15 minutes followed by free discussion. Every time we have around 30, 40 members at our events.*

### ***Seminars and workshops***

Event spaces are frequently used for seminars or workshops. The purpose of seminar is to impact positively on user's personal and business development. Seminars are hosted by managers, users, or people from outsides. As a matter fact, event spaces are rentable for beyond co-working space members. The most frequently discussed seminar theme is on business management and development. In addition to that, some co-working spaces consult with users regarding what kind of knowledge and skills that seminars should deliver.

*‘J’ There are many members who want to organize workshop or PR events. For that reason, we rent our event spaces in cheaper price. Also, recently we have been organizing events and seminars focusing on business development, innovation, and patent law. As we have many creators, it is important to know how to protect their inventions.*

Another type of activity is workshop which is rarely provided by co-working spaces. Workshop aims to apply skill to users and create new idea and product. This project is currently organized by only one co-working space so far.

*‘D’ Start-up studio: Individuals who wants to do an innovative business can join the start-up studio for free for six months to team with other participants, and create new product service from the scratch. Moreover successful teams can sell their ideas and products to other enterprises that are interested in.*

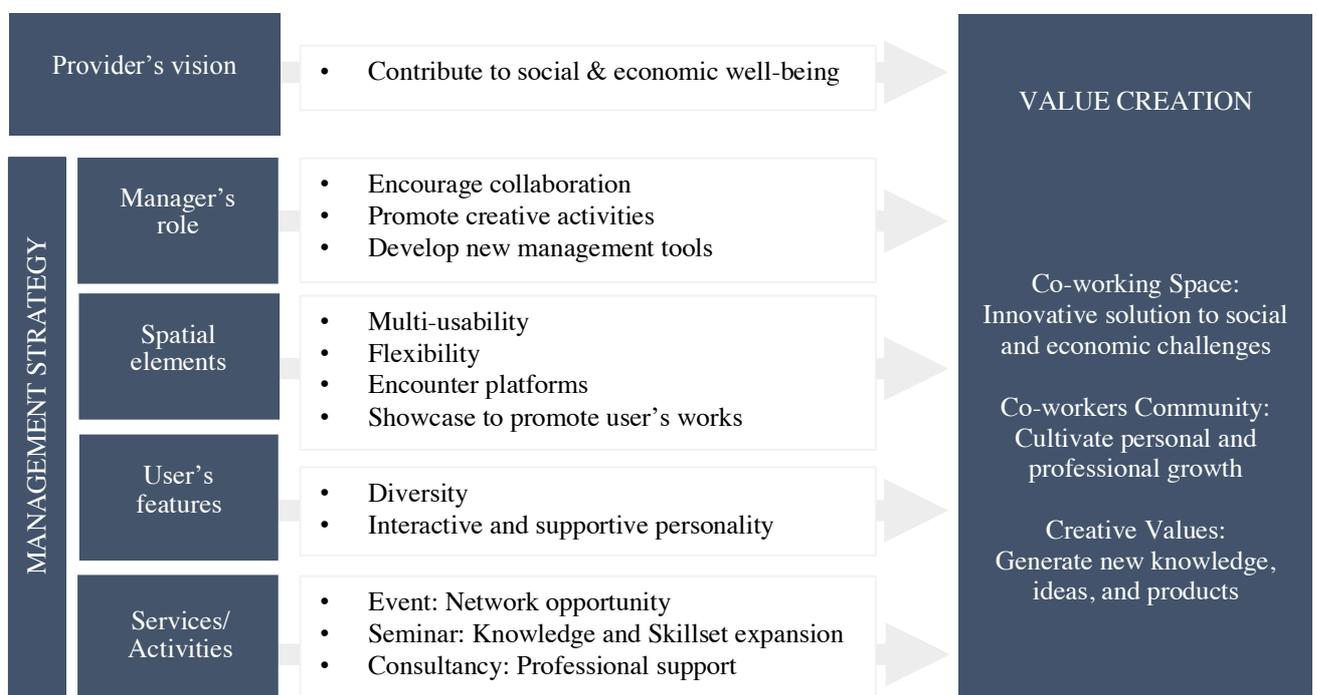
### ***Consultation service***

Co-working spaces make effort to provide holistic support by offering consultation service with experts. There are currently six co-working spaces have sources to connect users with lawyers, accountants, and so on. Consultants come to visit at co-working spaces time to time, or come when they are requested. Consultation service is free in most case but some spaces charge fees. Users can get any kinds of advices on how to run and manage businesses.

Among them, ‘I’ co-working space provides not only business-related consultation service but also offers a psychiatrist to support user's mental health. Because of government initiation,

this co-working space considers the public well-being. As mentioned by the manager, the mental health issue is becoming much more common in Japan especially among the young generation. It is necessary to provide a place where people can discuss their personal matters.

Over all, findings from key informant interview have provided extensive management strategies that apply on to interactive and creative co-working space development. Figure 18 have summarized the key findings and factors associated with management elements and implementation tools to achieve creative outcomes.



*Figure 18. Summary of Key Findings: Management Tools Associated with Interactive and Creative Co-working Space*

## **4. DISCUSSIONS**

### **4.1 Status Quo and Dynamics of Co-working Spaces**

To be able to identify the co-working spaces that are active in management activities, it became necessary to clarify the existing status quo and dynamics of co-working spaces. This sections argues on the current condition and recommended future direction.

Regarding the spatial distribution of co-working spaces in 23 special wards of Tokyo, the results illustrated a higher agglomeration in major commercial areas. Meanwhile, residential areas or suburban parts of Tokyo such as Setagaya ward or most eastern wards have shown a slow growth concerning the expansion of co-working spaces.

Co-working spaces can spread through less commercial zones in the future and contribute to regional economic development. Now with the work style reform in Japan, many workers have a chance to do remote jobs. Workers can find new communities and business opportunity at co-working spaces. Moreover, workers can benefit more control over their personal lives because people can find co-working units close to their residential areas and thus save time and energy.

Reflecting on the typologies, interactive and infrastructure type of co-working spaces have almost equal proportion in quantity. Based on the research findings of this study, infrastructure type of co-working spaces can reflect and adapt management practices to shift into interactive types. By doing so it would increase the number of creative hubs and thus encourage creative individuals and innovative firms to keep creating and developing. Following part explains management strategies and implication tools for creativity in details.

## **4.2 Managerial Practices to Foster Creativity**

The primary purpose of this research study is to investigate *the role of co-working space to enhance the interactive and creative work environment by implementing management strategies*. Co-working space encourages interaction and collaboration among users and other relevant parties. By doing so users can find necessary inputs to produce new ideas, products, and projects. Therefore, management implications are crucial elements to foster individual or collective creative outcomes. In this discussion part, the author argues between major literature reviews reflected in the conceptual framework and the research findings.

### ***Manager's role***

Co-working spaces employ community managers to assist community building and connect people, ideas, and resources effectively (Bouncken, Laudien, Fredrich, & Görmar, 2018; Capdevila, 2014). Studies have shown that managers act as an intermediary between users and does smoothen the process of interaction and networking. According to the research findings that managers not only connect users to one another but also introduce users to potential partners or customers who are outside from the co-working spaces. For instance, it is commonly mentioned by the managers that co-working space operator firms and users cooperate together to work on creative projects. In other words, co-working space has a function beyond workspace service and facility. Co-working space is becoming a new medium to access to job opportunities. Companies are finding talented professionals among the co-working users, meanwhile, users are finding ways to practice their skills and knowledge to grow professional values.

Further, managers are constantly evolving their management strategies to find ways to upgrade their operations in different scales. In a smaller scale, managers experiment with various implications to set up the interactive atmosphere within a co-working space. In a larger

scale, managers are interested in building a connection with other co-working spaces to expand the network opportunities. These findings prove the idea that the co-working space is a creative and innovative enterprise as it constantly thrives for new creating new values and opportunities, mentioned by Schmidt et al (2015; 2017).

### *Spatial elements*

Suppliers consider spatial features which are able to offer platforms where people can work, interact, and learn. Because of the essence of flexibility in co-working spaces, spatial design can be modified by reflecting on the users' needs. If users are able to design their own workstations it entices the user's creative capability as mentioned in the previous studies (Brenn, Krzywinski, & Noennig, 2012; Fabbri, 2016). Findings illustrated that several co-working spaces allow people to decorate or modify their work environment. It may not necessarily promote interaction but it helps to create a functional workplace where users can perform better results on their work tasks.

Physical features don't cause desired outcomes as planned. For instance, it is common that co-working spaces have an open flat office layout and co-work desks which are the spatial features that are believed to foster communication (Monaghan & Ahmm, n.d.; Schmidt & Brinks, 2017). However, findings from the on-site visits noticed that people feel reluctant to have a conversation in these areas. In fact, the primary purpose of co-work desk is for working and thus, users try to avoid to bother others. Japanese people are well known to for their well manner and politeness. Perhaps, cultural factors may associated with difference in design feature performance. Instead, users are more comfortable having a talk in the communal or less formal area.

The next future is less academically mentioned spatial feature which is a showcase zone. Co-working spaces provide a showcase area where users' creative outputs are displayed. By

creating a space for acknowledging and promoting creative works encourage users and motivate them to keep continuing the creative work (Amabile, 1998). Moreover, showcase areas function as a platform where it welcomes broader audiences to interact and hopefully inspire them as well. Partially, some co-working space is becoming a hybrid public space where workers and outsiders both have an access to shared space. It is an interesting discussion point to look over to see the relationship between public space development and co-working spaces.

### *User's features*

Another major management instrument is to gain users from different backgrounds with unique knowledge or skills as well as to have users who are supportive personal character (Amabile, 1998; Cabral & Winden, 2016). According to the interview participants that managers select applicants who are suitable for co-working space's vision and thus will bring value to the community. Co-working spaces with selection stand on user's work activity and personal character are more likely satisfied with their community qualities. People are more likely to engage with each other and willing to collaborate compare to co-working spaces without any regulation or requirements on users. Jakonen et al (2017) revealed that if users are unwilling to interact then encounter or knowledge transformation opportunities would be restricted. Managers avoid these results by simply taking control of the user's access to co-working space.

Except for a diverse group of professionals from different sectors, generational and cultural diversity can be found at co-working spaces. A mix of users from different nationality and age groups share their unique lived experiences and different perceptions. Such interaction occurs not necessarily for business-oriented purpose. Rather it provides an opportunity to learn about each other's identities based on personal curiosity. According to a study by Stevens et al (2008)

demographic diversity in work environment benefits with increased creativity and productivity. Openness to diversity at co-working spaces is creating unique social interaction experiences.

### *Services and Activities*

Co-working spaces arrange community events to create an opportunity for users to build connections, exchange ideas and knowledge, or even find business partners to collaborate with (Garrett, Spreitzer, & Bacevice, 2017; Moriset, 2013; Spinuzzi, 2012). Based on the findings, there are two types of social gatherings, which are event and seminar. Events are usually for network purpose, whereas seminars are dedicated to providing new knowledge and skill-set that may benefit the user's creative outcomes. Events are arranged in many different formats as from casual community lunches to formal meetings where users get to meet with former co-working space users, entrepreneurs, and enterprises which are looking for new ideas and business opportunities.

Also, some spaces offer professional consultation services focusing on legal and financial fields. With the help of activities taken at co-working space, users are encouraged to improve themselves personally and professionally. Moreover, these holistic support systems accelerate the process of generating new ideas and products. Each co-working space have different aims and community of users, therefore, it is crucial to experiment with new management strategies that serve the best of their needs.

Overall, this part reflects on the management tools that should be utilized to create an interactive and creative co-working space. Next section reviews the motivation behind active management strategies and the potential role of co-working spaces to contribute the sustainability from a broader viewpoint.

### **4.3 Co-working Space and Sustainability Entrepreneurship**

Co-working space and its roles to contribute to sustainability have highly associated with providers motivation and vision. Provider's motivation is crucial to identify the nature of co-working space. So far, it is the least discussed element of co-working space within the academic field. The research participant co-working spaces have strategic objectives to contribute to solving social and economic issues that Japan has been facing. These co-working spaces noticed the issues with lack of economic development, expansion of vacant properties, and shortage of workplace that can meet with modern workers' needs. Being motivated to change existing problematic conditions, co-working spaces have chosen strategic objectives to foster open innovation, regional revitalization, and support local and global business exchange opportunity. Suppliers take different strategies to achieve above-mentioned objectives. Based on the findings, this study defines co-working space as an urban sustainability-driven enterprise which can offer solutions to complex economic and social issues by offering innovative workplace services and empowering a community of creative individuals. In the empirical part of the study, this study discovered co-working spaces that contribute to the economic and social well-being. For instance, there are co-working spaces renovating vacant facilities and revitalizing regional economic and social development. Open innovation and start-up ecosystems to support professionals or companies with limited resources are commonly found at co-working spaces. In fact, co-working spaces have attracting points of offering a flexible work environment and various facilitation services to cultivate business at low cost.

Lastly, from a wider perspective, co-working spaces can have the potential to contribute to sustainability entrepreneurship. As a matter of fact, co-working spaces foster the creative capability of individuals from diverse sectors. By supporting their creativity, it may indirectly encourage the process of impacting others to succeed to make a positive change in their respective fields. Overall, this section summarized the role of co-working space that

contributes to sustainability entrepreneurship by empowering creative capability that benefits the society, economy, and environment.

## **5. CONCLUSIONS**

### **5.1 Conclusion**

The research overall aimed to clarify the role of co-working space to enhance the interactive and creative work environment by implementing management strategies.

This study explored the interactive type of co-working spaces to analyze co-working spaces which are active and innovative in management operations to foster interaction among users. To detect an interactive co-working space, the research built a comprehensive data set consists of co-working space units recorded in 23 special wards of Tokyo. A total of 199 co-working spaces are identified to be under operation. Among them, around half of the co-working spaces provide social gathering events to promote interaction. A remaining half only provides only physical amenities and thus function as an infrastructure base for the users. This study focused on interactive co-working spaces that frequently organize social gatherings, seminars, and explicitly express their interests in connecting people and creating new values.

This research investigated the major managerial elements that affect the creativity prone work environment. Each management strategies consists of different approaches to build a community of interactive and collaborative co-workers. Co-working spaces influences on user's creative capability by offering opportunities to access to a flexible workplace, a community of network, new knowledge and skills, serendipitous encounter, and personal and professional support system. Co-working space managers constantly update and create new activities by reflecting on the needs of the users and suppliers. Flexible and creative natures of co-working space are beneficial to adapt a new efficient management system immediately. The methods applied in this study can be followed by managers as they not complex and does not

require special tools that are not available to them. Finally, this paper shared a summary of practical management tools of interactive co-working spaces that conceivably managers can reflect and gain new perspectives.

## **5.2 Recommendations for Future Research**

The study explored management strategies, implementation tools, and effects on user's creative capability at co-working spaces. There are several concepts that were not explored during the study but may constitute a suitable direction for further research.

The study only focused on management strategies. Moreover, it only covered the supplier's perception and intention to create an interactive and collaborative workplace. However, in order to explore the holistic systematic analysis on work environment on user's behavior, it may necessary to study user's review on management practices. According to a research study on co-working space operation based on hosts and users' perspectives, findings resulted in some clashes in a different point of views that consequence the negative impact on management outcomes (Seo et al., 2017). Therefore, the user's perception of co-working space services and activities should be explored further as this may unlock potentials to generate more creative values.

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## APPENDIX

### Appendix A. KEY INFORMANT INTERVIEW SURVEY SAMPLE

#### **Brief research explanation and Contact information**

My name is Tuvshin Delgerekh and I am from Ulaanbaatar, Mongolia. I am an international research student at The University of Tokyo, majoring at Sustainability Science. Currently, I am conducting research on the topic of “ANALYSIS OF CO-WORKING SPACE MANAGEMENT STRATEGIES FOR FOSTERING INTERACTION AND CREATIVITY - A CASE OF 23 SPECIAL WARDS OF TOKYO, JAPAN”. This research study aims to explore the potentials of co-working space as a platform to encourage and enhance creativity (new learning, collaboration, starting a business).

I will be immensely grateful for your participation in my interview. If you have further questions, please feel free to contact me.

#### **Participant Information Sheet**

**Participant name**

**Gender**

- Female  
 Male  
 Others

**Age**

**Nationality**

**Educational Background**

- Elementary, Junior, or High School  
 Undergraduate  
 Postgraduate

**Occupation**

**Position at co-working space**

**Employment duration at co-working space**

**Co-working space name**

## Semi-Structured Interview Sample Questions:

### 1. CO-WORKING SPACE BACKGROUND

Background Information
Establishment Data
Ownership
Choice of location
Motivation to run co-working space
Vision / Strategic Objectives

### 2. MANAGER'S ROLE

FRAMEWORK	ELEMENTS	SAMPLE QUESTIONS
Roles	<i>Activities and Attitudes</i>	<ul style="list-style-type: none"> <li>• What is your job description?</li> <li>• How do you engage with users?</li> <li>• Do you facilitate users' relations?</li> <li>• Do you encourage interaction and collaboration?</li> <li>• Do you acknowledge and share the user's creative outputs?</li> <li>• Are there any concerns or things that you want to improve at this co-working space?</li> <li>• What are the plans for the future development of this space?</li> </ul>

### 3. SPATIAL ELEMENTS

FRAMEWORK	ELEMENTS	SAMPLE QUESTIONS
Multi-use functionality	<i>Facilities</i>	<ul style="list-style-type: none"> <li>• What are the available facilities?</li> <li>• What are their functions?</li> </ul>
Flexibility	<i>Openness to change</i>	<ul style="list-style-type: none"> <li>• Would it be possible for users to modify their workstations based on their interests?</li> <li>• Do you consult with users concerning the use of space or resources provided in the co-working space?</li> <li>• Do you make adjustment on your spatial features?</li> </ul>
Encounter platforms	<i>Communal areas</i>	<ul style="list-style-type: none"> <li>• Which areas are most used by co-workers?</li> <li>• Which are the communal areas?</li> <li>• What are the areas people mostly communicate with each other?</li> </ul>

#### 4. USER'S FEATURES

FRAMEWORK	ELEMENTS	SAMPLE QUESTIONS
User's accessibility	<i>Target users</i>	<ul style="list-style-type: none"> <li>• How do you select users?</li> <li>• Are there any requirements to become a user?</li> <li>• Do you have any specific target groups?</li> </ul>
	<i>Existing users</i>	<ul style="list-style-type: none"> <li>• How many users?</li> <li>• Who are the common type of users (profession/ gender/ age/ nationality)?</li> </ul>
User's motivation	<i>Motivation of use</i>	<ul style="list-style-type: none"> <li>• What are the usual activities that users do at co-working space?</li> <li>• What do you think about why people chose to use this co-working space?</li> </ul>
	<i>Willingness to interact</i>	<ul style="list-style-type: none"> <li>• Do you interact with users?</li> <li>• Do you think users are open for interaction?</li> <li>• What are the common topics do you discuss with users?</li> </ul>
	<i>Willingness to engage with other users/ participate activities</i>	<ul style="list-style-type: none"> <li>• Do users interact with each other? (Why/ When/ Where)</li> <li>• Do users participate in activities provided by the co-working space? (Who/ Why/ What activities)</li> </ul>

#### 5. SERVICES & ACTIVITIES

FRAMEWORK	ELEMENTS	SAMPLE QUESTIONS
Services/ Activities	<i>Implementation tools</i>	<ul style="list-style-type: none"> <li>• What are the services and activities offered at this co-working space? (Types, Themes, Frequency, Participants)</li> <li>• What are the desired outcomes of providing services and activities?</li> </ul>