

Exploring Innovative Workplace Design in Jakarta



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ABSTRACT

Background - Workplace design has always been one of the discussion topics between professionals in the field of corporate real estate and facility management. Office design concepts such as new ways of working, the new office and innovative office have been around for decades and still intrigue debates and discussions among them (Appelbaum & Batt, 1994; Brill, Margulis, & Konar E., 1984; Duffy, 1997; Krisnantari, 2012; Chaiwat Riratanaphong & van der Voordt, 2011; Senge, Schein, de Geus, & Gallwey, 1998; van der Voordt, 2003; van Meel, 2000). Duffy (1997) also contributed to this discussion through his characteristics of the new office, which will create a combination between adding value towards the organization and driving down occupancy costs. The development of technology and ICT has created more possibilities in flexible working. Communication and information distribution became flatter, mobile working was made possible (Duffy, 1997; Gensler Architects, 2008; Martens, 2011; van der Voordt, 2003). The tendencies of creating flexible working hours, supported by activity-based-workplace are becoming more common in newly designed North American or North European offices, namely P&G, Microsoft, and other companies.

These ideas and contribution from the experts about office design as an added value towards organizations are transferred globally, including to Asian countries, as well as Indonesia as the focus area of this research. Few experts or organizations have investigated this issue of innovative office design in Asia, specifically in Indonesia. That is why it is important to explore this issue in Indonesia, to investigate the difference of the products and perceptions towards innovative office design in Indonesia and the western culture. Since Indonesian organizations tend to have different working cultures, the objective of the research is to give advices to companies in Indonesia about workplace design tailored to the perception and preferences of their employees. The research itself is an explorative study, where developments created changes during the different research phases. (R. S. Batenburg & D. J. M. van der Voordt, 2008)

Purpose - According to research by Gensler's Architect (2008), an overwhelming number of their employees samples believe that well-designed work setting clearly contribute to their individual and organizational performance. Discoveries through the open database on Leesman's index (LeesmanIndex, 2013) also pointed out the same importance of workplace and its influence on the perceived productivity. However, these are merely researched in the western culture, and not enough evidence of the related research found in the context of Indonesian culture. This research will explore the implementations of current office designs in Jakarta, and how it affects their satisfaction, and nonetheless their productivity. By the end of this research, it could be concluded whether or not this Western based approach has been adapted into the particular situation in Indonesia, and how was the implementation process was done.

Approach / Methodology - To explain the multiple approaches brought from the western culture to Jakarta, the Netherlands would be the country of reference study. The country already has various existing research on the impacts of different types of workplace design (2008; Brunia, 2008; 2009; van der Voordt, 2003), which could be used for more insights. Case studies and interviews in Jakarta and literature review of the Dutch cases in the Netherlands were conducted and compared, to gain descriptive information about the products and organization perspectives. To investigate on the satisfaction level and the preference on workplace design attributes, a survey among the employees in three out of five cases in Jakarta as well as complementary general survey from social network, was used, which included a combination of questions from the WODI light toolkit (Maarleveld, Volker, & van der Voordt, 2009) and the discrete choice method.

Limitations - Practical issues such as time and accessibilities to the case studies are the main limitation from this research.

Findings - From the literature study and the case studies in Indonesia and The Netherlands it follows that Indonesia and the Netherlands are two very different countries in the aspect of culture. The underlining finding is the empirical part of the research did not show anonymous distinctions on workplace design characteristics based on the cultural aspects of the Indonesians in Jakarta and the Dutch, but more based on the different industry characteristics, as well as organization characteristics. Yet, decision-making process did show significant distinction between cases in Indonesia and the Netherlands, where top-down approach is more preferred by the organization, and shows the significant hierarchy characteristics of Indonesian organizations.

Originality / value — A combination survey of WODI light toolkit & discrete choice method, to combine both satisfaction & possibility of future design indicators, which could be elaborated to create new approach towards program requirements design or simply help owners & designers on the physical workplace management issues.

Keywords — Facility management, workplace management, innovative workplace, productivity, post occupancy evaluation, data benchmarking

PREFACE

Working is one of the two major paths of fulfilment in life according to Sigmund Freud. Many factors determine a person's productivity, stress, and satisfaction at work, and one important thing is the influence of the physical environment towards these satisfaction factors (Robert Gifford, 2002).

Managing the appropriate physical environment in workplaces is considered important nowadays, as international and local corporates compete to win the same battle of retaining and attracting high-quality talents, at the same time maintaining and increasing workplace efficiency and effectiveness. Different types of industries require different types of approaches to manage their workforce. Companies operating in Jakarta, Indonesia, are facing the same problems. With the typical Indonesian and Jakarta's culture in particular, local Indonesian companies and global corporates are using different kinds of approaches on their workplace environment, for instance on choosing to give an equality workspace to all or creating workspaces based on the hierarchical structure.

With the current growing economy in Asian countries, including Indonesia, the topic of workplace design and its added value to strengthen organizations' objectives, including employees' performance through better real estate management will be a very attractive issue for global corporates. Various flexible and activity-based offices have been introduced in Indonesia. Yet, research and publications in this field is still rare in the country. Therefore this idea came up, to conduct case studies in Jakarta, using additional insights of the publications and literature review from the Dutch cases. Interviews, case studies and survey were conducted during this research to measure the objectives gained by the organizations and the match between the companies' objectives with employees' preferences.

Last but not least, this thesis is written to finish the graduation program of masters track Real Estate and Housing, Faculty of Architecture, TU Delft.

Enjoy reading!

Executive Summary

A photograph of a modern office lounge. The room features several purple velvet armchairs and blue upholstered sofas arranged around a round, dark wood coffee table. A pink orchid is placed on the table. In the background, there are large windows, a wooden pillar with a clock, and a potted plant. The ceiling has recessed lighting and air vents.

This part will summarize the entire process and results of the research for managers and companies involved in this research. It gives a quick overview to readers about the project.

EXECUTIVE SUMMARY

INTRODUCTION

Workplace management is one of the solutions for corporates to enhance the working environment based on their values and objectives. Moreover, the activity-based approach for workplace management is considered one of the ways to create efficiency and enhance employee engagement.

PROBLEM STATEMENT

With organizations' objectives and the different approaches of workplace management, post occupancy evaluation could be one way of checking how efficient a workplace management is meeting organizations' objectives in dealing with employees' satisfaction to increase productivity. Furthermore, indications of the preferences of the physical characteristics could be an input for the future improvement. One of the strategies in enhancing organizations' performance is through lowering real estate costs, without reducing the level of employees' satisfaction towards their physical workplace. Although more factors also influence employees' satisfaction, this research in particular will discuss about how the influence of the physical workplace environment towards the working process, which will also influence the workers' behaviour. This research will be done in Jakarta, where less research has been done in the field.

Specifically, the successful case measurement in this research focuses more on the objectives towards employees, which comprises of:

- Employees' satisfaction of their current office design
- Their preferences of the physical workplace, to explain their level of satisfaction

To match these two factors concerning employees' satisfaction and perception, several variables were measured with indicators through:

- Literature studies
- Case studies (including observations & interviews) and case references
- A survey over satisfaction and preferences to find the possible solutions for upgrade in the future

There is the need to explore the implementations of the innovative workplace in Jakarta and its effects on organizations and employees due to the scarcity of previous research in this field in that area.

RESEARCH QUESTION

For companies in Jakarta, innovative workplace design might be one way of attracting employees. At the same time, companies may use innovative work place design in this case the activity-based workplace, as a way to manage real estate costs by reducing work place area. As this might affect employees' satisfaction, and because research has been typically focussing on work place design in Western cultures, the main research question is:

- “What are the users' preferences on the physical workplace environment in Jakarta, which are perceived, as supportive to higher productivity?”

METHODS & APPROACH

The process consists of both theoretical and empirical approaches as written below, as seen in figure 2 of Research Design (see page 15).

THEORETICAL APPROACH

In accordance with the research design, the theoretical framework consists of three different topics. Firstly, topic of innovative workplace will address the different discussions of new ways of working, advantages and disadvantages, including the possibilities that a well-designed and innovative workplace could give, based from the previous researches. Secondly, the topic of culture in the workplace will be an input of the Indonesian and Dutch comparison. Indexes created by Hofstede (Hofstede, et al., 2010) will be used in comparing both countries' culture. Finally, the theories on the added value of Corporate Real Estate Management (CREM) explain the process of accommodation strategy to achieve organizations' objectives. All three topics are important for explaining the process towards innovative workplace, as well as the products.

EMPIRICAL APPROACH

The empirical part of the research was designed to answer the hypotheses from the literature study and the main research question. During the planning and development of the research, two Dutch cases were taken as reference cases, with five Indonesian cases as case study samples, as the main focus of the research, with three out of five cases agreed to be surveyed.

The five Indonesian cases, namely MedoEnergi, PTI Architects, Egis Indonesia, P&G Indonesia and Ogilvy Jakarta, showed broad diversifications of different organization characteristics and industry characteristics. Meanwhile, the two Dutch reference cases, Microsoft & Ogilvy Amsterdam, give comparisons with exhibits in North European country to the five Indonesian cases. The first three cases are considered as local Indonesian companies, from different industries. MedcoEnergi is an oil & gas company, while PTI Architects is an architecture firm, and Egis Indonesia is a construction company. From these three companies, only MedcoEnergi had the corporate guidelines concerning workplace design. Furthermore, P&G and Ogilvy are both multinational companies from the U.S., where P&G works in the field of consumer goods product and Ogilvy works in the field of advertising and communication. Both companies have guidelines on workplace design, but Ogilvy has more concern on the physical design, while P&G has a more integrative approach with the working process and values of the company. Microsoft is a software company, who also applies their own integrated workplace guidelines concerning the design and how it supports the working process.

Besides observing and studying the cases, survey consisting of the WODI toolkit concerning satisfaction level over the workplace, and a discrete choice questions on variables of the important physical characteristics preferred by the employees. The aim of the questionnaire is to see whether the employees' satisfaction are aligned with their preference, as well as to check the success level of the workplace. Three indicators to cross-analyse the results were suggested, namely comfort, privacy and stimulation, which has been debated on issues concerning innovative workplace design (R. S. Batenburg & D. J. M. van der Voordt, 2008; Boray, Gifford, & Rosenblood, 1989; Brill, et al., 1984; Brunia, 2008; Choose People, 2012; Robert Gifford, 2002).

HYPOTHESES, FINDINGS & CONCLUSIONS

Since Indonesia has high power distance index based on Hofstede's findings (Hofstede, et al., 2010), there might be the higher chance on more top down approach decision making process, where in this case, the management team decides the workplace design, disregarding the importance of inputs from the main users: the employees. Thus, the first hypothesis was suggested:

Hypothesis 1

➤ “Organizations in Jakarta are aware on the importance of the physical workplace, but do not show any sign of bottom up approach on this matter.”

Findings on hypothesis 1: This hypothesis could not be generally proven, since the sample of the case studies could not represent the whole population of organizations in Indonesia. However, the three cases of local organizations in Jakarta did not show a direct bottom-up approach. Two of the five organizations did an indirect bottom-up approach (MedcoEnergi & PTI Architects), and two other did not show any sign of bottom-up approach (Ogilvy & Egis Indonesia). On the other hand, P&G, although not showing any sign of bottom-up approach from their Indonesian subsidiary, may already have conducted a study for their global network, before implementing the global workplace management guidelines. In a glance, it could be stated that there is a high influence of the western culture concerning the working culture in Jakarta, especially within the multinational companies. However, when looking at the local companies, the approaches are majorly still top down, from the management level to the lower structure.

Based on the same approach of the high power distance level of the Indonesian culture, the second hypothesis was concluded, concerning the physical appearance of the workplace in Jakarta:

Hypothesis 2

➤ “The settings of workplaces in Jakarta will tend to show hierarchical characteristics e.g. representing status.”

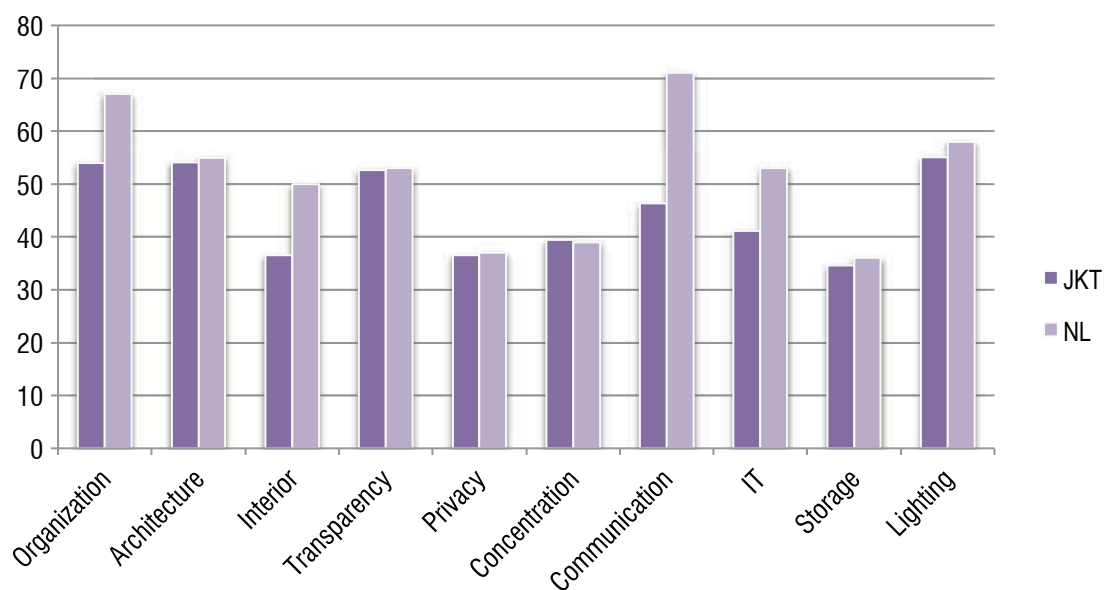
Findings on hypothesis 2: This hypothesis could be rejected, since the physical workplace itself does not merely represent the local culture, but also the organizations' culture. Only two out of five cases in Jakarta did show signs of the Indonesian characteristics based on the observations (MedcoEnergi & Egis Indonesia). Additionally, one could see also from the characteristics of the industry, as another way to explain the characteristic of the physical workplace. In the case of MedcoEnergi, the hierarchy was directly shown from the room size, materials, furniture and electronic devices. The product of this hierarchical space arrangement was also a result of the similar approach in the company's guidelines. The higher the position in the organization structure, the bigger the room, the better the materials and furniture are, and more electronic devices are given.

Based on the low score on the indulgence vs. restraint index of the Indonesian society, some evidence could be traced back on how satisfied they are towards their workplace. The satisfaction level may be one of the effects of the usage of bottoms up approach seen on the three cases. With the assumption from hypothesis 1 that almost no bottom up approach is done in the Jakarta cases, hypothesis 3 is concluded.

Hypothesis 3

➔ “Employees in Jakarta will tend to have low satisfaction level on their workplace, due to their lower result on the indulgence vs. restraint index.”

Findings on hypothesis 3: This hypothesis could be partially approved based on the results of the WODI part of the questionnaire. Indeed, the satisfaction level was low, at least in comparison with the average of the Dutch WODI results (Center for People and Buildings, 2013). This could also be caused by the less bottom up approach used in local companies, as showed in the first hypothesis. In the graphic below, one can see how the satisfaction levels concerning organization, interior design, IT infrastructure and communication process in the workplace are lower compare to the one in the Netherlands. This could additionally be explained on the reality of the lower investments being made concerning the physical workplace in two out of the three surveyed cases in Jakarta. Workplace design is still seen as less important for the management, due to the additional investments needed for a well-designed office and better IT infrastructure. While on the two reference Dutch cases, companies are more willing to invest on the workplace design (Microsoft, 2009, 2010, 2013; Studio Ramin Visch, 2013).



Graphic 1 — Comparison between index of culture characteristics of the Dutch & Indonesian (Hofstede, et al., 2010)

As a conclusion, the research question will be answered.

“What are the users’ preferences regarding the physical workplace environment in Jakarta, which are perceived, as supportive to higher productivity?”

➤ Based on the survey results, the preferences of the employees are:

Table 1- Level of preferences on the physical attributes from discrete choice result

No	Attributes	Attributes Level Preferred	Indicator
1	View & window	With view to parking & greenery	Stimulation
2	Room partition material	Non translucent	Privacy & territoriality
3	Cubicle usage	Cubicle	Privacy & territoriality
4	Furniture	Comfort over aesthetics	Comfort
5	Table partition height	50cm	Privacy & territoriality
6	Colours	Neutral colours	Stimulation
7	Lighting	Bright lighting	Comfort & Stimulation
8	Plants	No plant	Stimulation
9	Blinds	Translucent	Comfort
10	Table partition material	Semi translucent	Privacy, territoriality & concentration
11	Floor material	Carpet	Privacy, territoriality & stimulation

Thus, the ranking of the factor is:

1. Stimulation
2. Privacy
3. Comfort

It could be seen from the table that the important factors preferred by the employees in Jakarta mainly prove the high significance demand over stimulation and privacy, while comfort is seen as a less important factor. The preference for stimulation as the most important factor could be explained by the fact that the stimulation indicator is meant to support employees in terms of ideas generation, reducing stress level, increase working motivation, and so forth. The idea of having stimulation as the most preferred indicator is in line with the idea of workplace being supportive for employees' productivity.

The result of the discrete choice suggested that Stimulation is considered to be the most important indicator to describe a better workplace environment compare to Privacy and Comfort. However, all three aspect should still be compromised, since it is impossible to neglect the other two and only focus on stimulation.

Additionally, when cross-analysed with the case studies in Jakarta, it was found that out of three cases in Jakarta who participated in the survey, only one has a match between the satisfaction and preference level. The match would be an average of more than 50% on the satisfaction level for all three indicators. While on the broader perspective, when the picture is seen through the whole sample (including questionnaire with participants from the social network), the answers of the 174 participants revealed that less than 50% of them feel that their current workplace environment satisfies their need of stimulation, privacy and comfort for a higher productivity.

Looking back, out of the five cases conducted in Jakarta, only three out of five cases did the activity-based approach of an innovative office. These are Ogilvy, P&G and MedcoEnergi. Thus, only one out of three local Indonesian company cases has done more effort in supporting their employees through an activity-based workplace. Indeed, costs were the major issue hampering more investments on the workplace design. Nevertheless, it was proven that innovative office has supported the employees positively, especially when it has been well planned and tailor-designed for the organization.



Figure 1 —the step-by-step approach to align organization's objectives & employee engagement

Innovative workplace design, as in this case activity based workplace is one way to engage the employees and enhance their performance. It is indeed impossible to manage all characteristics of employees needs in the workplace. However, by creating as much options and flexibility by creating multi-usage workspaces, employees will have the sense of control, which could stimulate them and motivate them in using spaces based on their current state. The idea is to create the optimal solution from the integrated strategy, which aligned both users' needs & demands as well as the organizations' objectives. Survey method used in this research (the combination of WODI toolkit & the discrete choice method) could be one solution for mapping the users demands.



Figure 2 — results of the WODI & Discrete Choice cross analysis of 174 participants in Jakarta

Indeed, the workplace design implementations in Jakarta still need extensive improvements. Organizations tend to put less attention in this case, and manage a top-down approach on the decision-making, neglecting the importance of employee engagement. Although the implementations found in the Dutch cases are also not the perfect solutions, but lessons could be learned on how the combination of employee engagement with top down decision-making could lead to a more comprehensive design. Additionally, company guidelines are considered to be another important factor in supporting the consistency of the top-down approach.

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1. Research Introduction



This chapter will deliver the research background, the step-by-step approach of the research and the theoretical background of the whole explorative process.

1. RESEARCH INTRODUCTION

1.1. Personal Motivation

Workplace design and cultural influences never occur to me as the main driver in the office industry. However, it intrigued me when I read the article “Driving Effective Workplace in Asia” (Jones Lang Lasalle, 2012a). According to the report, the trend of innovative workplace is also occurring in Asia due to the development of technology and the company cultures developed from various multinational companies. Countries like Japan, China and Singapore are also starting to change their ways of working and changing their workspaces design to open settings, including flexible office space and shared desk office. Although the first intention of these changes is to improve company’s productivity and the possibility of costs reduction (Duffy, 1997), there are some barriers in the culture that hamper the objectives of these methods. These different approaches of workplace design brought by the western culture may not always be possible to could be straightforwardly implemented in the Eastern world.

Workplace design as one of companies’ strategies to attain their objectives should then be adapted to the needs of each company. In the western culture itself, the discussions and debates about the different kinds of workplace management and the innovation of the office have been there for more than a decade (Duffy, 1997; van der Voordt, 2003). The innovation ranges from flexible office layout, activity based settings, and so forth, depending on organizations’ culture and needs. These strategies are also adopted in Asian countries as stated before, including Indonesia. However, there will always be the intangible aspect of national culture, which distinct organizations’ characteristics based on their locations. This research will explore the implementations in Jakarta’s workplace environment, and the local satisfactions towards their current workplace and preferences of the workplace physical characteristic.

To see the topic through the perspective of a local employee, I chose Indonesia as the first country of my research, with Jakarta as the main location due to its current high supply and demand of office space (Colliers International, 2012b). The country is harvesting an upward economic growth of 6.1% and 6.4% respectively in 2010 and 2011 (IndexMundi, 2012). The phenomenon of this high new investments and expansion of major companies, leads to the higher demand of office space in the city, which linked to the more supply provided by private investors (Colliers International, 2012a, 2012b). As the rents in Jakarta CBD are going up (Jones Lang Lasalle, 2012b), organizations need to think more strategically in accommodating their activities. Therefore, this research could contribute to those companies willing to invest and doing business in Indonesia, or trying to strengthen their workforce through organizational changes, where physical workplace design could also play an important role both to increase efficiency and effectiveness of their activities and budget. Furthermore, there are still scarce resources and publications related to innovative workplace in Jakarta.

The Netherlands is chosen as the country for comparison due to the existing research on the impacts of innovative workplace (D. R. S. Batenburg & D. J. M. van der Voordt, 2008; R. S. Batenburg & D. J. M. van der Voordt, 2008; Brunia, 2008; Maarleveld, et al., 2009; Chaiwat Riratanaphong, 2009; van der Voordt, 2003), which could be used for more insights of previous works. This comparison will be first conducted by literature studies, then through short case studies.

1.2. Problem Statement

“The formulation of a problem is often more essential than its solution...” (Albert Einstein)

Leaders create culture and sometimes also have to change the culture in their organizations (Schein, 1992). In majority, change in the physical workplace environment is consistent with the change in organizational structure. It is noted that the success of alternative offices is determined by the underlying strategy and particularly the method of implementation in particular (van der Voordt, 2003). What is then, a successful workplace? Workplace professionals state that there is an intrinsic relationship between workplace design and employee performance, but seem to struggle to present a supportive evidence (Leesman, 2012). In this case, the term successful refers to the whether or not the outcomes meet with the company’s initial objectives. In defining the workplace change strategy, companies are driven by several goals (van der Voordt, 2003), which can be used as the parameters to measure their success such as:

- Improved performance, including greater productivity
- Better communication and cooperation
- Facility support and control of change processes
- Greater employee satisfaction
- More efficient use of space
- Image improvement
- Serving as a role model
- Acquirement of an insights into trends
- Acquirement of experience with new concepts
- Prevention of the need to move by using space more efficiently

In the current study, this research concentrated on employees oriented objectives, which comprises of:

- Employees’ satisfaction of their current office design
- Employees’ preferences of the physical workplace

The two factors of satisfaction and preference will be cross-analysed through three main indicators, which will be explained further in the report. To match these two factors concerning employees’ satisfaction and perception, several variables were measured with indicators through:

- Literature studies
- Case studies (including observations & interviews) and
- A survey over satisfaction and preferences to find the possible solutions for upgrade in the future

Concerning the selection of the research topic, publications in the field of innovative office or new ways of working in Indonesia are still scarce. Organizations seem to have less awareness towards the issue of workplace innovation and the impacts on their employees. “In China for instance, companies tend to implement the workplace change using a top-down approach” (van Meel, personal communication, November 23rd 2012). However, the products seen so far such as hoteling or hot-desking system, open layout space, et cetera are quite similar compared to those in the western countries. From an interview with a professional working in research of the property management, it was stated, “The process, perceptions, preferences and behaviour towards the products on the other hand, may differ” (Lim, personal communication, January 10th 2013).

In summary, there is the need to explore the implementations of the innovative workplace in Jakarta and its effects on organizations and employees due to the scarcity of previous research in this field in the area.

1.3. Research Aim & Objectives

The major aim of this research is to explore the implementations of current office designs in Jakarta, and how it affects employees' satisfaction, which will nevertheless also impact their productivity. The research will focus more on the perceptions of the work places as the products, while still considering the implementation of the workplace process, since both are one entity. A product would not exist without a process occurring beforehand (see figure 3: theoretical framework). These preferences will create the array of approaches for the companies when willing to change their office arrangements to aim certain objectives. Such an approach might be particularly relevant to Indonesia as a developing country, since it is considered as a very promising market for real estate industry at this very moment. "Of course, when there is an economy growth, new developments will occur" (Lim, personal communication, June 3rd 2013). Therefore, these companies should know about what types of process and design approaches, are available and appropriate for their intended objectives and strategies.

In the end, the intended result(s) of this research will be the users' preferences on the physical workplace environment in Jakarta, which employees perceived as supportive to their work and as such are assumed to support and eventually increase their productivity. The problems will also be based on the issue of innovative workplace and current working cultures.

1.4. Research Target Groups

In view of the research objectives, this study might be particularly relevant to property consultants, who are familiar with this research but have not been able to do an integrated research of the market in Indonesia, and to the corporates willing to further develop their workplace in the future. They might benefit from the insights put forward from this study on whether or not innovative workplace could work in Jakarta, and the distinctive characteristics of the workplaces in Jakarta.

A subsequent and personal objective is to learn how to conduct a research and encounter professionals from the real estate industry, and learn from them as they are likely to have different fields of expertise.

1.5. Relevance of The Research

This particular research will touch the elements of both academic and societal relevance as explained below.

1.5.1. Academic Relevance

The research stands in the field of Real Estate Management, under the specialization of corporate real estate management (de Jonge et al., 2009). The idea is to measure one source of 'added value' of real estate, which is through the design of corporate/ organizations' offices.

As a primary research focus, the design of the physical workplace environment should not merely support the organizations' objectives, but also adding value to the individuals, as in this case the users or the employees.

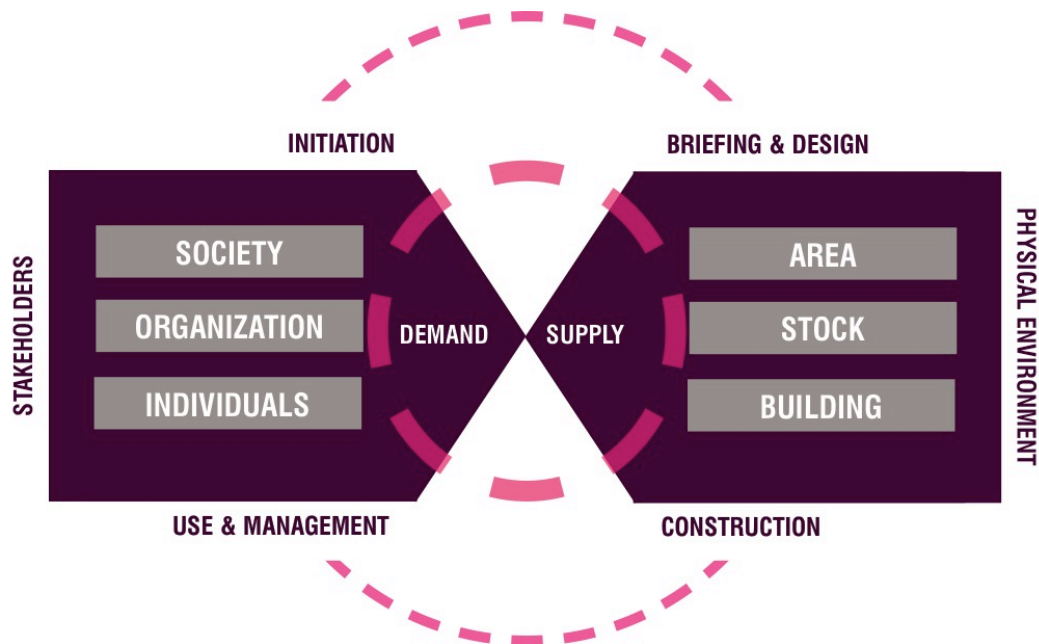


Figure 3 — Academic Relevance

1.5.2. Societal Relevance

Workplace design and its development towards the current trends have been a common issue for planners, corporates and facility managers. Terms such as new ways of working, flexible working, or agile working, have been the discussions for several decades, which also concerns activity-based workplace arrangement. Various publications and researches have been done by professionals (Appelbaum & Batt, 1994; Duffy, 1997, 2008; Dul, Ceylan, & Jaspers, 2011; Maarleveld, et al., 2009; Martens, 2011; Chaiwat Riratanaphong, 2006; van der Voordt, 2003; Wainwright, 2010), in search of the benefits, drawbacks and the strategies towards innovative workplaces. However, publications concerning innovative workplace or flexible workplace have not been discussed properly in Asian settings. Therefore, it will be not only interesting, but also useful for the long term, to add Indonesia on the radar, starting with Jakarta as its capital and the central of the country's main business activities.

Organizations in Indonesia, especially Jakarta being the particular research area in this topic, need to be aware of the importance of the added value of balancing the demands and supplies of their facilities such as workplaces. In matching demands of their employees and other needs in accordance with the corporate objectives, a company could most likely be one step closer in achieving their objectives. In the current high developing and competitive market, it is certainly necessary for organizations to put their employees' needs as one of the most important companies' achievement, which then could lead to better performing employees as individuals and as teams. Thus, this research will be a handful insight for companies, specifically in Jakarta.

Another advantage that could be given through this research is the initial data benchmarking concerning the issue of workplace in Jakarta. This type of data benchmarking would be useful for global corporates willing to start their operation in Indonesia or local Indonesian companies who are willing to expand their organizations, especially at this very moment, when the economy in Asian countries including Indonesia is in the highly positive state, where new investments are coming in.

And last but not least, this research will add up to other publications about workplace design and its added values on corporate real estate management generally and specifically in Jakarta, Indonesia, as the main area of research.

1.6. Main Research Question

As explained in the research aims and objectives, the research question will fully support the intended end result. Departing from the debate of a successful workplace or office design, and the idea of innovative office in Jakarta, the following research question emerge:

➤ “What are the users’ preferences regarding the physical workplace environment in Jakarta, which are perceived, as supportive to higher productivity?”

To elaborate more on the question, different domains are structured for the theoretical framework. These domains were considered to complement each domain, in creating the logic of innovative workplace and its influencing factors such as culture in the workplace, environmental psychology, and designing an office itself.

Some sub-questions were generated further in accordance with the supporting theories of this research to answer more issues in detail:

1. What can be found in the literature concerning organizations’ objectives?
 - a. What does the literature says about corporate real estate management?
 - b. What are the major objectives of corporates according to the literature?
 - c. What is real estate strategy in terms of acquiring corporates’ objectives?
2. What can be found in the literature about new workplace design?
 - a. What are the theories and discussions of the new workplace?
 - b. What are the influences of workplace design on organizations’ performance?
 - c. What are the current trends of workplace design?
 - d. What can be found in the literature about the psychological aspects of workplace design?
3. What are the influences of ones culture on ones perception on their workplace?
 - a. What are the definitions of culture, organizational culture and national culture?
 - b. What are the differences between the Netherlands and Jakarta concerning their culture in general?
 - c. How do culture influence ones perception towards their workplace?
4. What are the implementations of the current workplace design in Jakarta?
 - a. What are the differences between the Netherlands and Jakarta concerning decision-making process of a workplace design?
 - b. How do the workers in Jakarta’s case studies perceive their current workplaces?
 - c. What are the preferences of workers in the Jakarta’s case studies concerning workplace design?
 - d. What lessons can be learned from the Netherlands in implementing their workplace?
5. How can we optimize the benefits of workplace design in Jakarta?
 - a. How can the findings in the literature give solutions to the issues found in the case studies?
 - b. How can the preferences of the employees improve to the decision making of the future workplace design in Jakarta?

1.7. Research Design

The research process started with literature studies of different domains namely studies on the added value of Corporate Real Estate Management (CREM), culture and innovative workspace. Based on these three topics such as workplace design (R. S. Batenburg & D. J. M. van der Voordt, 2008; Boray, et al., 1989; Brill, et al., 1984; Duffy, 1997, 2008; Robert Gifford, 2002; Martens, 2011; van Meel, 2000; van Meel, Martens, & van Ree, 2010), strategy within CREM (de Jonge, et al., 2009; de Vries, 2007; Den Heijer, 2006; Hofstede, et al., 2010) and cultural index measurements by Hofstede et al (2010), hypotheses were formulated, and the literature also contributed to identify the attributes and variables that were used in the case studies and the survey.

The empirical research itself consists of case studies and survey in Jakarta, Indonesia, in comparison with the referenced Dutch cases, which are based mostly on literature studies. Out of five case studies conducted in Jakarta, only three agreed on having the survey for their employees, namely MedcoEnergi, PTI Architects and Egis Indonesia. Employees of the three cases were surveyed through online questionnaires, which consists of questions taken from the WODI light toolkit from the Centre for People and Buildings (Center for People and Buildings, 2013) and a set of discrete choice modelling. The visual experiment within the discrete choice modelling questions allowed the participants to choose one of two rendering images per question. More explanation of the survey will be given in chapter 6. Due to the confidentiality issue, two other cases in Jakarta would not contribute on answering the employees' preferences. However, to create a more general sample in the end, the questionnaire is sent also to a wider range of participants from the researcher's social network. The participants from the case studies and social network, created a total of 174 participants.

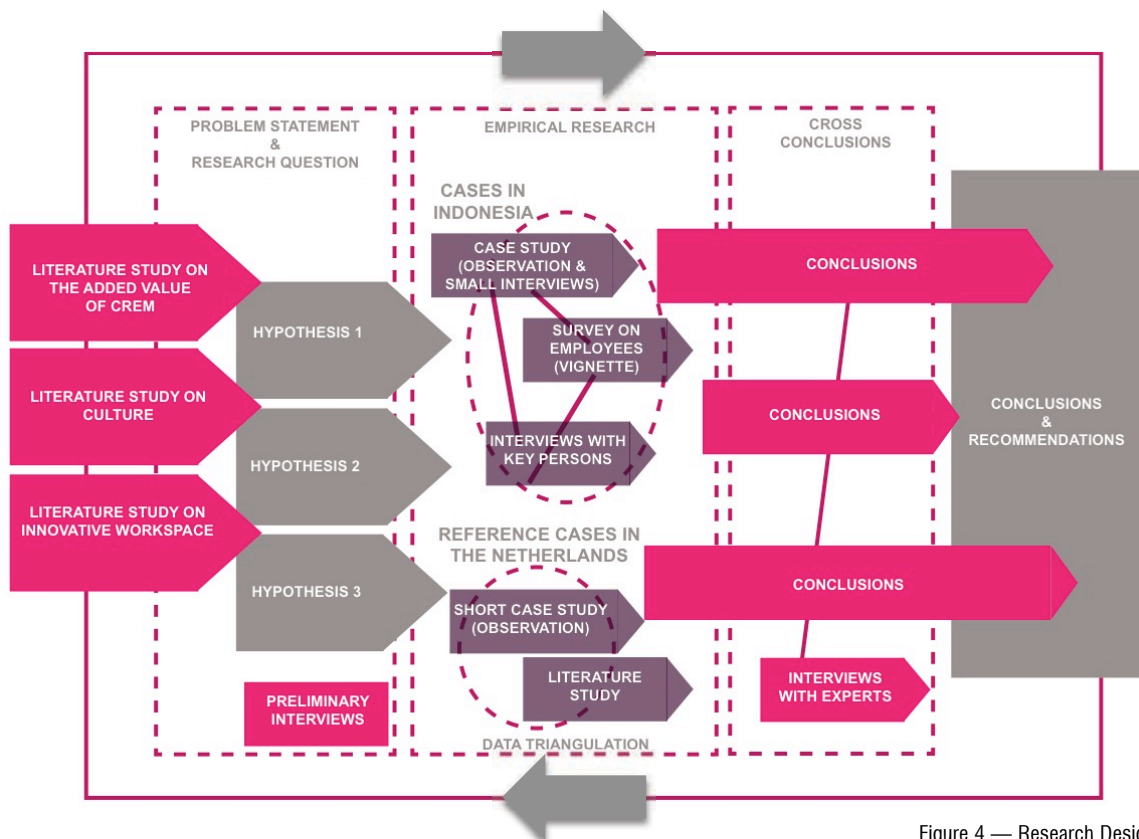


Figure 4 — Research Design

The empirical research is an attempt to answer the research question and to test hypotheses, which will be the conclusions in the end. These different conclusions were discussed with professionals, who has been interviewed and asked on how they see the findings. The inputs of the experts are considered a valuable addition

to the survey. Since they are a third party outside the university, their remarks and views are used to provide valuable input for the discussions and recommendations parts on the report.

The step-by-step process will be deliberated further in the next chapters of this report.

1.7. Theoretical Framework

In accordance with the research design, the theoretical framework consists of three different subjects. First, in dealing with innovative workplace design, new ways of working, its advantages, disadvantages and the possibilities that a well-designed and innovative workplace could give, will be addressed based on the previous studie. Secondly, culture in the workplace will be discussed as an input to the Indonesian and Dutch cases. Indexes created by Hofstede (Hofstede, et al., 2010) will be one of the characteristics in comparing both countries' culture. Finally, theory about the added value of Corporate Real Estate Management (CREM) was added to explain the initial process of accommodation strategy to achieve organizations' objectives.

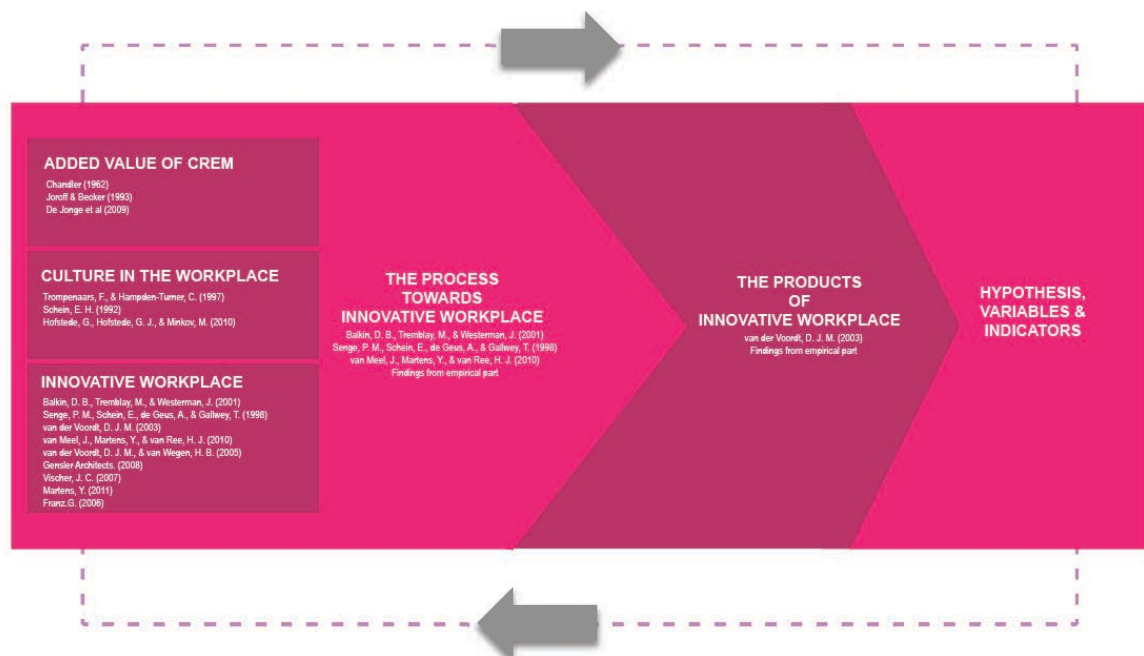


Figure 5 — Theoretical Framework

All three topics are important to gain understanding of the process towards innovative workplace. Ideas and concepts of how a workplace should be and provide will be the input of the product of the innovative workplace. Based on the literature studies, three hypothesis were defined:

- “Organizations in Jakarta are aware on the importance of the physical workplace, but do not show any sign of bottom up approach on this matter.”
- “The settings of workplaces in Jakarta will tend to show hierarchical characteristics e.g. representing status.”
- “Employees in Jakarta will tend to have low satisfaction level on their workplace, due to their low result on the indulgence vs. restraint index.”

The reasoning behind the hypotheses will be discussed at the end of chapter four. All hypotheses will be answered after the empirical research, based on the findings of the cases and the survey results.

2. Corporate Real Estate & The Objectives



This chapter will discuss various theories concerning corporate real estate management and its domains, as well as organizations' objectives and the benefits of a well structured CREM.

2. Corporate Real Estate & The Objectives

The following chapter will discuss the first research sub-question of:

“What can be found in the literature about organizations’ objectives?”

- a. What does the literature says about corporate real estate management?
- b. What are the major objectives of corporates according to the literature?
- c. What is real estate strategy in terms of acquiring corporates’ objectives?

2.1. Corporate Real Estate Management

In the building industry, real estate management connects the two sides of demand and supply (de Jonge, et al., 2009). Multiple actors and/or stakeholders are in charge of the game, where various objectives are at stake. According to Joroff & Becker (1993), corporate real estate is considered as the fifth corporate resource after capital, people, technology and information. It is a powerful resource yet expensive, the most expensive resource after labour.

Corporate real estate itself consists of four domains, namely the general management, the asset management, facility management and project management, which are contributing to the shared objective of optimally attuning corporate accommodation to organisational performance, adding value to corporate objectives and indirectly generating income (de Jonge, et al., 2009).

2.2. Major Corporate Objectives

The major focus within this research is the domain of the real estate management, where corporates have to deal with their daily operations and manage their resources of capital, people, technology and information, at the same time. Corporate real estate has also evolved over time. From the focus on industrial buildings during the industrial revolution towards the need for added value of real estate, which was enhanced by the corporate growth and geographical spread of corporates during the 1960s and 1970s. Furthermore, the rising costs of accommodation due to the oil crisis in 1973 and the introduction of information technology has created different mind-sets for corporates in managing their facilities (de Jonge, et al., 2009; Duffy, 1997). Both workplaces and business processes were changed overnight.

The added value of real estate is defined as its contribution towards organisations’ objectives. De Vries (2007) divided organizational objectives into 3 categories: productivity (output/input), profitability (revenues-costs) and comparative advantage. These categories were distinguished into ten ways of contributing to realisation of the objectives (de Jonge, et al., 2009; de Vries, 2007), as summarized in the following table.

Table 2 - Added value of real estate towards organizations’ objectives by De Vries (de Jonge, et al., 2009)

	Productivity	Profitability	Distinctiveness
Increase productivity			✓
Supporting image			✓
Enhancing flexibility		✓	
Improving culture			✓

Stimulating innovation	✓
Increasing satisfaction	✓
Enhancing synergy	✓
Reducing costs	✓
Controlling risks	✓
Expanding funding possibilities	✓

Furthermore, real estate decision-making should also incorporate all the involved stakeholders namely the managers, financiers, users and controllers. Although all stakeholders are important in the decision-making process, this particular research will emphasize more on the role of the users in the workplace decision-making, as a complementary to the management's objectives.

2.3. Real Estate Strategy

Decisions are considered strategic when they are crucial to an organization's future, broad of scope, adding values and have consequences for many functions and activities or when they are almost irreversible when executed (de Jonge, et al., 2009). According to Chandler (1962), strategy may determine the long-term objectives of an organization, as well as the plan of approach and resources allocation. According to Mintzberg the following five Ps are to be present at the same time, namely:

- A PLAN for action
- A PATTERN
- A unique POSITION in the market
- A PERSPECTIVE
- A PLOT

Starren (1998) mentioned that a strategy is the overall framework in which the organizational activities take place. It creates the conditions of organizations' concerns and success. The basic thinking of strategy as the approach towards companies' objectives, could be applied as the way corporates decided on how they manage their real estates, or in this case their workplaces.

On figure 6, Den Heijer (2006) discussed the four different domains of Corporate Real Estate Management, namely the General Management, Asset Management, Facility Management and Project Management. Each has specialization and focus on different level of the organization. These different factors are distinguished as focuses and functions. The two focuses are on the institution or the real estate, with two functions between operational or strategic level. Facility management, which most relates to workplace management, lays on the operational level, with the focus on institution, which furthermore taken the users as the major key role. The users in this case are the employees.

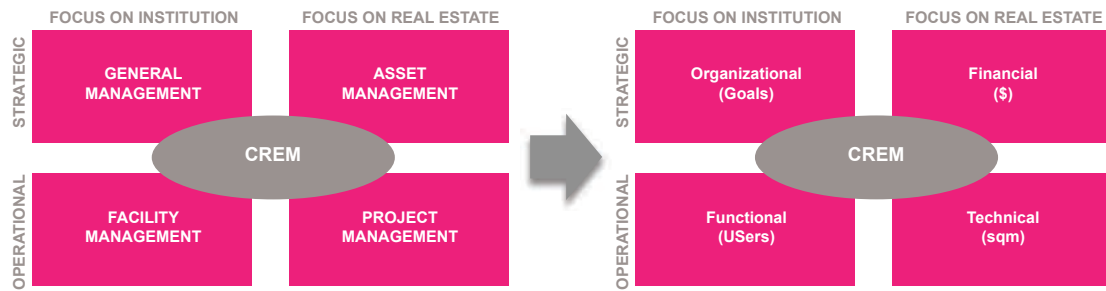


Figure 6 - CREM framework from stakeholders to performance indicators (de Jonge, et al., 2009; Den Heijer, 2006)

Facility management itself is considered as one of organizations' strategies on achieving their objectives. Furthermore, each strategy should be based on the companies' aims, which should juxtapose the importance of matching the demands and supplies of the particular organization. Furthermore, De Jonge et al (2009) also mentioned that a strategy should be translated into three different forms:

- Changes in space demand and strategic choice
It should be translated into changing space demand and strategic choices for real estate. This is a concrete way of explaining the specific criteria of their accommodation strategy. However, it should also be suitable with their overall strategy.
- Strategic vision in key words
The strategic vision serves like a dream, which could be complemented with a visual reference for the whole portfolio or for an individual building; e.g. workplace layout.
- Future demands create a solution space
The strategic vision should have an abstract qualitative character, although it is harder to explain and require CRE managers to make assumptions concerning the aimed quality.

2.3. Answer to Sub-question 1

Further on, the first sub-question and its points will be answered:

“What does the literature says about corporate real estate management?”

Corporate real estate is one of the most important corporate resources, connecting the demands and supplies of the company. The field of corporate real estate management consists of four different domains, namely general management, asset management, facility management and project management. As an additional insight, workplace management lays in the domain of facility management, which plays a role at the operational level

“What are the major objectives of corporates?”

There are three major corporate objectives according to Den Heijer (2006) namely productivity (output/input), profitability (revenues-costs) and comparative advantage or distinctiveness. In accordance with these three major objectives, ten more specific aims are to be determined, i.e. :

- a. Productivity
 - Stimulating innovation
 - Increasing satisfaction
 - Enhancing synergy

- b. Profitability
 - Enhancing flexibility
 - Reducing costs
 - Controlling risks
 - Expanding funding possibilities
- c. Distinctiveness
 - Increase productivity
 - Supporting image
 - Improving culture

“What is real estate strategy in terms of acquiring corporates’ objectives?”

Real estate strategy is a tool and approach in acquiring corporate objectives, which could be deliberated through several different steps. It is one out of several ways to fill in the gaps between supply and demand in gaps between current and future supplies and demands. In terms of the workplace environment, strategy could be translated as the workplace management, how the company translate their values and objectives in accommodating their employees. Strategy could be defined in the form of policy or guidelines, where the organization describe their values and translate them into their own procedure.

3. Workplace Design & Management



This chapter share the development of office design as well as workplace management, which consists not only the design of the physical appearance of the workplace, but also the policies and the drivers behind them.

3. Workplace Design & Management

This chapter will answer the first question of:

“What can be found in the literature about flexible workplace design?”

- a. What are the theories and discussions of the new workplace design?
- b. What are the influences of workplace design on organizations' performance?
- c. What are the current trends of the new workplace design?
- d. What can be found in the literature about the psychological aspects of workplace design?

In respond to varied expectations of the employees, companies and organizations create strategies and approaches to enhance the employees' performance and increase their well-being. These approaches include the innovation in the workplace according to Balkin et al (2001) namely:

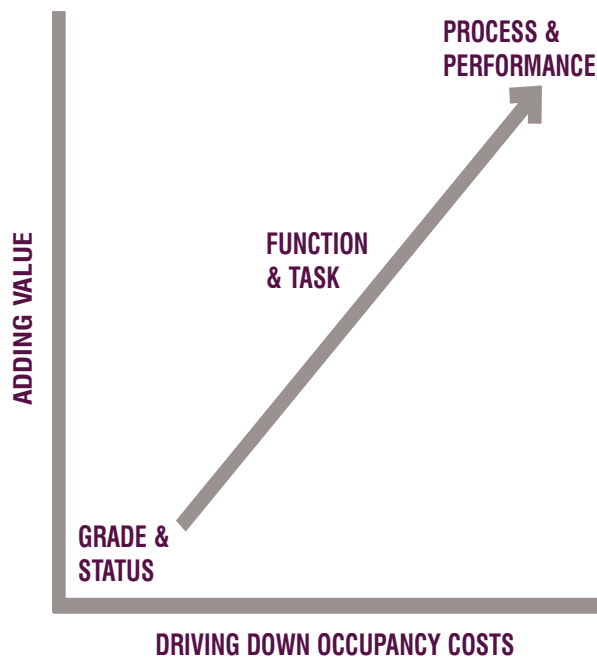
- Team innovation (self-managed work teams and problem solving teams)
- Organization restructuring (job design change, work method change, organization design change)
- Work schedule innovation (compressed workweeks, flexi time, job sharing arrangements, and voluntary reduction in working hours)
- Skill mix change (re-training cross-training and skill-upgrading),
- Bargaining process innovation (improvements in bargaining effectiveness such as continuous bargaining, mutual gains bargaining and the use of interest arbitration for solving conflicts),
- Empowerment innovation (improvements in employee rights and entitlements such as accommodation for disabilities and increased attention to reducing barriers for women to move into traditional male jobs),
- Individual pay innovation (individual performance bonuses and skill-based pay),
- Team pay innovation (team bonuses),

Another way to enhance employees' performances and well-being is by enhancing the quality of the physical space or the office. With the development of technology, organizations are enabled to collaborate and communicate inside and outside the physical workplace without direct contact. Phone calls to online conferences have been daily means of today's communication, which also drive organizations and their members to communicate distantly. Cloud computing also enables them to work from home, share ideas and results from their own living room, not just locally, but also overseas.

Regardless the improvement of mobile working, the concept of having the physical workplace or the office for working and encountering colleagues/ clients, is still irreplaceable. The physical workplace itself should also be in line with organizations' strategies and approaches, as stated before in chapter two in aligning the strategy towards corporate objectives. Thus, a corporate workplace management has to translate its value and objectives to support the desired working process and environment.

“A good looking office has no meaning if it cannot physically and emotionally support the people who inhabit it. A good office has to interact and support a vast group of workers, each of whom is effectively a client in their own right.” (Sevil Peach)

3.1. The New Office Concept



Graphic 2 - The new office (Duffy, 1997)

In accordance with the development of corporate real estate management, Duffy (1997) mentioned how the workplace concept has changed over the years, both in terms of process and physical characteristics. The focus now emphasizes the added value of the organizations' objectives and also financially, in cutting occupancy costs. The complexity of organizations' activities has created particular needs, which added the companies' overhead. Extra costs due to higher preferences for better accessibility or prestigious locations are considered important to position the companies towards clients and employees. Therefore, workplace management is considered important to strengthen the effort in achieving organizations' aims.

As stated in chapter 2 that the main objectives of organizations comprise of profitability issues including reducing costs, one of the ways to limit their expenses is through managing the workplace (de Jonge, et al., 2009; Den Heijer, 2006). This idea is in line with Duffy's idea about the new office. However, this trend tends to shift at this moment. Global corporates are more focussing on the added value of the company by enhancing the quality of a workplace as part of their organizational strategies. Especially in countries as Indonesia, where high numbers of new investments are entering the developing market. These new investments enforce companies to be more competitive and workplace improvements could be one way in doing this. Occupancy costs are no longer the main concern, although costs related efficiency still is.

In the real estate management industry, the focus of workplace innovation is with the physical workplace characteristics (van der Voordt, 2003), which are the main focus on this research. The physical interventions in the offices include open job-oriented or organization-oriented housing, which includes flexible or agile workspace such as hot-desking, hoteling and other terms of innovative workplace-design or the new office. One of the approach also includes activity-based workplace management. The enhancement of a workplace quality itself, goes hand in hand with one of the strategies of a company, since it created various benefits to the organizations (van der Voordt, 2003). Its physical form could be different for each organization, depending on organizational culture and local context.

Innovative office could also be described as a way to enhance the innovation of a company, which could be one of the benefits or objectives of an innovative office. In accordance with Duffy's point of view, Martens (2011) mentioned that physical workplace in general could contribute to three aspects of organizations namely the performance, process and people through:

- Cost saving, risk control, environmental sustainability and contributing to the corporate image towards customers and employees
- Supporting work processes and communications
- Supporting or changing organisational culture, improving employee satisfaction, attraction and retention of staff, supporting and providing organizational flexibility

These three aspects, performance, process and people, are both the positively and negatively affected by physical workplace characteristics. The organization and its people are influencing the process, which then would create the performance such as new and valuable ideas, products and services. Figure 2 could elucidate more on this idea, where the context surrounding the process could be the culture, which is one of the four domains, structuring the theoretical framework of this research.



Figure 7 - Relation between physical workplace and performance. Adapted from: Martens (2011)

Other terms of describing innovations in the workplace such as new ways of working, flexible working and the new office have been used in literature as well (Duffy, 1997; Chaiwat Riratanaphong, 2006, 2009; van der Voordt, 2003). Ideas mainly emphasized on the role of technology and ICT towards the development and change of the working culture, how efficiency and effectiveness were enabled by the current technology advancement. Duffy (1997) in his book *The New Office*, also described the characteristics of new offices:

- Much greater attention to the economic importance of better use of time
- Impatience with boundaries, to improve communications between departments and specialists
- Less hierarchy
- A tendency towards smaller, more rapidly changing organisational units
- The importance of group activity
- The obsolescence of clerks and clerical ways
- Total confidence in the creative use of IT
- A new flexibility

However, since the debate and development of the new office has been going on for years, the new office may already become the new standards in some places. Furthermore, the term 'new workplace' is really determined by the related subject. One concept or strategy could be new or innovative in one place or organization, while in other places the same concept has been going on for years. This applies to the comparison between the Netherlands and Indonesia for instance. Flexible workplaces are particularly common to public organizations in the Netherlands (Center for People and Buildings, 2013; 2011). Here, employees are not just free to choose their own desk, but are also supported to work from home for one or two days a week. In Indonesia, this situation is still not common, especially in public organizations.

3.2. The Role of Workplace Design for Organizations

The office setting has long been recognized as a physical representation of an organization's culture, where firms may alter physical dimensions through office redesign in order to affect organizational culture and reinforce desired changes in culture and strategy (McElroy & Morrow, 2010). Therefore, office design may be the physical representation of an organization's culture. There is some evidence that office design is also determined by the local culture (van Meel, 2000). However, with today's advance technology and globalization, the barriers between offices of different countries seem to decrease. Offices tend to be similar everywhere, and more dependent towards the organizations' culture.

According to the results of Gensler's survey on over 2000 workers in the US, 90% of their respondents believe better workplace design and layout result in better employee performance. In addition to the importance of workplace design and layout for better employee performance, Kornberger and Clegg (2003) stated that in order to increase innovation and creativity, we have to create a "generative building that allows and encourages plurality, contradictions and dis-census, through its spatial organization".



Figure 8 - Survey result on US workers in 2000 (Gensler Architects, 2008)

Several publications focused on the influence of office design towards employee's productivity (Dul, et al., 2011; Hua, Loftness, Kraut, & Powell, 2010; Martens, 2011). It was said that certain features of the physical workplace could have positive effects on creative task performance and mention features such as the presence of plants, a non-crowded workspace, and direct window view. Moreover, the combination of several physical features could also create benefits for the workers. It was described in several publications (Dul, et al., 2011; Martens, 2011), that these aspects could create positive or negative impacts towards one's creativity, which is closely related to innovation.

More recently, Leesman (LeesmanIndex, 2013) also support the importance of the design of organizations' offices. More than 50% of the employees relates the influence of workplace design towards productivity, 85%

finds it essentially important and almost 50% of the participants agree that offices should be a place they are proud to show to the visitors. The overall information could be seen in figure 7.

Another aspect that might improve the productivity is collaboration. The layout of the workspace could actively contribute to occupant's perception of collaboration environment (Hua, et al., 2010). Openness is one of the characteristics, which determines workplace layout characteristics. It refers to the ratio of total square meters of the office to the total length of the interior walls and partitions. Another spatial characteristics that should be considered, is accessibility. This refers to the extent to which an employee's individual workspace is accessible to the external intrusion of others. However, this characteristic is often described by only the existence of doors within a room. Therefore, in the application of space syntax theories and techniques, which was originally developed for street and neighbourhood design, visibility is added to this picture. The combination of these three elements: accessibility, openness and visibility, could be a powerful tool to evaluate an existing layout. According to Hua et al (Hua, et al., 2010), the layout of various collaborative spaces also directly impacts office workers' perceptions of how well the work environment supports collaboration.

Percentage who are agree with the statement about the design of their organization's office.



Percentage satisfied with features indicated as important in their workplace.



Percentage satisfied that activities indicated as important in their work are supported.

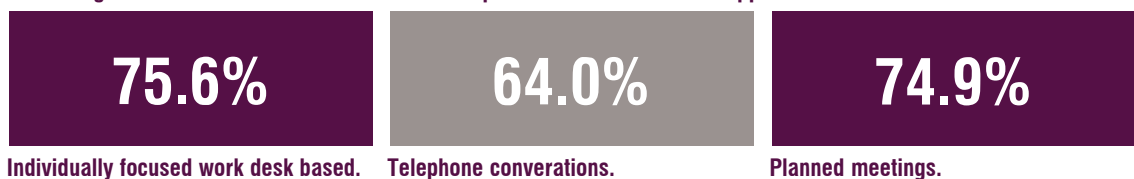


Figure 9 - Survey result from Leesman Index - (LeesmanIndex, 2013)

3.3. Transformation of Office Design

As discussed in the previous sub-chapter, technology has become one integrated part in organizations life cycle and daily operation. The two factors of work process and performance created by the input had been made smoother and easier with the help of technology development, including the ICT and other electronic media. The World Wide Web has created even broader network as well as competition to the local market. Ouye (2011) mentioned five ongoing trends within the workplace environment in today's society, namely:

1. The continuing distribution of organizations
2. The availability of enabling technologies and social collaboration tools
3. The coming shortage of knowledge workers

4. The demand for more work flexibility
5. Pressure for more sustainable organizations and work-styles

The first two trends mentioned has now been the new normal of today's workplaces, where technology is embedded in everyday working culture as put forward by Marten (Martens, 2011).

Office design changes over time (Gensler Architects, 2008). During the period of 1980s, office layouts tend to follow only the linear process of an organization. Uniformity felt stronger in the design characteristics. Status is still reflected by the workspace, which makes the workplace hierarchical both in the Western and Eastern culture. Cubicle offices which first introduced in the US (van Meel, 2000) were still popular.



Figure 10 - Office design transformation (Gensler Architects, 2008)

In the 1990s, technology development started to play a role in office design. The working environment then focused on digital tools, the processes were more dynamic and enhanced networking rather than linear relationships between employees. Hierarchy is fading in the workplace, and the design is more flexible, adaptable to change. Companies also became more aware by creating amenities to attract talent. Hoteling (non territorial office space, where each employee could reserve the space on first come first serve basis) was introduced to enable mobility. Today, technology is already integrated with every aspect of the working process, while people create the strategic competitive advantage. It could be stated as a more holistic approach of workplace design.

As the evolution of the physical workplace design goes further, corporates began to realize the importance of allocating spaces based on the basis of work pattern as seen in figure 9 (Duffy, 2008).

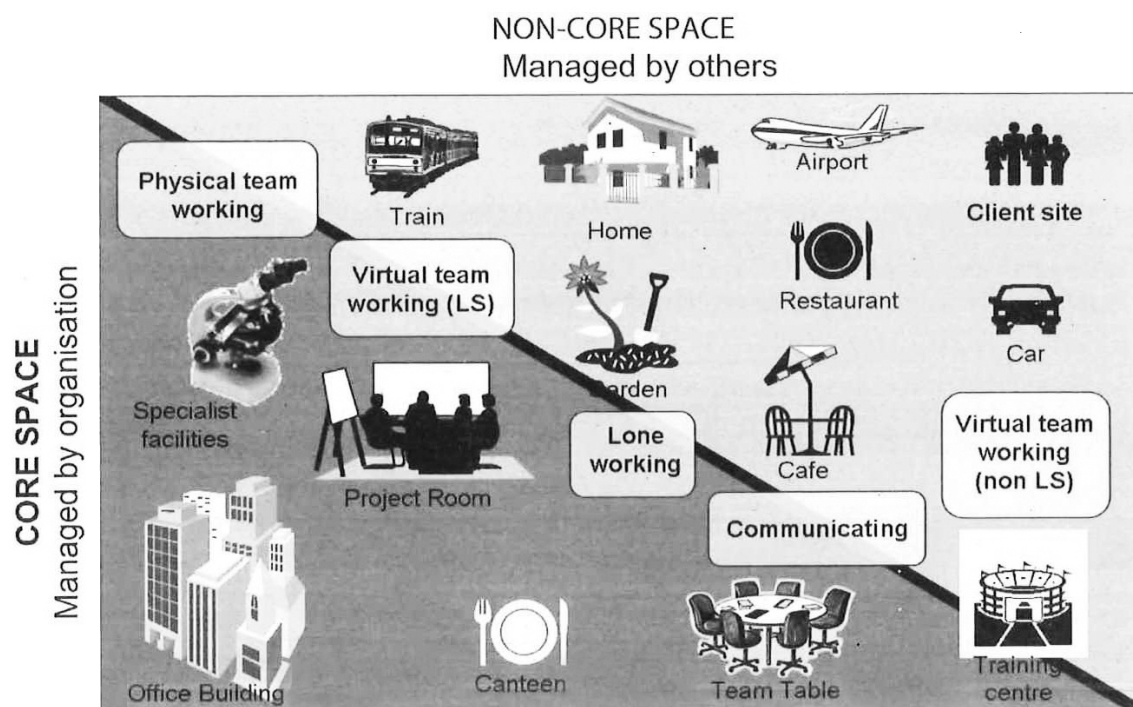


Figure 11 — Work-Life Balance & Activity Based Workplace (Duffy, 2008)

Complementary to this activity based workspace design, van Meel et al. (van Meel, et al., 2010) tried to distinguish and explain the different types of workspaces and its characteristics, as shown in the appendix 1. While for the basic needs concerning the physical workplace quality, Vischer (2007) listed some variables such as user's ergonomic, natural and artificial lighting, layout of the office plan, and noise.

It is not mandatory for every organization to have all the workspace types or supporting areas defined by van Meel (2010) in appendix 1 available. The important part is to create an environment, which suits the organization the most, as implied in the second chapter of the real estate strategy. In designing or evaluating their workplaces, organizations have to look back to their current demands and to identify the possible future needs or trends, in accordance with their values and goals. Furthermore, this classification will be used to explain the cases in the empirical part of the research.

Van Meel et al (2010) also renowned the crucial decisions that have to be made concerning organization's objectives when creating a workplace environment:

1. Location: whether employees are obligated to work in the office, or have freedoms to work elsewhere.
2. Use: whether employees get their own personal workstation, or do they have to share space.
3. Layout: whether the office layout is open or enclosed. According to Vischer (2007), several studies proved that office workers are uncomfortable in open plan configurations and prefer private enclosed workspace.
4. Appearance: whether the ambience of the space is neutral or expressive (visually arresting)
5. Filing: whether the work is more digitally recorded (paperless) or on paper
6. Standardization: whether the office concept is used for the whole companies within departments, and/or branches.

3.4. Office Design and Employees' Needs

The process of accommodating employees' needs in an organization has been connected with Maslow's pyramid approach (Jones Lang Lasalle, 2011), where there are four levels of human needs:

- Physiological
This includes the basic physical comfort (functional aspects) such as protection from the weather, moderate temperature (balance of coolness and heat), sufficient lighting, good air quality, drinking water and restrooms.
- Safety
The safety issue is referring to the security for employees and the organization itself. Regarding the employees, a workplace should be secured for them to do their work also in terms of health. Hence, this safety issue could not be done without accomplishing the physiological aspects. Other issue concerning the organization is the security of the data, assets and products of the organization inside and outside of the workplace.
- Attraction/ belonging
Attraction/ belonging may be given not just from a prestigious or well-designed workspace, but also a good office environment and well reputed organization consists of an engaging corporate culture, collaboration among diverse individuals and being a part of a desirable team. Having a well-designed workplace could support the sense of belonging and pride of the employees. The physical appearance of the company is one tangible asset that could communicate the corporate identity, vision and strategies.
- Esteem

The business premises should take into account that employees are part of an exciting business culture and members of an enviable team. Staffs are usually motivated by the image of certain 'landmark buildings' and by certain layout and design of the office interior.

- Self-actualization

On the top of Maslow's pyramid, there is this self-actualization. Most employees will feel good about themselves through being innovative and creative in doing projects/ work and solving important problems.

These multiple layers of human needs by Maslow explain how each employee is striving not just for their basic needs. Since working is one of the life major fulfilment according to Freud (Robert Gifford, 2002), it has become clear that employees need to feel not just safe or sheltered from the outdoor, but also belong to the organization, motivated by the organization, and could develop themselves inside the organization. These needs of belonging, esteem and self-actualization, could also be facilitate by the physical workspace environment through the different types of workplace types and their combination in a suitable workplace management.

In accordance to the psychological approach towards user in office design, Gifford (2002), Vischer (2007) and US Army Corps of Engineers (1997) tried to explain the influencing indicators, namely:

- Territoriality: a means of achieving a desired level of privacy. One way to do this is through personalization.
- Privacy: a central regulatory human process by which persons make themselves more or less accessible to others. Two keys towards privacy are through visual control (visual privacy) and acoustic treatment (acoustic privacy).
- Comfort: this only includes functional comfort (ergonomic support for user's activities), since physical comfort (basic needs such as safety, hygiene and accessibility) is considered fulfilled beforehand.
- Status: to what extent does the workplace is segregated towards status.
- Control: could be translated as a psychological comfort, which explains the degree of environmental choice or empowerment users have through decision-making process.

Based on the findings from Jones Lang Lasalle (2011), Gifford (2002), Vischer (2007) and US Army Corps of Engineers (1997) the indicators are summarized into three main indicators, namely:

1. Comfort

This indicator comprise of the physiological needs as well as safety according to the Maslow's pyramid, and other basic human needs, such as the ergonomics of the furniture, hygiene and accessibility. Sense of control is also included, since it gives employees more at ease when choices are available.

2. Privacy

The level of privacy needed of one human being is different to others. Besides privacy itself, territoriality also included in this indicator, since it is considered as means of achieving a desired level of privacy.

3. Stimulation

The ability to attract and retain employees in the office, giving them sense of belonging, and some status are included in the stimulation. Accordingly, control also stimulates employees to become happier (Choose People, 2012; Veitch & Gifford, 1996), while self-actualization give the stimulation on the creation and innovation process (Jones Lang Lasalle, 2011).

All aspects within the interior and exterior of the physical appearance of the workplace could contribute to the feel towards comfort, privacy and stimulation within individuals. Dul et al (2011) listed a number of elements of the physical work environment that are possibly related to creativity:

Table 3 - Elements of the physical work environment related to creativity (Dul, et al., 2011)

No	Element	Description
1	Furniture	Furniture that are placed in the workplace
2	Indoor plants/ flowers	Plants that are placed in the workplace
3	Calming colours	Colours that provide a relaxing experience (e.g. blue, green, blue violet)
4	Inspiring colours	Colours that provide stimulating experience (e.g. yellow, orange, pink, red, red violet)
5	Privacy	The possibility of being secluded from the presence or view of others
6	Window view to nature	Having visual access from the work environment to the outer natural environment (e.g. trees, plants)
7	Any window view	Having visual access from work environment to any outer environment
8	Quantity of light	The amount of light in the work environment
9	Daylight	The light coming from the sun into the work environment
10	Indoor physical climate	The temperature, velocity, humidity, and composition of the air in the work environment
11	Positive sound	Positive sounds (e.g. music, silence, absence of noise)
12	Positive smell	Positive odors (e.g. fresh air, absence of bad smell)

Concerning the allocation of workspace based on activities, working activities themselves consist of different categories (Robert Gifford, 2002). Most work outcomes fall into the four different categories: performance (productivity including other indicators such as absence, resignation, time spent in the office, etc.), feelings (satisfaction, evaluations, attitudes, emotions & perceptions), health & stress (morale, positive or negative changes in body or mind) and social behavior (special behavior, interpersonal interaction, privacy, status). Five major aspects of the physical working environment are affecting these four outcome categories: sound (noise, music), temperature (heat & cold), air (pollution, freshness), light and color (sunlight, incandescent, fluorescent, windows, views), and space (amount, arrangements). However, in this research, the noise is considered as already in good condition for the employees and organizations.

Based on the three summarized indicators and the elements of the physical appearance of the workplace, the following variables were distinguished:

Table 4 — Elements and indicators filtered from literature

Elements	Indicators	Explanation
Furniture	Comfort	This attribute/ element was proposed by Dul et al (Dul, et al., 2011) as one of the influencing elements towards creativity. The use of furniture could symbolize status and comfort at the same time.
Climate	Comfort	Climate could be one of the factors towards control and comfort.
Room colours	Stimulation	Vischer (2007) included colours in architectonic details, which are likely to affect 'emotion-focused' coping behaviour in situations of workspace stress. It does appear that colour can influence workers' moods and, in general, that warm colours are exciting and cool colours are calming (Schatz & Bowers, 2005).
Artificial lighting	Comfort	Artificial lighting could be related to the degree of control of one of the ambience factors in the office. Moreover, artificial lighting could also support visual comfort.

Daylight	Comfort	Daylight research has linked increased comfort and productivity with window size and proximity, as well as with view out, control over blinds and shielding from glare (Vischer, 2007).
Partition heights & materials	Privacy	Partition is one of the ways to create privacy. Different materials create different feel for visual and acoustic privacy.
Floor materials		Floor material could be one other way to create sound privacy and territoriality.
Windows & outside view	Stimulation	The idea of outside view is in line with the daylight issue, which could either enhance or reduce comfort and productivity. However, the impact of window proximity also depends on the culture. For instance, in Japan, the highest proximity to window tend to be less productive (Jones Lang Lasalle, 2012a).

3.5. Answer of Sub-question 2

“What are the theories and discussions of the new workplace design?”

Based on the theory of Duffy (1997) concerning the New Office, the new workplace is focusing more on the added value of real estate (in this case the office) towards organizations' performance. The new workplace has technology embedded in the work process (Martens, 2011), where it became not only a tool or a media, but a way of enhancing performance for instance by gaining inputs through online crowdsourcing, eliminating distance through videoconference, and so forth. Furthermore, the new workplace has become not only a place, which facilitate the working process, but also supporta employees' developmental process and their sense of belonging to the organization.

In summary, the following are the characteristics of the new office based on Duffy's (Duffy, 1997) interpretations:

- Much greater attention to the economic importance of better use of time
- Impatience with boundaries, to improve communications between departments and specialists
- Less hierarchy
- A tendency towards smaller, more rapidly changing organisational units
- The importance of group activity
- The obsolescence of clerks and clerical ways
- Total confidence in the creative use of IT
- A new flexibility

“What are the influences of workplace design on organizations' performance?”

A well-designed and well-managed workplace could contribute plenty of tangible and intangible aspects towards organizations' performance. According to Duffy (Duffy, 1997, 2008), workplace management could boost the work process and organizations' performance through the added value of the real estate such as smoother workflow or communication, and by driving down the occupancy costs, or increasing efficiency.

Facilitating the employees with the proper combination of workspace arrangements, such as in activity-based work settings, will also increase performance through the possibilities to choose workspace. It means giving sense of control, which will increase employees' satisfactions. The survey results also prove how employees value the importance of workplace design, and how will it influence their performance. This process could be explained through the multiple levels of the Maslow's pyramid:

- Physiological: giving the basic physical comfort (functional aspects)
- Safety: concerning health and hygiene
- Attraction/ belonging: engaging the corporate culture through the workspace
- Esteem: translating the exiting business culture through a symbolic way such as the workplace itself
- Self-actualization: promoting and supporting innovations by facilitating the employees

“What are the current trends of the new workplace design?”

Today's trend of the workplace environment is the diversity of workers generation, where millennials, gen X, gen Y and the baby boomers are working together as a team. This combination creates a dilemma but also a good skill combination. However, in the coming years, the baby boomers generation will withdraw from the working population, and different type of working process will develop. The result could be the endless grow of technology dependent processes, where communications and basic working processes will be endorsed by everything related to technology and its development.



Figure 12 - Office design transformation (Gensler Architects, 2008)

Furthermore, according to Ouye (2011) the trends on the workplace environment are:

1. The continuing distribution of organizations
2. The availability of enabling technologies and social collaboration tools
3. The coming shortage of knowledge workers
4. The demand for more work flexibility
5. Pressure for more sustainable organizations and work-styles

The fourth point of the increasing demand for flexibility in the working environment could be the answer when we combine the different generations who are currently active. With higher flexibility, the design could be answered with the activity based workplace arrangement discussed by Duffy (2008). Different workspace and supporting areas distinguished by van Meel (van Meel, et al., 2010) could also be the answer of today's workplace design trend. However, what is most important is to align the workplace management with the whole organization scheme, strategy and objectives, and not only to follow the trends. The variety of workspace for different activities could always be combined and complement each other. An organization does not have to provide all sorts of workspace types, but merely the most efficient ones, which suit their work process.

“What can be found in the literature about the psychological aspects of workplace design?”

Within the topic of the impacts of office design towards employees' productivity, the physical characteristics of the office will play dominant roles in enhancing or reducing their performance. Elements such as daylight and colours are some of the lists considered to have positive/ negative impact towards their behaviour and perceptions. The behaviour and perception will be related to the other domain of environmental psychology, which will be elaborated further in this proposal.

Based on list of variables explained before, the attributes, which will be used on the further part on the questionnaire, are:

Table 5 - List of the variables of workplace's physical characteristics

Elements	Indicators	Explanation
Furniture	Comfort	This attribute/ element was proposed by Dul et al (Dul, et al., 2011) as one of the influencing elements towards creativity. The use of furniture could symbolize status and comfort at the same time.
Climate	Comfort	Climate could be one of the factors towards control and comfort.
Room colours	Stimulation	Vischer (2007) included colours in architectonic details, which are likely to affect 'emotion-focused' coping behaviour in situations of workspace stress. It does appear that colour can influence workers' moods and, in general, that warm colours are exciting and cool colours are calming (Schatz & Bowers, 2005).
Artificial lighting	Comfort	Artificial lighting could be related to the degree of control of one of the ambience factors in the office. Moreover, artificial lighting could also support visual comfort.
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Partition heights & materials	Privacy	Partition is one of the ways to create privacy. Different materials create different feel for visual and acoustic privacy.
Floor materials	Stimulation	Floor material could be one other way to create sound privacy and territoriality.
Windows & outside view	Stimulation	The idea of outside view is in line with the daylight issue, which could either enhance or reduce comfort and productivity. However, the impact of window proximity also depends on the culture. For instance, in Japan, the highest proximity to window tend to be less productive (Jones Lang Lasalle, 2012a).

4. Culture & Workplace Behaviour



This chapter will show the studies concerning culture, which consists of national and organizational culture. Its influence on behaviour in the workplace will also be discussed.

4. Culture & Workplace Behaviour

This chapter will elucidate the further question of:

“What are the influences of ones culture on ones perception on their workplace?”

- a. What are the definitions of culture, organizational culture and national culture?
- b. What are the differences between the Netherlands and Jakarta concerning their culture in general?
- c. How do culture influence ones perception towards their workplace?

4.1. Culture in General

The word culture comes from the same root as the verb “to cultivate”, meaning to till the soil: the way people act upon nature (Trompenaars & Hampden-Turner, 1997, p. 23). It could as well be analysed as a phenomenon that surrounds us at all times, being constantly enacted and created by our interactions with others (Schein, 1992).

Culture is about the shared tacit ways of being (Senge, et al., 1998, p. 62). Furthermore as the ideas, customs, and social behaviour of a particular people or society (Oxford University Press, 2012). Both meanings could represent the idea of company culture and local / national culture. Company culture is a result of human enactment (Morgan, 1993, p. 111).

When we encounter other social systems, there is already given circumstances such as names, norms and habits, which have already developed since a long time. We cannot strip people of their common sense constructs or routine ways of seeing. They come to us as whole systems of patterned meanings and understandings (Trompenaars & Hampden-Turner, 1997, pp. 18-19). Thus, culture is context or location oriented. Even in one country, there could be different tribes, languages and traditions. Culture is the manner in which these dilemmas are reconciled, since every nation seeks a different and winding path to its own ideals of integrity (Trompenaars & Hampden-Turner, 1997, p. 183). Culture is also about

acceptance in societies, which could be transpired as norms. Norms measure the standards for behaviour that exist within a group or category of people (Hofstede, et al., 2010).

There are different ways to distinguish cultures. One way, is through the four different culture manifestations: symbols, heroes, rituals, and values. They are described as the skins of an onion, indicating that symbols represent the most superficial and values the deepest manifestations of culture, with heroes and rituals in between (Hofstede, et al., 2010). Symbols are words, gestures, pictures or object with particular meanings of particular culture. Heroes are persons, real or imaginary, serves as role models due to its inherent characteristics. Rituals are collective activities, which in particular cultures considered socially essential, such as ways of paying respect to others. In the core of the onion diagram, there are values: feelings with an added arrow indicating a plus and a minus side. They deal with pairings of paradoxes such as good vs. evil, clean vs. dirty, safe vs.

Figure 13 - Onion diagram (Hofstede, et al., 2010)

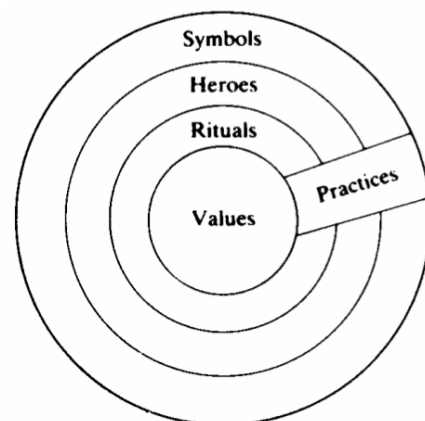


Figure 14 - Onion diagram (Hofstede, Hofstede, & Minkov, 2010)

dangerous, permitted vs. forbidden, and so forth. Concluding from the onion diagram, a workplace is a symbol, where the values of a company is reflected, where the rituals of daily working activities are conducted.

4.2. The Role of National Culture

The word culture comes from the same root as the verb “to cultivate”, meaning to till the soil: the way people act upon nature (Trompenaars & Hampden-Turner, 1997, p. 23). It could as well be analysed as a phenomenon that surrounds us at all times, being constantly enacted and created by our interactions with others (Schein, 1992). Culture is about the shared tacit ways of being (Senge, et al., 1998, p. 62).

Furthermore as the ideas, customs, and social behaviour of a particular people or society (Oxford University Press, 2012) culture could also represent the idea of not just culture of an area/ country for instance, but also company culture. It is a result of human enactment (Morgan, 1993, p. 111).

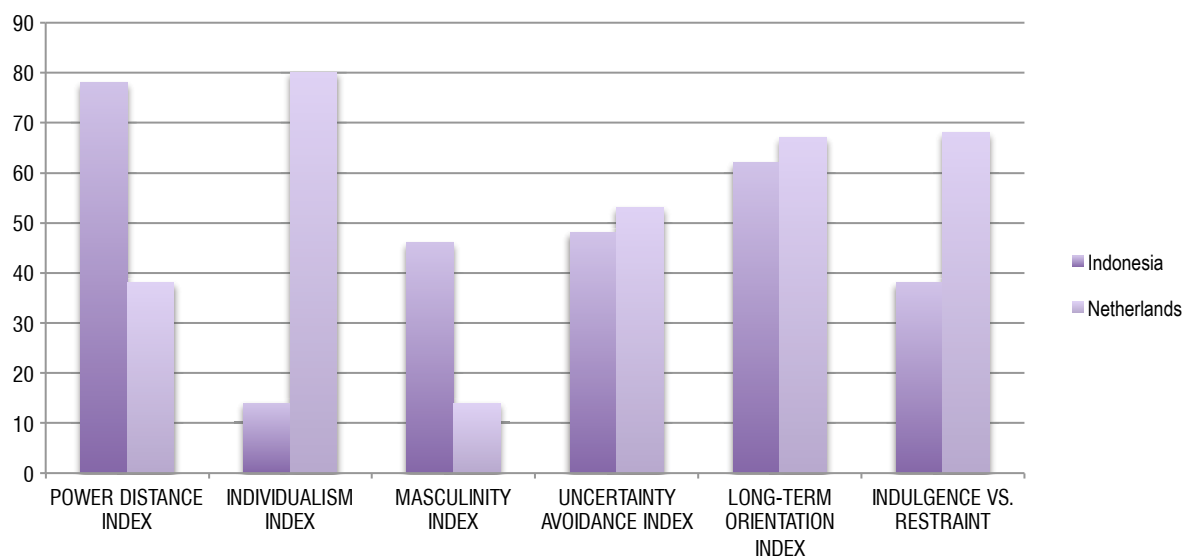
When we encounter other social systems, there are already given circumstances such as names, norms and habits, which have already developed since a long time. We cannot strip people of their common sense constructs or routine ways of seeing. They come to us as whole systems of patterned meanings and understandings (Trompenaars & Hampden-Turner, 1997, pp. 18-19). Thus, culture is context or location oriented. Even in one country, there could be different tribes, languages and traditions. Culture is the manner in which these dilemmas are reconciled, since every nation seeks a different and winding path to its own ideals of integrity (Trompenaars & Hampden-Turner, 1997, p. 183). Culture is also about acceptance in societies, which could be transpired as norms. Norms measure the standards for behaviour that exist within a group or category of people (Hofstede, et al., 2010).

The way individuals react to action conducted to them, or the way they communicate and interact with their colleagues or bosses at work, will reflect their values. Hofstede (2010) distinguished these actions and perspectives as mental programs. He then, distinct them into four different measurements or indexes, which are complemented with two more variables of long-term orientation and indulgence vs. restraint index, by Minkov (2010). Subsequently, the indexes are:

- Power distance (power distance index): the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. Subsequently, Hofstede created the Power Distance Index (PDI), which measure the differences of each country’s power distances.
- Collectivism vs. individualism (individualism index): collectivism has tighter ties between individuals than individualism. In organizations of collectivist countries personal relationship comes before task. While for countries with lower collectivism index (more individualist), task is more important than personal relationship in organization life.
- Femininity vs. masculinity (masculinity index): masculinity in this point is the condition where a community indicates the extent to which the dominant values of a society are “masculine” (e.g. assertive and competitive), and intents to distinguish gender roles very clearly. On the other side, feminine communities tend to position men and women in the same level (e.g. both men and women are supposed to be modest, tender and have no obligation to certain roles).

- Uncertainty vs. avoidance index: the term avoidance in this condition comprises the feel of threat by unknown situations thereby tend to avoid these conditions. While uncertainty represents the less hesitant to face uncertain conditions. Uncertainty in the workplace environment is usually correlated with job stress and the willingness to stay for longer/ shorter period of time.
- Long-term orientation index: this measurement is based on the Confucius theory on the Chinese values. The community that pursue long-term orientation are persistence (perseverance). They order relationships by status. They are thrifty and they have a sense of shame. The other way goes for the short-term community.
- Indulgence vs. restraint index: the indulgence vs. restraint index explains that some countries tend to be easily indulged than others. Interestingly, this indulgence does not have parallel correlation with a country's wealth. Some of the happiest countries are not the wealthiest country. Indulgence stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. Its opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms.

In figure 8 the results of the Indonesian indexes, compare to the Netherlands, which will be used as a basis for the further comparative study of the workplace characteristics, are presented. Indonesian culture tends to be more communal, as seen in the low individualism index, with a higher power distance index.



Graphic 3 - Comparison between index of culture characteristics of the Dutch & Indonesian (Hofstede, et al., 2010)

Table 6 - Relations of cultural dimensions and workplace characteristics. Adapted from: Plijter (2012) & Kloet (2007)

Cultural dimensions	Workplace characteristics
Power distance High: Culture does not upwards mobility Low: Equal opportunities for all staff members	Top managers, top floor More open floor space
Individualism vs. collectivism High: Largely loose working relationship Low: The colleague takes responsibility	Private spaces are important More team space
Masculinity vs. femininity High: Male needs to dominate in organizations	Technical orientation materials

Low: balance in male and female needs	More colors and warmth
Uncertainty avoidance High: Many regulations to predict results Low: Creative and entrepreneurial environment	Standardized settings Inspirational furniture
Long- vs. short-term orientation High: Strong work ethic and respect for tradition Low: Change and flexibility to develop business	More hierarchical workplace management Flatter structure in the workplace
Indulgence vs. restraint High: Higher tendency to allow relatively free gratification of life enjoyment Low: Such gratification is triggered by strict social norms	Less focus towards employees satisfaction on the physical workplace More focus towards employees satisfaction on the physical workplace

Table 7 — Relations of cultural dimensions and workplace characteristics. Adapted from: Plijter (2012) & Kloet (2007)

Culture, together with the identity of the users could be expressed and reflected through the physical workplace (Martens, 2011). In relation with activities and the physical workplace, Plijter (2012) in her work also referred to Kloet (2007), who translated the variables of Hofstede and Minkov (Hofstede, et al., 2010) into the tendencies of physical preferences in the workplace.

Indonesia and the Netherlands tend to have distinguished cultures from the three out of four Hofstede's indexes. Based on the information in figure 8, Indonesian culture tends to be more hierarchical than the Netherlands, as it is mostly for Asian culture compare to the western countries. The Power Distance Index proves the phenomenon, where Indonesia scores 40 points higher than the Netherlands. The Dutch tend to be more individualist than the Indonesians, and more feminine as well, while Indonesian parents expect their children to take care of them on their old days. The Indonesian society also tends to be quiet masculine, with discrepancy between gender roles. In conclusion of the cultural differences between Indonesia and the Netherlands, the countries have very different values, in four out of the six variables by Hofstede and Minkov (2010). These values should then be translated to the physical characteristics of a workplace in the further phase of the theoretical framework.

4.3. Organizational Culture

Culture has long been recognized as a contingent variable in formulating strategies (Morgan, 1993, p. 111). Which means, it is very much influencing the strategy. An example could be seen on how a company could adapt its culture based on the leader's culture. Strategies are used to achieve objectives, which are the driver of organizations way of working. Thus, there is such thing as corporate culture, which distinguish a particular organization or company with its competitors and surroundings. A family owned company, will have different value than a national owned company. The objectives are different, therefore the strategies used are different, creating different regulations and working environment. It shares the ideas, vision and objectives of the company. It defines the values brought by the first founder of the company as well. Culture is a shared system of meanings. It dictates what we pay attention to, how we act and what we value (Trompenaars & Hampden-Turner, 1997).

Hofstede, et al. (2010) explained the different indexes and their relation with the organizational structure. One of them is on power distance index (PDI). In terms of education level, higher educated employees could represent the higher hierarchy within organizational chart, where the PDI are mostly higher than employees with lower education or unskilled and semiskilled workers (Hofstede, et al., 2010). However, this situation only occurs in the

countries with lower power distance. On the opposite situation, most of the employees will have the same rate of PDI.

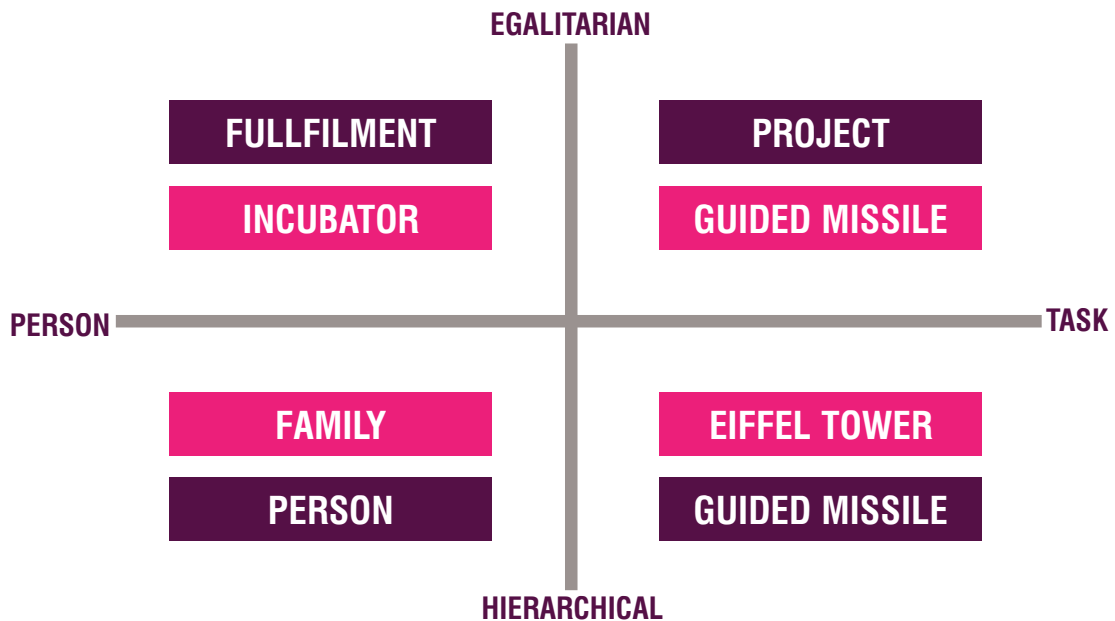


Figure 15 — Organization Type, Culture & Characteristics (Trompenaars & Hampden-Turner, 1997)

According to Trompenaars (1997, pp. 157, 159), three most important aspects of organisational structure that determine corporate culture are:

- The general relationship between employees and their organisation
- The vertical or hierarchical system of authority defining superiors and subordinates
- The general views of employees about the organisation's destiny, purposes and goals, and their places in this.

He also mentioned about the four types of organization, which are divided according to their focus on person/task and hierarchy/equality. With the typical Indonesian culture, when linked to Hofstede's theory (Hofstede, et al., 2010), it will be most likely that the local Indonesian organization would be more hierarchical and person oriented, as in the family type.

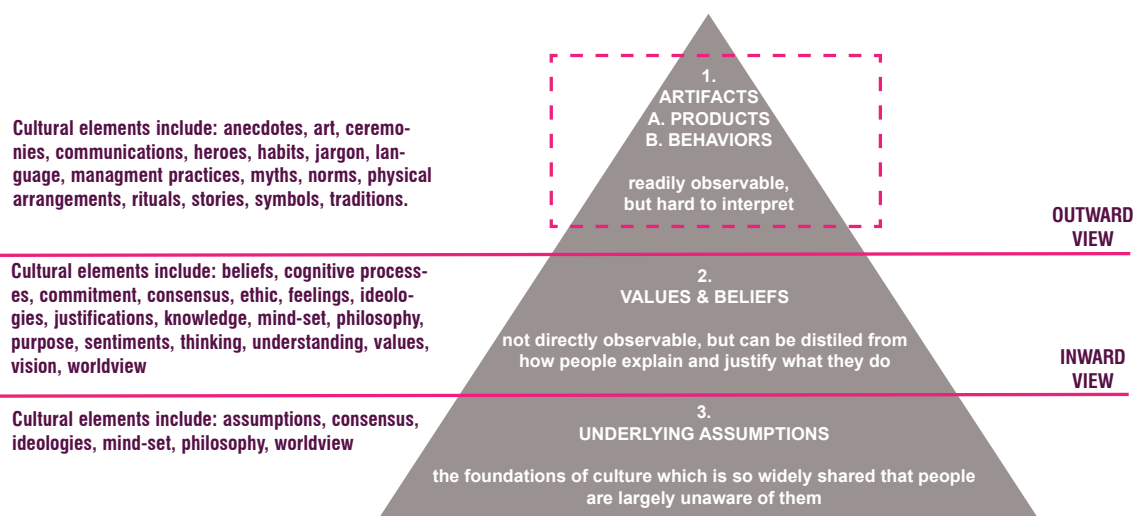


Figure 16 — Organizational culture & its manifestation (Schein, 1992)

Organizations also develop from time to time. They merge with other organizations or expand their businesses from local level to national level, furthermore to regional level then international. These expansions were abridged by the development of IT and other technologies. This is where companies from certain countries have to alienate with both the local culture and local market. Location will determine the rule of the game of how organizations would behave. Nonetheless, when companies go global, there is an almost inevitable move towards universalism way of thinking. Therefore, “glocalisation” is important within organization’s expansion to their foreign business chains. It is necessary to adapt the organisation to local characteristics of the market, the legislation, the fiscal regime, the socio-political system and the cultural system (Trompenaars & Hampden-Turner, 1997, pp. 3, 38). This leads to a conclusion of there is no one best way of organizing. The important thing is for management to utilize the strengths of the local culture (Hofstede, et al., 2010).

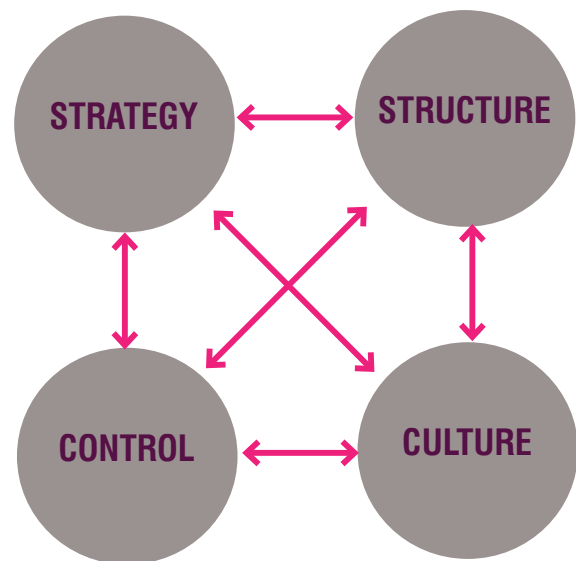


Figure 17

Strategy, structure, control and culture in organization (Hofstede, et al., 2010)

Juxtaposed with the issue in chapter 2 of strategy and real estate strategy in particular, culture is very much influencing an organization’s strategy. Hofstede et al. (2010) suggested that as long as quantitative studies of organizational cultures are not used as isolated tricks but are integrated into a broader approach, they are both feasible and useful. Thus, it could be stated that strategy is one of culture’s product included in the management practices.

4.4. Answer of Sub-question 3

“What are the definitions of culture, organizational culture and national culture?”

Culture is about the shared tacit ways of being (Senge, et al., 1998, p. 62). There are various forms of culture including symbols, heroes, rituals, and values. Company culture is a result of human enactment (Morgan, 1993, p. 111). Who, where, when and how an organization started, really influence the culture of the initial group.

“What are the differences between the Netherlands and Jakarta concerning their culture in general?”

According to Hofstede (2010), the country rank relatively low for PDI index, no. 38. And no.73 in the masculinity index, which means the inhabitants tend to be more feminine than masculine. The Dutch tend to be more individualistic, where normally families only have tight relationship within the nuclear members (father, mother and children). On the other hand, Indonesia scored 46 in the uncertainty level, which considers as a community not in favour of uncertainties, and scored large PDI, approximately 78. The tropical country is also much more masculine compare to the Dutch communities.

In summary, both countries are relatively the opposite on four out of six cultural indexes, namely:

- Power distance index: The Dutch tend to have lower power distance compare to the Indonesian
- Masculin index: Indonesia is a much more masculine country compare to the Netherlands
- Individualism index: The Dutch is in general more individualists than the Indonesians
- Indulgence vs. restraint index: the Indonesians has lower indulgence level compare to the Dutch' index

“How do culture influence one’s perception towards their workplace?”

One’s perception towards a workplace is very much influenced by their origin culture and previous organization experience. It would be incomplete to state that only local culture will influence one’s behaviour, expectations and perception in his/her workplace. It is the combination of different culture from the local, the origin culture of the employees and the culture of the organization, which will shape his/her perception.

The example of how the culture influences one’s perception towards their workplace could be seen also from their expectations towards workplace. For instance, when the power distance index is high, hierarchy is considered to be high. Thus, the higher management level will expect more privileges concerning their workplace such as bigger room size, better furniture, better equipment, and so forth. This example could be seen in Arabic countries. In addition, the previous table 5 tries to build the connection between culture and workplace characteristics.

As a result, the following question could be answered:

“What are the influences of ones culture on ones perception on their workplace?”

Culture is also about acceptance in societies, which could be transpired as norms. Norms measure the standards for behaviour that exist within a group or category of people (Hofstede, et al., 2010). Looking back to the basics, it is the way people act upon nature. Thus, one’s culture, will determine their perceptions towards what kind of workplace they prefer. Since one’s culture is inherited from different kinds of culture including the culture of their origins, local culture and the organization’s culture, then local culture will also determine how they perceive their workplace. For instance, someone with a pure Indonesian culture will tend to look for more hierarchy not just in the structure of the organization, but also in the arrangement of the office space.

However, when interrupted with the culture of the education and organizational culture, ones preference could differ than the stereotype found in the Hofstede’s index. Therefore, even in one organization set in one place, it would be impossible to satisfy everyone and give them their own type of space. One of the solution of this issue could be to create choices for employees to choose their own type of space that suit them, with their activity and their preference for the environment, as found in the activity-based workplace arrangement.

4.5. The Process towards Innovative Workplace

Based on the initial interviews, findings of the issues concerning workplace management and the endless debate about innovative workplace, the first hypothesis was concluded:

➤ “Organizations in Jakarta are aware on the importance of the physical workplace, but did not show any sign of bottom up approach on this matter.”

Bottom up approach in this case means as the approach of making a decision on a workplace through employee engagement. Based on the high level of power distance index as, Indonesia has the tendency to create more top down decisions, compare to engaging the lower level of the management.

This hypothesis will be measure by the interview towards key persons within the organizations and the small interviews towards organizations members during the case studies. The objective of the interview is to discover the process towards their current workplace, how the companies achieve their objectives, whether they involve the employees or not.

The process towards innovative workplace is influenced by the three aspects mentioned above, namely the objectives & strategy of the organization, the existing precedents, guidelines and benchmark of the current issues of the workplace management and last but not least, culture, both the local culture and the culture of the organizations.

4.6. The Products of Innovative Workplace

Based on the the perspective of the power index of Hofstede & Minkov (Hofstede, et al., 2010), the second hypothesis was concluded:

➤ “The settings of workplaces in Jakarta will tend to be more hierarchical e.g. representing status, compare to the Netherlands.”

And due to the consequences of the first hypothesis, supported by the low indulgence level of the Indonesian culture in comparison with the Dutch culture, the third hypothesis would be:

➤ “Employees in Jakarta will tend to have low satisfaction level on their workplace due to their low result on the indulgence vs. restraint index.”

The measurement for this hypothesis was by comparing the offices in Jakarta and the Netherlands, through case studies, reference cases in the Netherlands and the data from CfPB of the WODI Toolkit (Center for People and Buildings, 2013)compare to the one surveyed in Jakarta.

5. Case Study & Survey



This part will show the empirical part of the research, where several observations and surveys were conducted towards companies and their employees.

5. CASE STUDIES & SURVEY

The empirical research part has been conducted in Indonesia, with two reference-cases in the Netherlands. More in depth studies were done in Jakarta, Indonesia, as the main focus of this research. Segregated into different phases, the idea is to understand the real objectives of the companies, and how the organization member cope with the decisions made by the management in terms of workplace management. To understand organization's objectives, interviews are done towards key persons of the company. Thereafter, satisfaction of the employees is investigated through observations and incidental interviews with the employees. At the end of the empirical research, the preferences of the employees will be revealed by the discrete choice part of the survey. The two parts of the discrete choice survey, namely the WODI toolkit and the discrete choice will be matched by three indicators, which will be discussed in the further parts of this chapter.

Fundamentally, the cases observed in Indonesian and the reference cases in Netherlands are done to answer subquestion 4 of:

“What are the implementations of the current workplace design in Jakarta?”

- a. What are the differences between the Netherlands and Jakarta concerning decision-making process of a workplace design?
- b. How do the workers in Jakarta's case studies perceive their current workplaces?
- c. What are the preferences of workers in the Jakarta's case studies concerning workplace design?
- d. What lessons can be learned from the Netherlands in implementing their workplace?

5.1. Indonesian Case Study

5.1.1. Indonesian Case Study Process

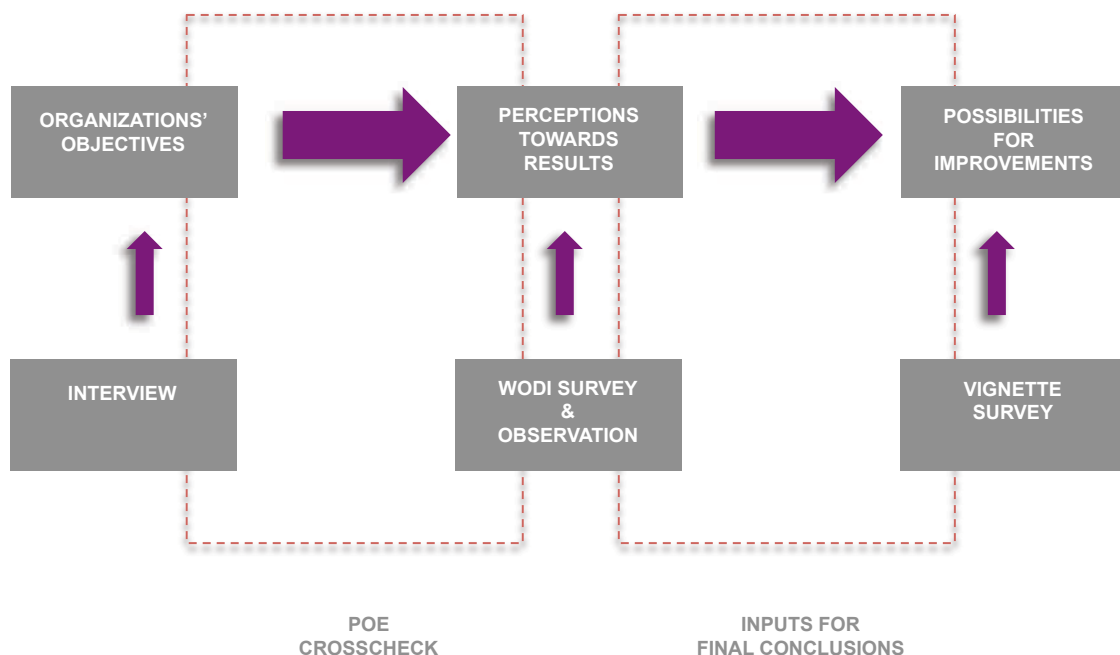


Figure 18 — Indonesian case phase

The figure above shows the main framework of the approach of the empirical research in Indonesia. In accordance with the process of the accommodation choice model (van der Voordt, Y.M.D., & Gosselink, 2011), every change within an organization starts from the impetus of organization's objectives. To discover the process and the stakeholders involved in the organization's objectives, interviews with key persons will be done.

Knowing the objectives beforehand will add up to the reasoning behind the evidence-based Post Occupancy Evaluation (POE), which will be done through observation and satisfaction survey. The observation will explain the behaviours of the users towards the products, as the results of organizations' initiative to change. Since measuring the interaction between the products and the behaviours towards them is an intangible process, the matrix in table 2 will give more insights for the focus points during the observation. All variables and indicators were based on the previous literature studies (R. S. Batenburg & D. J. M. van der Voordt, 2008; Schatz & Bowers, 2005; van Meel, et al., 2010; Vischer, 2007; Wang & Boukberi, 2010).

Moreover, to gain more knowledge about the perceived satisfaction from the users, a part of the users' survey will include the satisfaction of the employees of their current workplace environment. The five distinctive cases were chosen with different criteria. Firstly they have to be a company with a head office in Jakarta, each renting or owning a multi stories office building, and also a private company. The reason of having the case studies of only private companies is due to the very different working culture of the Indonesian public corporations, which will not be discussed in this research. The combination of the cases should show the diversity of company culture, industry, as well as working culture. Five cases from different history background, culture and industry were observed, and three of them agreed to be surveyed.

The first case of MedcoEnergi, represents the large Indonesian corporates, from the Oil & Gas industry. MedcoEnergi has been one of the leading Oil & Gas private companies in Indonesia. The company has been built for 30 years, with developments and expansions abroad in countries such as Libya, Oman and the U.S. The interesting part about MedcoEnergi would be its characteristics of the Indonesian culture embedded in the working process, which could be seen in the daily activities and through some incidental interviews with the employees. The second case is PTI-Architects, which is a local Architecture firm. Although started and built by an Indonesian, PTI-Architects was once part of an Australian global architecture firm. Within years, PTI-Architects has developed and currently employs more than 90 employees in their current office in Jakarta, with several expats from the U.S., Philippines, and Australia. Differ from MedcoEnergi, PTI-Architects is more international oriented although they are based in Jakarta only. The office facilitates the employees with their own desks, and little approach of activity-based area. The third case Egis Indonesia is a subsidiary on Egis, a French engineering company, working in public construction and design engineering. Although act as the Indonesian subsidiary of Egis France, Egis Indonesia is very much local oriented and has major autonomy from their mother company. Despite sharing some engineers from their global network and organization development objectives, Egis Indonesia set their own strategy, with small input from their mother company. The company is relatively small with more than 30 employees, but with the plan of exponential growth in the near future. They have an open plan office layout, with only one meeting space. Compare to other four cases, Egis Indonesia is the only one located outside Jakarta's central business district, with the leverage of their clients and partners who located in the same area.

The last two companies observed, but not surveyed are Ogilvy Jakarta and P&G Jakarta. Both companies has American founders, and located in the same building, almost outside of one of Jakarta's CBD. Ogilvy Jakarta is a subsidiary of Ogilvy, a part of the WPP Company, a communication and advertisement company. The organization moved to the current building since early 2011, with each employee employing an entitled desktop, but with a touch of activity-based workplace setting. P&G Jakarta, which served as the last case, is also using an

activity-based workplace setting, but with free-seating and flexible working hours and days. They are not obliged to come to the office 5 days a week, but they can have one day working from home.

5.1.2. Location Overview: Jakarta

Jakarta is a highly dense populated city, with population of 10.187.595 inhabitants as of November 2011 (Disdukcapil DKI Jakarta, 2011). This number is only covering the legal inhabitants with registered IDs, while there are lots among others, which are not covered within the governmental screening. As the capital of Indonesia, the city has grown to number 17th among the largest city in the world (The Brookings Institution, 2012), a big leap after ranked 171 in 2007. The city itself is undergoing a lot of development in terms of real estate as well as supporting infrastructures, where the government and private investors thrive in creating new infrastructures and new businesses at the same time.

In terms of quality of living, the city is still under various welfare issues, such as on the lack of public transportation and the traffic jam that is creating massive problems for the commuters of this 2nd largest conurbation area after Tokyo. Durations of commuting varied between 1-2.5 hours for each commuter, but can get worse during the rainy seasons caused by the additional flood problems. These issues are really influencing the culture of the inhabitants, such as the quality of life issue. Due to long hours spent in transportations, the inhabitants have limitations in time. Jakarta citizens are used to be in a rush everyday, tolerance is less, compare to Indonesian societies on the other parts of the country. The traffic issue also creates more moving schedule on activities such as meetings or other appointments. These issues pursue them to get used to working on tight time schedules. Hence, they tend to work long hours, which vary according to the types of businesses.

The fact that the city is a part of a Moslem country could be seen from the five times praying ritual done by most of the Moslems, and longer lunch break every Friday for the men (not women) to do the Friday prayer (sholat jumat). All office buildings are facilitated with praying rooms dedicated for the Moslem ritual, which are used at least 2 times a day by the Moslem workers. The working hours also vary for different companies. Most oil & gas companies, as well as public organizations tend to start and finish earlier. MedcoEnergi for instance, starts its working hours at 7.00 AM and finishes at 4.00 PM, while other companies such as PTI starts its working hours at 8.30 AM until 5.30 PM. According to incidental interviews with the employees during case studies, earlier working hours gives more time for employees to balance between their professional and private activities, due to the less traffic jam during those times. Most companies are not applying a flexible working hours/ days, including the public organizations, which means workers are mostly spending their time in the office 5 days a week.

The urban life also endorses globalization for its citizens. Foreign influences, both from the western culture (European and American countries) and eastern countries (Asian countries) can be seen in most of the businesses occurring in the city. The number of expats, which was decreasing after the national riots in 1997, is now increasing again with the raising economy. Consequently, the most educated workforces are used to international working environment, with the existence of international companies. International workforces manage some national and multinational companies. For instance, PTI Architects, although owned by a local, is very international oriented with foreign directors and employees.

The high pressures came from the urban environment also creates more competitiveness on the working culture, especially in private companies. This issue also urges companies to be more competitive to retain and attract the best talents. Real estate developers are supplying more and varied office spaces, from a member-based personal office space, to a big office space for bigger corporates. Currently, the city has two major central business districts, namely Sudirman and Kuningan, which are both located in the South and the Central of Jakarta. The following part is dedicated to explain findings on each case study in Jakarta.

5.1.3. Case Study Findings

A. MedcoEnergi

ORGANISATION

MedcoEnergi is a local company based on the oil & gas industry. Being the pioneer of local private petroleum company, the organization has grown towards its current state, as the local benchmark in the industry. The petroleum industry itself has faced a big change, due to the issue of oil resource scarcity. The process of venturing for new resources and energy potentials are being explored by the organization. This means there is also the urge to accommodate confidentiality of data and documents, as well as the confidentiality of meetings and work process (Rasyid, personal communication, February 2013).

Consequently as a company working in energy exploration, MedcoEnergi has to work with the government's rules and system, for instance through the screening and coordination with SK migas (before was BP migas). This procedure of working with the government has influenced MedcoEnergi's corporate culture, not just being concern towards health and safety issues, but also on working with the government's bureaucracy and hierarchy, as seen in their organization structure and office hierarchies.

As stated by the management, MedcoEnergi has the vision "to be the energy company of choice for all key stakeholders, consistently delivering competitive energy related products and services of world-class standards" (MedcoEnergi, 2013). With the mission to develop energy resources potentials into profitable investment portfolios, carried out properly and responsibly. To attain the positive working ethics, they try to encourage the values of professionalism, ethics, open and innovative culture. The latter serve as the objective for their human resource development in terms of innovation and intellectual maturity.

Hereafter, they also stated directly their policy & objectives:

- In pursuing its vision statement, becoming one of world-class company, MedcoEnergi requires a Modern working environment, which professionally managed and equipped employees with standard office equipment and promotes a high standard health & safety environment with maximum of security access.
- The Lay out design based on Company's business processes / grouping activities / departments, promotes organizational effectiveness through team based productivity and supports the office management effectiveness and policy

CULTURE & THE WORKING PROCESS

In accordance with their line of business as an Indonesian oil & gas company, MedcoEnergi has to report all actions and belongings into SK Migas, the national inspection department for the national petroleum businesses and resources. Therefore, making MedcoEnergi below SK Migas' line of organization. This procedure to plan everything in accordance with SK Migas' guidelines, influences all decision-making process, including the workplace change procedure. Buildings were listed and selected based on this procedure.

In relation with Hofstede's indexes (Hofstede, et al., 2010), MedcoEnergi truly revealed the essence of Indonesian characteristics as measured in his work. Based on the human resource data, the total of the female workers in the company is less than 19% of the total workforce, which proves the high masculinity index within the firm. The observation also showed some subjective insights on the low individualism index, which also indicate the family oriented type of organization (Trompenaars & Hampden-Turner, 1997). For example, the managers are seen as

“the father” of the department. High power distance index is also felt from the layout and the design of the office. The gaps could be seen through the type of workspace they have, either they are sitting at the open layout workplace or having their own rooms, higher quality of furniture for higher management level. Comparing the rooms of the BODs and the staff, showing high contrast, would clearly show the gaps.

Working as a petroleum company, MedcoEnergi is really aware of health and safety issue. This influences company’s policies and procedures in the office and on the field. In the physical workplace management itself, the guidelines consist of not just sizes of the offices for different employee level, but also on furniture choices, which is related to the safety issue. In other words, the company is more process oriented than result oriented. Nonetheless, results are also very important.

ACCOMMODATION STRATEGY & CONCEPT

Before moving to their current office, MedcoEnergi was occupying another building in different vicinity. The shift towards the current accommodation was first started with pragmatic problems occurred in their previous office such as:

- Electricity problems and lack of supporting-source from the building management
- Lack of accessibility compare to other Jakarta CBD area such as Sudirman and Kuningan
- Lack of privacy and security for the organization due to public usage on the building’s GF and too many entrances.
- Organization growth, which forced the management to provide more employees, also the need for a more functional and efficient workplace design, from closed-room based office to modern open plan concept, also to encourage the effective communication process.
- The requirement of a better image for the company as the first local private oil & gas company in Indonesia

Furthermore, the organization, enforced by the General Service department, started their search for the new office. The initial location selection in Sudirman was based on the research result concerning the employees’ residential area. To minimize the span of the project schedule, the company hired 5 project managers, but all guidelines and research for the initial tendering process were made inside the company.

Amidst the high standards and privileges given in terms of office space and facilities, the company is aiming for accommodating more staff in the future, which supports the large spaces given at the moment. This move of creating more space for more persons in the future is in line with the growth chart of the organization. The culture change also occurred in the company. In their case, the change happens step by step. At first, the organization members are used to the enclosed rooms type of workplace. Each engineer had his/her own room and desks. Furthermore they changed to cubicle type of workplace, until now when they changed to the more open environment approach. The management also tried changes such as clean desk policy. Yet, the pilot project did not succeed, since the lockers they provided were miss-used by the users.

The innovation of the physical workplace environment for MedcoEnergi, of course differs from other smaller companies. Due to the large size of the organization, changes come in phases. Workplace innovation for MedcoEnergi might be not just in terms of creating more openness to encourage the non-formal communication process, but also from the material usage such as the demountable partition system, due to their type of project-base working process. All the process and attempts done by the organization in terms of creating a supportive working environment is done through a hierarchical structure by the general service department, all with the acknowledgment and agreement of the board of directors.

The main constraint in accommodating MedcoEnergi's workplace requirements is its large size of organization. Various building options were eliminated mainly due to their lack of space. Although very supportive in other aspects of MedcoEnergi's requirements, those building are not capable in facilitating roughly 1500 employees at the same time.



Figure 19 — Layout of MedcoEnergi's headquarter

Green building was also one of their main considerations, which they used as other parameters in the search for the new workplace, as a consequence of their mission and strategy. The issue was quickly solved by the current building, which is completed with the Integrated Building Management System (IBMS). As the building is partially owned by the same group of the mother company, MedcoEnergi gained advantages as the main tenant and priority. Although big enough to accommodate their current needs, MedcoEnergi still rents some floors in other building nearby, The Niaga Tower.

All the research and knowledge towards the change to their current workplace were done in house, by the General Service department. The department was a team consisting talents with civil engineering background, as well as facility management, as they are in charge with the maintenance of all of company's facilities. This approach is not only reducing the financial expenses for consultancy, but also create inside views towards the workplace management concept, since the team are already familiar with the working process and culture of the organization, as well as the requirements.

As a result, the accommodation concept truly reflects company's culture and characteristics. The hierarchical culture of the company could also be seen from the space arrangements in the working environment. The gaps between the upper structure and the lower level of the government are very recognizable. Floors with more heights are dedicated to the VP's and BOD's, aside of other gathering functions such as meeting place. The types of furniture used and room sizes also considerably reflect the status of the users. Subsequently, the ratio of FTE/workplace is 1:1, with dedicated 22.5 sqm per FTE. However, there is this big gap between the spaces given to the higher key persons from the management (e.g. BOD's). For instance, the largest net space given in the guidelines is to the CEO is 48sqm/FTE and the smallest 5sqm/FTE for the administration staff. Each staff has a dedicated workstation, including the engineering department's staff, who often works outside the main office to do some field work.

The main concept of the office is to maximize the external views & lights exposure, to and from the working area by using the "Open Office" concept, but still to provide enough room for individual compartment / cabinet and privacy. The company was aware already with the easier communication process, which will be provided by the open office concept. They provided in house research from the general service department to support the decision-making process by the BOD in accordance with SK Migas' (then was BP Migas) guidelines.

As other commercial buildings in Indonesia, the public facilities inside the building also include a praying room or Musholla on each floor, which are used 5 times a day by the Moslems. Nearby these praying rooms on each floor, a pantry completed with coffee machine and a dinning table is located. Discussions tables are available, but are rarely used.

Another unique usage of the facility is how the company facilitates also the Christian employees to do their worship every Friday break. Providing also the common floor (on the 28th floor) for guests and meeting area for all departments, this floor becomes the meeting point for company and clients, also the first branding from the company. To support the branding idea of the company, they created guidelines during the programming phase, of an Indonesian Heritage concept, due to the history of MedcoEnergi as the pioneer of Indonesian oil & gas companies. In respond to this guideline, the designer consultants proposed the idea of Indonesian traditional temple concept in the lounge area of the 28th floor.

The company also rent some space in the B2 floor of the building for their security system and implant travel agent. The idea of having their own security system is to control each floor the company rent through the CCTV per floor they planted themselves. Hereafter, the organization could check not only the security, but also the

efficiency of the employees' usage of the workplace such as overtime work. In the Energy Building itself, the IT server for the whole building (including for all other tenants of the company) are concentrated on the third floor. MedcoEnergi then also decided to rent the IT server on that floor for their whole IT system.

The Integrated Building Maintenance System helps improve the maintenance control of the Energy Building. However, the system is not yet fully implemented in the building. One of the advantages of the MEP system of the building is the ability to control the climate or lighting in ones' working area, since the system is not centralized and can be differentiated based on ones' need/ desire.

Table 8 - Available workspace type in MedcoEnergi

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Private office	Large meeting room	Storage space
Work lounge	Small meeting space	Print & copy area
	Large meeting space	Pantry area
	Meeting point	Break area
		Smoking room
		Library
		Waiting area
		Circulation space
		Praying room

The building is relatively new, compare to other buildings in the area. The location in Sudirman Central Business District in Jakarta, gives extra accessibilities from both from public and private transport, which is much better compare to the previous location.

Each floor is dedicated for each department, with own workstation for each employee. Remote working is possible, but depending on the job description. Some jobs require employees to be in the field for several weeks, while other departments such as HR department, stays in the office the entire working hours. Due to own workstation assigned for each staff, there is possibility for personalization. The partition height of 1.2m, also allows partial vision privacy, while they work. Common facilities and areas such as the pantry, praying room are used together, which also become a hub for employees during lunch, coffee break, or other incidental encounter.

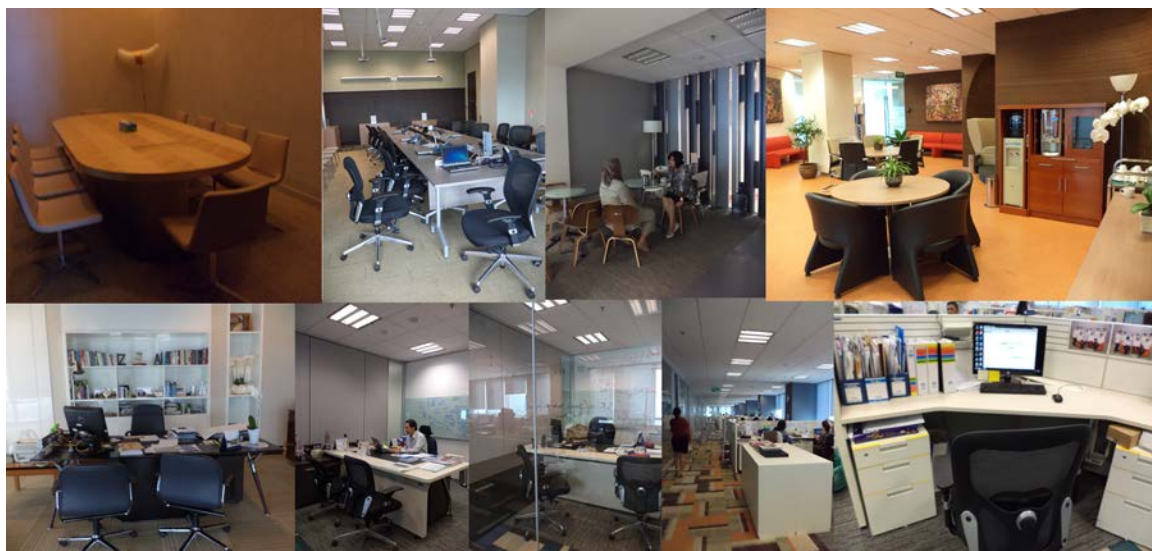


Figure 20 — Interior ambience of MedcoEnergi's headquarter, below from left to right: director's office, Senior manager, manager, and personal workstation

SURVEY RESULT

The satisfaction result of the questionnaire participants from MedcoEnergi are as listed below:

Table 9 - WODI part result of MedcoEnergi's participants

	Satisfied	Dissatisfied	Indicator
Satisfaction with organization	36%	14%	Stimulation
Satisfaction with architecture of the building	64%	9%	Privacy, stimulation, comfort
Satisfaction with the interior design & ambience	55%	9%	Privacy, stimulation, comfort
Satisfaction with transparency in the layout	71%	5%	Privacy
Satisfaction with privacy in the office arrangement	29%	33%	Privacy
Satisfaction with the possibility to concentrate	29%	33%	Privacy, stimulation
Satisfaction with the possibility to communicate	80%	5%	Stimulation
Satisfaction with the IT performance	55%	25%	Stimulation
Satisfaction with storage & archive facility	55%	20%	Comfort
Satisfaction with the lighting in the workplace	55%	20%	Stimulation, comfort
	Supportive	Unsupportive	
Support on productivity	70%	5%	Stimulation
Support on creativity & innovation	65%	10%	Stimulation
Support on information exchange	90%	5%	Stimulation



Figure 21 — Cross check WODI — Discrete choice result of MedcoEnergi

2. PTI Architects

ORGANISATION

PTI Architects is a local architecture firm based in Jakarta. The company started out in 1991 as a member an Australian architecture firm the Peddle Thorp Architects, until they separated in 1999 and became its own entity with local owner, which established PTI Architects as a local architecture firm with international influences.

As a company once part of an Australian firm, PTI-Architects still has the flat structure type of organization in terms of the working environment. Consequently, the company has adapted more towards the Indonesian collective culture, where the organization is more person than task oriented. This explains how PTI Architects evolves as a more family oriented organization. Nevertheless, they are trying to maintain their international characteristic by adding foreign talents from countries like Philippines, Australia, U.K. and the U.S. Even in the board of director level, they appointed four foreign experts to collaborate with their four other local professionals. This management change was done recently, in less than 2 years.

Due to the high demand of the building industry in the country and the high competition among local and international architecture firms, the recent structural changes of the organization were made to enhance the image of the firm, as a local company with international capabilities. The management added international calibre architects and designers in order to compete with other international firms operating in Indonesia. Since there are two different ranges in the building and construction industry in Indonesia, the approach was done also to enhance their marketing capabilities, for higher bid on project fees.

The company also recently hired one employee to deal with the human resource organization, in order to capture the employees' needs. As the industry is now booming in Indonesia and projects' levels of complexity increase, the company grew bigger as an organization. Thus, PTI is facing major changes in terms of the organization's management. They would like to change the structure towards a more linear process, with more staff in charge on the middle management process. PTI also deals with the problem in retaining and attracting the efficient talent, which is important for their position at the moment, since PTI is not a one-architect-based firm, but a corporate architecture firm. This creates challenges for the organisation to step up as a solid team, therefore knowledge sharing is important.

CULTURE & THE WORKING PROCESS

As stated before, PTI Architects tend to show tendencies of the family oriented organization, where the owner is seen as the head of the family. Furthermore, the low individuality index of the Indonesian characteristic mentioned by Hofstede et al. (2010) could really be seen in the way they work and their informal interaction between colleagues. The family type of organization could be seen as the strongest culture within PTI-Architects. Although change towards the structure of the company by adding foreign professionals was done, the typical collective culture of Indonesians is still strong in the organization. One of the information gained from one of the associate directors, which enforced with the observation, the behaviour and attitudes of the employees are quite relaxed in the workplace itself. This behaviour could also be seen not just towards colleague but also towards the upper authorized key person such as the BOD, although the hierarchies can still be seen within the management of the organization.

The work process is controlled with periodical internal meetings. For instance, the design division has progress meeting every once a week to inform the associate director about the progress of each project from different teams.

The organization structure consists of multiple directors, follow by associate directors, seniors and juniors and the finance, HR & administration staff. The main divisions are differentiated into two departments: architects and interior designers. However, the work process is very flat compare to its structure. The command line could be bypassed, e.g. senior architects could directly consult his/ her project with the main directors, the director also has an open door policy for all employees.

ACCOMMODATION STRATEGY & CONCEPT

The change of accommodation towards the current workplace happened in the early year of 2009 due to issues from the building owner. Before, they occupied two floors both in Metropolitan Tower each for the Interior and the Architecture division of the company. Furthermore new problem occurred whereby they had to occupy single floor for the two divisions on the new building. Hence the issue of lack of space, the company outgrew the problem and found it is more convenient to be on the same floor, mainly for communication improvement.

The layout of the current workplace environment was based on the company structure and the project phase. The three main directors have their own enclosed rooms, while everyone else has the same common workstations. The idea is to keep the flat hierarchy within the company, also to maintain flat communication and informal interaction within organization members.

Both design and construction process of the current office was done by their own interior designers. Certain employees were appointed to design and supervise the construction, due to the limited time left for the moving process. Moreover, the design was consulted also with the board of directors, with the output of the current office layout. Only small adjustments were made afterwards, such as the changing from library towards the workstation area.

In terms of their physical office environment, the firm is facing the problem of lack of space. There is this limitation of growth due to this problem. Furthermore as an architecture firm, it is impossible for PTI to move from their paper-based working process. Therefore, storage spaces for physical documents are important. Subsequently, as knowledge workers, their employees will always have the need to be inspired through others' works and material samples. Therefore, the existence of library is quite crucial. Unfortunately, the previous library was changed to workstation area, since there is also the need of additional workspace. The company continues in seeking organizational growth, not just in terms of skill advancing, but also in improving their standards, for instance in specification standards for material identifications.

Aside from the lack of space disadvantage, the company is fortunate to be located in the centre of Jakarta business vicinity. At the moment, there are not many architecture firms located in the central business district area. The reason was the high rent level and the space they need to accommodate. Therefore, the firm is privileged to be closer to their potential clients.

The workplace concept is a combi-office with open workspace area for the employees, two enclosed meeting rooms (one big and one smaller room), and enclosed rooms for the directors and finance department. All employees including the associate directors acquire the same type of workstations, including the administration staff and the detail specialist drawer, who still works with manual drawing table.

At the moment, there is no proper facility given to the employees through the physical workplace environment. Their current office has limited area therefore there are definitely needs of improvements. For instance, the library for books and materials is not properly managed, thus not easily accessible. The proper library, which was initially designed for designers to get inspirations, is now changed to workstation area, since they are planning on adding staff in the future.

IT-support within the company is run by two employees. Again, the lack of space issue is inhibiting the possibilities of IT development. Additionally, the servers are already more than 4 years, which have exceeded the warranty time. This is not favourable for the company. There is another issue, that the company does not have

any mirror servers elsewhere, which is not secure for their data safety. However, during the observation time, the company is already in the process of creating the mirror servers on another location of their current office.

The technical quality of the building is still good, hence its age, which is more than 10 years already. Maintenances are being done well, since the building operator has to acquire the high standards of other multinational tenants such as HSBC and Colliers International. However, thermal regulation is centralized. Each tenant need to call the building management in order to change the temperature of the whole rented area, which is not giving enough control for each employee.

Although the building is considered old with moderate architecture compare to their other newly built building of WTC 2, the quality of the materials used inside the building are considered luxurious, with marble finishing floor and walls.

Noting the problem of the combination of both paper based and digital documentation system of work, the workplace innovation made by PTI-architects is in line with this issue. They packed the storage vertically, where each workstation was made with entitled storage space. However, this solution is still not enough, since filing is not their only issue.



Figure 22 — Layout of PTI office

The packed office space, which consists of less than 500sqm for 91 staff is actually very effective for the organization's communication. Teamwork can be easily done, even between different departments or specializations, since it is easy to reach everyone by walking distance. The intercom on each workstation also simplifies the communication issue between farther workstations. The only problem might be the small pantry, which is combined with the printing area. Since it is a company consists of architecture and interior consultants, some big printings are involved. Therefore, the dense space is not sufficient for all activities to be done at once. Employees have to take turns in using the printers, which is centralized in only one place. This situation is not effective during deadlines or meeting preparations. Storage room is also insufficient. Due to the large amount of papers used by the architects, plenty of documents were lying on the workstations. This condition may be a disturbance for the employees' productivity.



Figure 23 — Interior ambience of PTI office

There is no strict regulation from the company in terms of the workspace usage. The company tries to create advices on how to behave, but there is also no place (e.g. pin boards) to put regulations or such. Aside of the workstations, most of the spaces are used in turns (e.g. the praying room, pantry, meeting rooms, etc). There is no proper space for small discussions apart of the meeting rooms. Hence, when meetings are held, small discussions should be done on workstations. There is also the issue of lack storage space, which causes the documents and goods placed on the corners, or on directors' room.

Table 10 - Available workspace type in PTI-Architects

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Private office	Large meeting room	Print & copy area
	Small meeting space	Pantry area
		Waiting area
		Circulation space
		Praying room

SURVEY RESULT

The satisfaction result of the questionnaire participants from PTI Architects are as listed below:

Table 11 - WODI result of the participants from PTI-Architects

	Satisfied	Dissatisfied	Indicator
Satisfaction with organization	18%	27%	Stimulation
Satisfaction with architecture of the building	64%	18%	Privacy, stimulation, comfort
Satisfaction with the interior design & ambience	36%	18%	Privacy, stimulation, comfort
Satisfaction with transparency in the layout	30%	20%	Privacy

Satisfaction with privacy in the office arrangement	20%	40%	Privacy
Satisfaction with the possibility to concentrate	40%	20%	Privacy, stimulation
Satisfaction with the possibility to communicate	50%	20%	Stimulation
Satisfaction with the IT performance	10%	60%	Stimulation
Satisfaction with storage & archive facility	10%	50%	Comfort
Satisfaction with the lighting in the workplace	70%	20%	Stimulation, comfort
	Supportive	Unsupportive	
Support on productivity	50%	10%	Stimulation
Support on creativity & innovation	60%	20%	Stimulation
Support on information exchange	70%	0%	Stimulation



Figure 24 - Cross check WODI — Discrete choice result

3. Egis Indonesia

ORGANISATION

Egis is a French consulting and engineering group working in the fields of transport infrastructures, urban development, buildings, industry, water, environment and energy. They are also active in project financing, turnkey contracts for equipment, maintenance and operation within road and airport sectors. They are ranked amongst the ten biggest European engineering firms and the top twenty in the world.

Egis Indonesia itself was formerly known as Bceom and Sofreavia. The company has existed for 30 years in the country, with experience in transport, water, environment, energy projects, as well as economic and institutional consultancy. Egis Indonesia is a combine force of the local and international experts. They provide a range of services such as planning, feasibility, preliminary and final design studies, works supervision, impact assessments, technical assistance, and so forth. Although working as a subsidiary to their mother company, Egis Indonesia is a company of its own entity, which works differently with Egis (Egis Indonesia, 2013).

CULTURE & THE WORKING PROCESS

Consists of 30 staff or more, Egis Indonesia is working to strengthen their market in Indonesia, with their French directors. However, the company itself serves as a local Indonesian company, where the typical Indonesian working culture could also be seen, with a mix of the hierarchical structure of the French culture.

During the quick look through the office, the workplace environment could be considered as a combination between open office, some cubicles and team rooms, with some foreign professionals, mainly French, managing the organization. The high influence of the Indonesian culture could be explained by how the construction industry is very local, where the procedure has to follow local regulations, both formal and informal.

ACCOMMODATION STRATEGY & CONCEPT

The company chose the Wijaya location in the South of Jakarta due to its good accessibility not just for their employees, but also to their partners and clients. Wijaya and the surroundings are known for the location for various construction and engineering firm in Jakarta. In terms of the office itself, Egis Indonesia is occupying a combination of open layout and enclosed rooms office, where each department is located on the same area. Moreover, the idea of having enclosed rooms for some departments is based on the requirements of projects' confidentiality.

As a growing company, Egis Indonesia continues to develop and add employees. Therefore, flexibility is a key aspect. Moreover, due to the working process, which concerns a lot of drawings and paper documents, it is impossible for the company to be 100% paperless. On the contrary, they need more space for document filing, as well as plotter and copy area. Discussions involving large paper size often occur in the office, concerning their construction and engineering projects. Therefore, the meeting place also need to accommodate these requirements.

Table 12 - Available workspace type in Egis Indonesia

Workspace	Meeting Space	Support Space
Open office	Large meeting room	Filing space
Private office		Print & copy area
Shared office		Waiting area
Cubicle		Circulation space



Figure 25 — Interior ambience of EgisIndonesia, on the left corner below is the room of the main director, the largest room in the office.

At the moment, more meeting space is needed, due to only one meeting space for 8-10 people is available in the office. The room of the main director is using almost one fifth of the whole workspace area. However, this condition could not easily be changed due to the hierarchical culture of the organization. Other issues concerning privacy and concentration also occur in the office. Based on the interview, some employees are complaining with

the noise from their colleagues and concentration issues. This being said, since some designers/engineers need to concentrate during their time on the desk. Other issue concerning the office is the lack of pantry and place to eat. This issue eliminate the possibility of serendipities and incidental discussions. However, the open arrangement is contributing in helping the employees to encounter each other. The size of the rented space, which is not as big as other companies observed, also increases the possibility of the serendipities. The observation in Egis Indonesia reveals the importance of budgeting concerning the workplace. Due to financial issues, organizations tend to neglect the design of their workplace as a priority.

SURVEY RESULT

The satisfaction result of the questionnaire participants from Egis Indonesia are as listed below:

Table 13 - WODI result of participants from Egis Indonesia

	Satisfied	Dissatisfied	Indicator
Satisfaction with organization	35%	24%	Stimulation
Satisfaction with architecture of the building	35%	29%	Privacy, stimulation, comfort
Satisfaction with the interior design & ambience	24%	53%	Privacy, stimulation, comfort
Satisfaction with transparency in the layout	29%	29%	Privacy
Satisfaction with privacy in the office arrangement	18%	53%	Privacy
Satisfaction with the possibility to concentrate	18%	41%	Privacy, stimulation
Satisfaction with the possibility to communicate	65%	18%	Stimulation
Satisfaction with the IT performance	41%	29%	Stimulation
Satisfaction with storage & archive facility	29%	41%	Comfort
Satisfaction with the lighting in the workplace	59%	12%	Stimulation, comfort
	Supportive	Unsupportive	
Support on productivity	65%	18%	Stimulation
Support on creativity & innovation	24%	35%	Stimulation
Support on information exchange	59%	12%	Stimulation



Figure 26 - Cross check WODI — Discrete choice result on Egis

4. Ogilvy Indonesia

ORGANISATION

Ogilvy & Mather is part of the WPP group, a well-known mother company of marketing and communication expertise based in the UK. With the existence of their group of leading companies, WPP exists to develop and manage talent, apply the talent throughout the world, for clients' benefits, in partnership and with profit. As a mother company, WPP complements its subsidiaries through administrative work such as financial matters, which are co-ordinated centrally. Moreover they also encourage and enable the subsidiaries of different disciplines to work together for clients' benefits and the satisfaction of their people.

Ogilvy itself was founded by David Ogilvy as an advertising, marketing and public relation company since 1960s in the US. The core expertise of the company is in brand building, which requires a keen understanding of how new communications technology, new channels and vibrant creativity combine. With the international branches around the globe, the company does it locally and globally through the local and global 360 Degree Brand Stewardship. With the valuable innovations in the making, the company needs confidentiality to maintain their clients' privileges. Still, as a communication and marketing company, Ogilvy also needs to build their own image as a creative company. Therefore, the iconic and inspiring, yet confidential working environment is required by the agency.

The Indonesian subsidiary of Ogilvy herself consists of mostly local talents, with a combination of expat professionals in the management level. As an American company, the organization is considered as a hierarchical organization. Interaction between colleagues however, is very informal. One of the most distinctive characteristics of Ogilvy's employees is the high rate of creative worker within the company, due to their business field.

CULTURE & THE WORKING PROCESS

Compare to other organizations observed in this research, Ogilvy Jakarta tend to have higher number of younger employees. Due to the high competition in the market within their own clients, the company protect all possible information leaks the company create a high degree of confidentiality management, including in welcoming guests.

ACCOMMODATION STRATEGY & CONCEPT

The office was initially dispersed before they moved to the current workplace. Due to the need of deeper integration within the organization and the insufficient comfort and space of the last main Jakarta office, the management decided to move to the current office. The location however, is still on the same area with the previous main office. This time they teamed up with they sister company, Bates, who occupies the lower floor of the rent office space.

Through a top down approach by the management, Ogilvy Jakarta's office was renowned with the touch of M. Moser Associates as their interior designer. M. Moser staffs were the ones who conducted the initial studies towards the old offices and the needs for the current office. Based on the interview with one of the interior designer in charge in the project, it was stated that the old office was dark and the company needed a new fun office, where all employees could collaborate. Due to the high confidentiality concerning their work and copyrights, the company needed a separate public and private working area, as well as other common facilities in the workplace. Furthermore, the company need an open conference space in particular, and different discussion and collaboration areas, both for employees and visitors.



Figure 27 — Layout Ogilvy Jakarta

When asked about the locality issue on the design, the local aspect was only translated through material usage, and a tropical design. However, no particular local user behaviour was used as design consideration. The office design itself was based on WPP's guidelines concerning office design of their subsidiaries. Some of the requirements were open workspaces and to encourage the use of bench for the workstation. Red is of course is the company colour, which was used in the furniture, walls and partitions.

Table 14 - Available workspace type in Ogilvy Jakarta

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Private office	Large meeting room	Storage space
Work lounge	Small meeting space	Print & copy area
	Large meeting space	Pantry area
	Brainstorm room	Break area
		Waiting area
		Circulation space
		Praying room

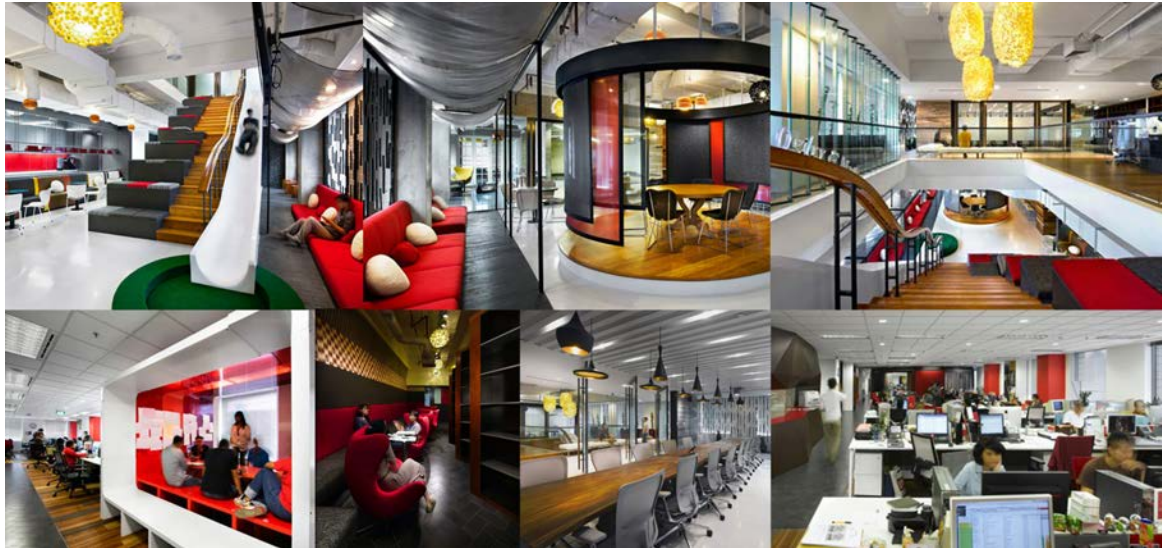


Figure 28 — Interior ambience of Ogilvy Jakarta (M.Moser, 2012)

5. Procter & Gamble Indonesia

ORGANISATION

Procter & Gamble or widely known as P&G, is an international firm from the United States. They are specializing in fast moving consumer goods (FMCG), which produce beauty / grooming and household care products such as soap and shampoo or home cleaning products. Working in over 180 countries worldwide, P&G has the ability and strength to compete in the global market. Therefore, it is also important for the management to maintain and develop the global organization. This condition is similar with Ogilvy, where they are governed by the mother company WPP. However, they have different specialization and management structure.

As a large organization, they aim to provide branded products and services of superior value and quality that improves the lives of their consumers. This in return, will give them rewards by the consumers with leadership sales, profit and value creation, allowing their members and the communities prosper (Procter & Gamble, 2012). Being established since 1837, the company has deep roots and organization culture, which are difficult to be changed dramatically at a short time. However, the market continues to develop, bringing new innovations as well as competitions to P&G, which force them to be innovative and efficient at the same time.

CULTURE & THE WORKING PROCESS

Within the formal office, P&G has applied the agile working methods already for many years, which occurs in all their offices worldwide. Although legally P&G has the same typical M organization structure, compare to all other case studies in this research, P&G has been the organization with the flattest organization structure seen from the daily interaction between employees and the management level. The working culture is very open and transparent, where all employees are treated equally.

The organization is also more task-oriented than person oriented, which proves that the company is not working as a family oriented firm (Schein, 1992; Trompenaars & Hampden-Turner, 1997). The demographic of the workers is also very diverse, where the Indonesian employees are mixed with expats from Egypt, the U.S., Japan and Malaysia. This international environment creates a mix of Indonesian and other cultures already.

ACCOMMODATION STRATEGY & CONCEPT

The strategy of P&G office in Jakarta is the same with P&G worldwide. Under the supervision of GBS as the in house facility manager, and coordination with Jones Lang Lasalle facility management, the agile working is managed. The agreement with Jones Lang Lasalle (JLL) is a global contract, where each P&G branch is accommodated by the local JLL. Based on the interview with the head of GBS Jakarta, the company is currently accommodating 135 employees with only 121 seats, in a 1500sqm office space. With the number of seats (121), they are acquiring a net space of 12.4sqm/FTE.

P&G Jakarta already settled in an open office environment since the year of 1999. Hereafter, they started the working-from-home policy in 2011, where each staff could spend a maximum of 2 days of the 5 weekdays working from home. The daily working hours is also flexible. Employees could choose to come anytime within 7 am to 6 pm everyday, based on an 8 hours working hours per day. The idea is certainly to maintain the balance of their facility costs, and improve the sustainability gain as embedded in the global corporate values. One of their major facilities in the current office space is the large training room for approximately 100 people, which is divided into 3 different rooms. All meeting rooms are centrally managed, with some layout boards spread in each corridor sides to inform employees on the available rooms.

Another issue gained from the interview is the 80% daily occupancy level, which proves that the management is persistent with their effort to achieve efficiency. To support the agile working process, each employee is facilitated with a moving pedestal or a locker. Each room is also complemented with conference tools. The workplace is managed on the activity-based-setting, where the facility management provided various workplace types, as described by van Meel (van Meel, et al., 2010). Below is the list of the provided room for the different activities:

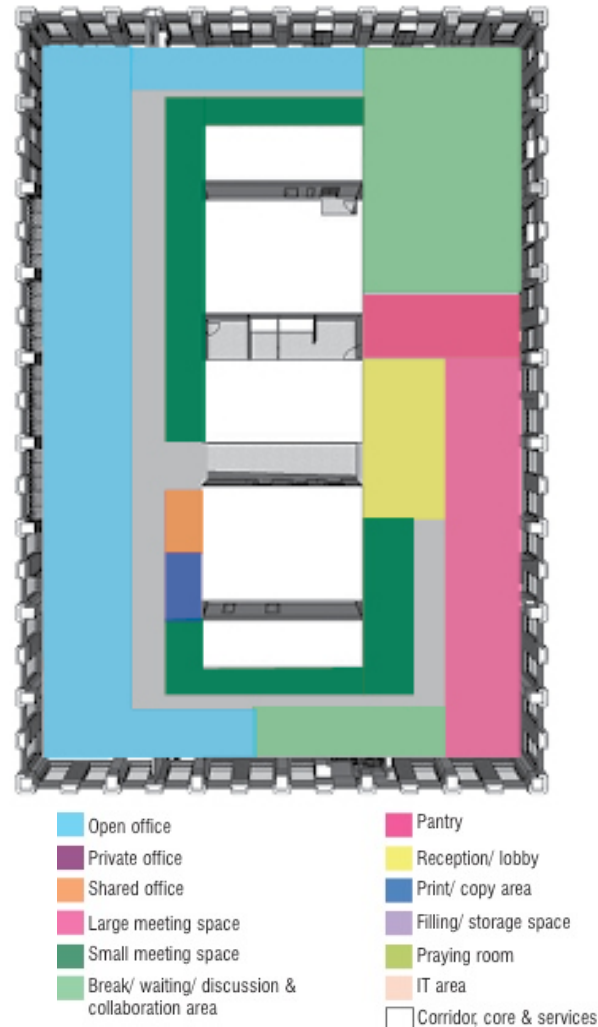


Figure 29 — Layout of P&G office, Jakarta

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Study booth	Large meeting room	Storage space
	Small meeting space	Print & copy area
	Large meeting space	Pantry area
	Brainstorm room	Break area
		Locker area
		Waiting area
		Circulation space
		Games room
		Praying room

Table 15 - Available workspaces in P&G Jakarta



Figure 30 — Interior ambience of P&G Jakarta (P&G, 2013)

5.2. Dutch Reference Case

5.2.1. Dutch Reference Case Study Process

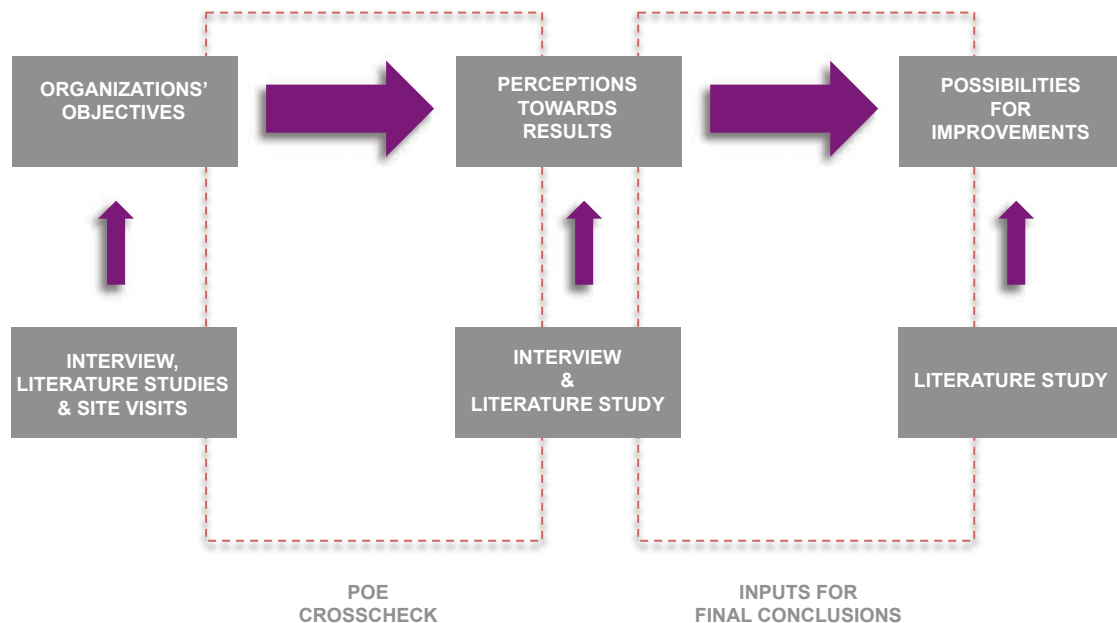


Figure 31 — Dutch reference case study phase

Although this research was initially designed to have the same step-by-step approach with the Indonesian case studies, due to the limited amount of time, the Dutch cases are taken as reference cases at the end. Two cases were chosen due to its feasibility and the amount of publication available. The first one Ogilvy Amsterdam, was chosen to get the feel of subsidiaries from the same mother company arrange their workplace facility. The second one, Microsoft Amsterdam, was chosen due to its resources availability and the possibility to learn from its process of creating an activity based workplace setting.

Both cases are different by nature. Both are employing knowledge worker, but in different fields of expertise. Ogilvy is filled with people from communication, marketing and design, while Microsoft is also creative but with a touch of IT development. Both companies are American companies with different history and background. Ogilvy's employee still has his/her own desk, and does not have a complete setting of activity-based workplace. However, the interesting part of Ogilvy is how they are sitting together with workers from other firms, and share some common areas together. While Microsoft's office tend to be very modern, with a pre-defined company culture called The New World of Work. More about both cases will be discussed further in this chapter, in the case study result.

5.2.2. Location Overview: Amsterdam & Its Culture

Amsterdam has been one popular city for tourist destination due to its particular attractions and landscape. The city is has 820,654 inhabitants in an area of 219 square kilometres. Amsterdam is well known for compact inner city centre, densely filled with the old Dutch houses. Many of these houses are now newly renovated in the inside and used as offices, museums, education institutions, and other commercial as well as residential functions. Due to this lack of new space, most big corporates are forced to locate in the outskirts of Amsterdam, in places such as Zuidas (the South Axis of Amsterdam), or Schiphol.

Serving as a capital city, is one of the small similarities it shares with Jakarta. In comparison with Jakarta, Amsterdam has a better infrastructure and transportation connection. Bikes, bus, trams and trains are connecting the inner city centre and its outskirts neighbourhoods. The working culture differs from one company to another, however the general culture could be categorized as stated by Hofstede & Minkov (2010).

5.2.3. Reference Case Study Results

A. Ogilvy Amsterdam

ORGANISATION

Ogilvy Amsterdam is the Dutch subsidiary of Ogilvy, the same company observed in the Jakarta case studies. Differ with their subsidiary partner Ogilvy Jakarta, Ogilvy Amsterdam is faced with the dilemma of the current economy crises suffering the European countries. This condition has forced Ogilvy to let go several employees, combining one job description with the other one. Despite the economy issue, Ogilvy Amsterdam has been through some changes in their management, including the change of job description for some employees and the change towards new director, from their fellow Dutch competitor.

CULTURE & THE WORKING PROCESS

Ogilvy Amsterdam has been considered as one of the famous advertising agency in the Netherlands. Their work includes the current brand of the city of Amsterdam. At the moment, they are undergoing various managerial changes, including the decreased organization size, and other management changes. The company itself used to hire also international talents. However, now they only have Dutch employees, with a combination of employees with communication and design background.

Concerning the achievements of Ogilvy worldwide, Ogilvy Amsterdam still has some homework to increase their performance, since the awards and big clients are not yet achieved through the contribution of their Amsterdam subsidiary. With the achievements won by Ogilvy worldwide, the mother company confirmed the power of their best network across the globe to their clients and subsidiaries. There is also the twin peak vision, which explains their purpose to be recognized as dominating the top-most zones of creativity and effectiveness. In terms of working process, Ogilvy worldwide has the policy to open chances for all their subsidiaries to work overseas. Therefore, Ogilvy Amsterdam may not always do projects in the Netherlands and the other way around. For instance, Ogilvy London might participate in a tender for Dutch clients. However, they are always open for collaboration with the local Ogilvy office. For instance, meetings between Ogilvy London can be done in the Amsterdam office.

In enhancing their competitiveness, the current CEO of Ogilvy Amsterdam believes that the firm should be a specialist such as in brand building, and have the niche market as their target group (Ledder, R., personal communication, March 2013). With the current Dutch talents varying from junior to senior skills of design and communication, the firm is working together as a team, with sub-divisions for each project.

ACCOMMODATION STRATEGY & CONCEPT

Their current office is located in Amsterdam, together with other two agencies. They started to occupy the old bike factory since 2001 on a 17year contract basis. Previously, the company occupied the whole building. However, due to further decrease of the organization's size, the company sub-rented their contract to two other

companies until now, where they only use a quarter of the whole space they rent. Below is the list of the provided room for the different activities:

Table 16 - Available workspace in Ogilvy Amsterdam

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Private office	Large meeting room	Storage space
		Print & copy area
		Pantry area
		Break area
		Waiting area
		Circulation space

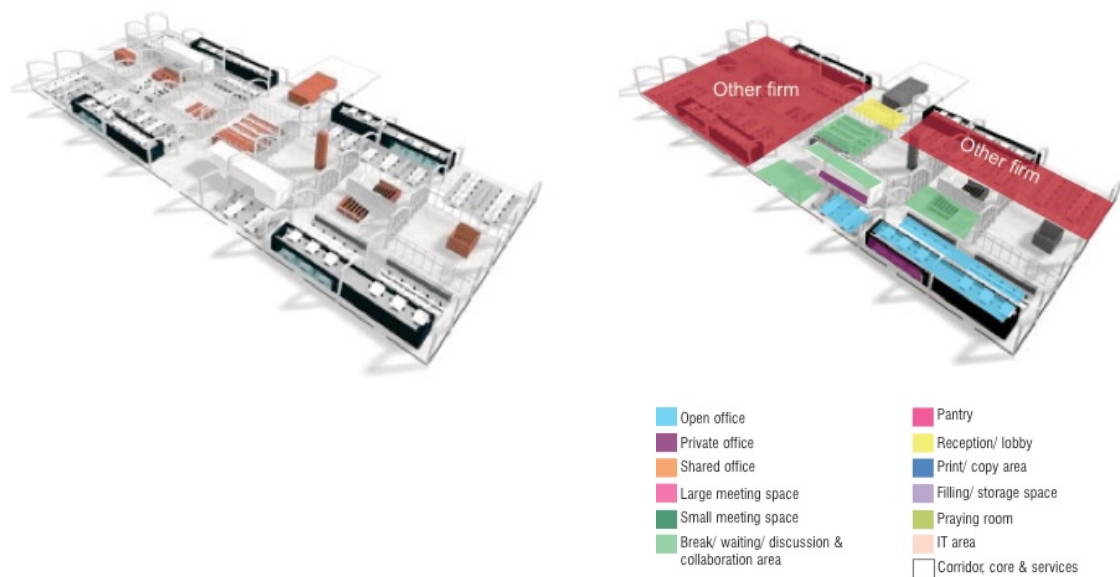


Figure 32 — Ogilvy Amsterdam's layout (Studio Ramin Visch, 2013)



Figure 33 — Ogilvy Amsterdam interior ambience

B. Microsoft Amsterdam (Schiphol)

ORGANISATION

Microsoft built its first path in the US, where the company started in 1975 by Bill Gates and Paul Allen. The corporate itself has grown global until this day, covering countries in 5 continents as one of the key player in the software industry (Microsoft, 2013).

CULTURE & THE WORKING PROCESS

The culture adhered in Microsoft Netherlands is the new way of working based on the “New World of Work” philosophy, where they believe on the blending of work and home life, globalization, and an always-connected world. This current culture is certainly different than the previous working style they pertain in the former workplace.

ACCOMMODATION STRATEGY & CONCEPT

The global corporation has created company guidelines concerning the workplace management. However, there are always exceptions concerning some cultural issues in some countries, such as the working culture in Saudi Arabia, where the manager should have their own large office space in order to be taken seriously (Plijer, 2012). In the Netherlands, the company relocated to Schiphol real estate area in 2008, complemented with flexible working at home or at clients’ offices. The process towards the current workplace took three consecutive years for planning and deliberation, with a new approach to work called “2bPR” or “To Be People Ready”. It leverages the “People Ready” motto of the Microsoft Business Software Solutions group and demonstrates the vision of Microsoft to its customers (Microsoft, 2009).

The only way to demonstrate the New Way of Working vision was “to eat our own dog food.” — Theo Rinsema, CEO Microsoft Netherlands (Microsoft, 2009)

Microsoft Netherlands management team decided to design the working environment through 3 key stages: people, place and technology. On the people stage, the management started the analyses employee work-styles and patterns to look for area of improvements. They did a survey on activities of the employees and the time they spend for each activity. With the equipped knowledge from their analyses, the company built the masterplan and “guided roadmap” on how to steer the employees to a New Way of Working. Each employee was also introduced to initiative’s concepts through tests on measuring their lifestyle and personality. Further on, they raised employee discussions on this issue and their concerns. The second stage of the place was done through giving the space for people to be mobile anywhere in the office, where they are equipped with wireless communications as well as enabled by plugged in setting. The final stage of technology is used mainly for communication within and outside the office. Employees can contact anyone without having to move from their spot. Furthermore, they are also enabled to arrange meetings, space and time through the supporting technology tools such as Office Infopath 2007.

Through the change since 2008, Microsoft Netherlands has successfully reduced their real estate costs up to 30%, increases employee satisfaction, increase specific product sales up to 50% and reduce the costs of IT, administration and communication (Microsoft, 2009). Despite the success of their current office space, physically, there are still some drawbacks such as the attractive breakout spaces that are left largely unused. On table 17, one can see the available spaces in Microsoft Amsterdam office, which consist of 5 workspace type, 6 meeting spaces type and 9 support spaces:

Table 17 - Available workspace in Microsoft Amsterdam

Workspace	Meeting Space	Support Space
Open office	Small meeting room	Filing space
Team room	Large meeting room	Storage space
Study booth	Small meeting space	Locker area
Work lounge	Large meeting space	Games room
Touch down	Brainstorm room	Print & copy area
	Meeting point	Pantry area
		Break area
		Waiting area
		Circulation space



Figure 34 — Layout of Microsoft Amsterdam's office



5.3. Case Comparison

5.3.1. Cases in Jakarta

MedcoEnergi

Based on the five cases from Indonesia and two reference cases in the Netherlands, the difference between the physical characteristics could be mostly seen in the case of MedcoEnergi. The hierarchy of the organization is translated directly to the guidelines as well as the actual implementations of the office space, creating distinctions of several private rooms and open office. The company also has guidelines on the size and furniture of each room. The higher the level of the management, the bigger the size, the better the furniture and the IT support tools. This condition is in line with Hofstede's theory (Hofstede, et al., 2010) of the high power distance index of Indonesian society. However, the organization did an indirect bottom-up approach towards the decision making of their current workplace. They have an in house division, the General Service, who did their own research, which automatically brings the perspective of the MedcoEnergi's employees.

Working hours is very strictly regulated; an eight hours working policy five days per week, starting from 7am, and officially ends at 4pm everyday, although some overtime is allowed. In terms of team space availability, various rooms are available for teamwork and discussion process. The high variety of choices could be seen, since the company has one dedicated floor of common areas, consisting of meeting space, lounge, common room and smoking room. And in addition, the management also provided diverse space for breaks and discussions in between the open office area on each floor.

The strategy of creating more seats for future company growth is also a sign of the focus on long-term, which is in line with Indonesian cultural characteristics.

PTI Architects

PTI Architects did not show a high significance on room distinction based on the organization hierarchy. Hierarchy was shown in the working process, but not in the physical workplace itself. Only 3 directors acquired the private office, while other directors and associates are seating together with all other employees. The directors also have an open door policy, whereby all employees could come in to have direct discussions. The company also did an indirect bottom-up approach of their workplace design decision-making. Several employees were accounted to be the designer of the new workplace, which also put them in the perspective of creating an office for themselves. Despite the fact that PTI Architects is a local firm, the physical characteristics of a typical Indonesian culture could not be seen in the office of PTI. Furthermore, both PTI and MedcoEnergi did not have the flexible working or working from home policy.

Working hours is regulated for a minimum 8 hours daily of five working days. Group discussions and meetings are served only with two meeting rooms and one waiting area in the reception lobby. However, based on the observation, discussions were happening in between desks or individual workspace. Some employees admit the concentration disturbance created by this issue.

Egis Indonesia

Egis Indonesia could be characterized in the same category with PTI-Architects based on its significance of hierarchy in the physical workplace. Only one director is entitled to a private office space of approximately

40sqm, which is more than three times bigger than the average workplace size/FTE. The working hours is regulated for 8 hours per day. However, due to some complain of ability to concentrate, some employees are allowed to work from home one day per week.

Egis Indonesia is the only case study using cubicles in the open space area. During the observation, some employees admit that the need of high concentration is really supported by the cubicles. However, they wanted larger space for each workstation. Discussion area is not widely available, since only one meeting room is facilitated. Therefore, discussions are occurring also on workstations such as in the case of PTI-Architects.

P&G Jakarta

P&G is the only case study with flexible working policy, where employees could work from home 2 days per week. The company is also the only case study with un-entitled workstations, except for the employees with administrative jobs.

The flexible working policy was initiated by the local human resource department, due to the issues of traffic in Jakarta, to support the work-life balance of the employees. Furthermore, the company also has high variety of workspace, based on the activities. This is very much in line with the idea from van Meel et al. (2010) as well as Duffy (2008).

The examples variation of rooms are collaboration area, which is also combined with the pantry and break area, a big meeting space, which is normally separated into three medium meeting room, several phone booth with a two person seating, which is also complemented with conference equipment. Furthermore, there is also the cocoon room, serves as the silent room for working with concentration. Based on the observation, the behaviour of the employees is different compare to the other three case studies discussed previously. Discussions in and between workstations do occur, but not as intense as in PTI-Architects, Egis and MedcoEnergi.

Ogilvy & Matter Jakarta

Ogilvy & Matter Jakarta showed the similar activity-based workplace management as seen in P&G. However, they did not have a silent room, but each employee is entitled for his/her own desk. The break area, which is shared with the neighbouring partner, serves also for casual discussion areas.

Two big meeting rooms are available, complemented with various spaces, which are designed attractively. This idea of course is aligned with the company identity of an advertising agency, where creativity plays the key role. Furthermore, hierarchy did show in the workplace arrangement, considering the amount of space given for personal offices of employees with higher management level.

High level of privacy and confidentiality issue are shown with the segregation of common areas and workstations, where guests are not allowed to enter and see the work process. This evidence could be linked with the higher power distance index of Indonesian culture, since the same approach is not used in the Amsterdam office.

5.3.2. Cases in Amsterdam

Ogilvy & Matter Amsterdam

The workplace management of Ogilvy Amsterdam shows some differences with their colleagues in Jakarta. They showed higher transparency level, with the high usage of glass in-between spaces. The workstations are also bigger, compare to the one in Jakarta, which could be an evidence of the higher individualism index. As additional information, although the company in Amsterdam has the same guidelines of workplace design with the one in Jakarta, this office was built before the guidelines were made.

The highlight of this office is the shared space with other firms who are located on the same building, such as the cafeteria and collaboration room. This condition could lead to serendipities or incidental meeting and discussions, which could trigger more creativity and innovation.

Although was not completely designed as an activity-based workplace, the office of Ogilvy in Amsterdam is preparing for some additional changes such as adding a lounge area on the mezzanine floor, as well as creating a Philips meeting space. Philips itself is a client of Ogilvy London. However, since Ogilvy London is also under one umbrella with Ogilvy Amsterdam, they offered the possibility for a touch down meeting space in Amsterdam. This then again, will create another serendipities and incidental discussions as explained before.

Microsoft Amsterdam

Microsoft Amsterdam also showed the integration between activity-based workplace and flexible working. The companies created various types of workspace, which are not dependant on the employees' hierarchy. The global Microsoft has acquired the workplace management policy for the entire Microsoft global.

As a reference case with the implementation of activity-based workplace management, Microsoft Amsterdam believed that the company gained benefits from their current office, such as:

- A 30% reduction in real estate costs
- Increased productivity
- Enhanced market reputation and ability to attract and retain top talent
- Increased employee mobility
- Benefits for the environment

The successful story of Microsoft Amsterdam's workplace management has created domino effect to other Microsoft branches, such as Microsoft Vienna, who converted their workspace to an activity-based working area in 2011. Based on one publication (Microsoft, 2010), Gonnée Been, manager communications, Microsoft Netherlands, summed up how the Microsoft Netherlands office impacts her working life. "For me, there are two reasons why the Amsterdam office is a great place to work. Firstly, it's an excellent and informal place to meet colleagues you might not normally have contact with. Also, for each and every activity I need to undertake, there's a space for me to be as productive as possible, according to my mood or workload."

5.3.3. Conclusion of Cases Comparison









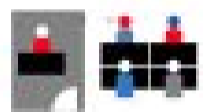

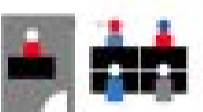

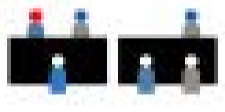
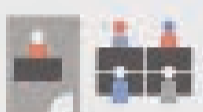

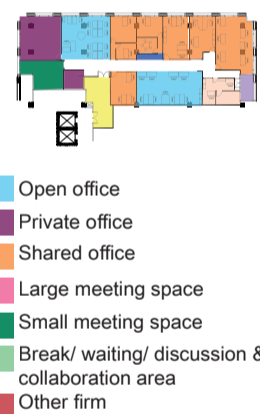

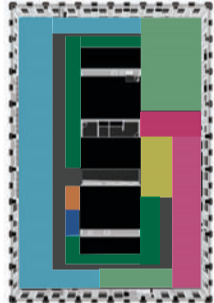

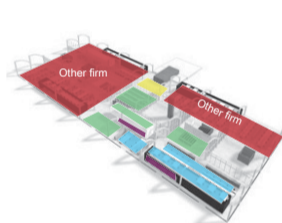
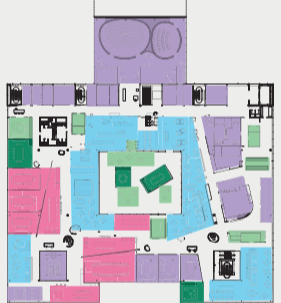
Of all the seven cases discussed earlier, three cases in Indonesia did apply activity-based workplace arrangement namely MedcoEnergi, P&G and Ogilvy. However, only P&G empowers their employees with mobile desktop or

laptop, while all other cases in Indonesia facilitate their employees with entitled desktop per person. On the cases in Amsterdam, Ogilvy Amsterdam still use the entitled desktop, while Microsoft has more or less the same approach with P&G. Furthermore, both Microsoft and P&G are implying workplace guidelines concerning design and management for both people and the facility. Ogilvy worldwide and MedcoEnergi also have workplace guidelines, but only on the physical design level. Other cases namely PTI Architects and Egis Indonesia did not have workplace guideline.

The character of the national culture could be seen if we zoom in to each organization. MedcoEnergi for instance, shows true characters of the Indonesian hierarchy through their workspace arrangement. The company also distinguish the BOD floor, which is furnished with entirely different materials, furniture, and lighting fixtures, also a more lavish and luxurious interior compare to the other floors. Nevertheless, the company still try to leverage the other employees through the diverse meeting rooms, break areas, pantries, and other facilities. Although facilitated with different kinds of workplace area, the activity-based workplace management in MedcoEnergi still involve private desks and PC, thus employees could not work with computers apart from their own desks. In the meantime, PTI shows less hierarchy compare to MedcoEnergi. Although this can also be the case that they are two organizations from different industry, PTI did not show segregation between space according to the organizational structure such as MedcoEnergi did. They do have private offices, but only for the three main directors, while other directors, associates, and other employees are sitting together on the open layout arrangement.

Furthermore, when both Ogilvy Jakarta and Amsterdam are contrasted to each other, the main difference could be seen from the transparency. Ogilvy Jakarta certainly gives the impression of being more enclosed and secluded. The designer segregated the public and private area, whereby guests would not be able to see the working process. This approach was done pertaining the confidentiality issue. On the other hand, Ogilvy Amsterdam was designed in a really open and transparent environment, using more glass materials and an impression of a more welcoming firm, although they are both subsidiaries to the same mother company. The working area is actually still not directly accessible for public, however the use of glass material give a more welcoming feel. Another distinction is on the location. Ogilvy Jakarta is located in the Central Business District (CBD) area, while the one in Amsterdam is more located in the Southern part of the city, with limited accessibility to public transportation. Although the accessibility is definitely higher in the Jakarta office compare to the one in the Netherlands, it could also resemble the importance of status and image in Jakarta, as usually seen in a hierarchical culture.

Based on the case studies and the reference case, generally speaking, the cases in Jakarta showed inconsistent character. One company such as P&G Jakarta showed an equal structure in the physical workplace, while on the other extreme MedcoEnergi showed a high significance of the importance of status. While on the other hand, the cases in the Netherlands did not show a significance level of hierarchy both in the case of Microsoft and Ogilvy Amsterdam. Going back to the topic of the innovative workplace design in Indonesia, it could be said that innovations in workplace such as through activity-based workplace setting, which could also consist of flexible working, could definitely work in Jakarta. The issue would be the organizations' culture and the leaders.

ORGANIZATION						
MEDCOENERGI Local company Oil & Gas	EGIS INDONESIA Local company Construction	PTI-ARCHITECTS Local company Architecture firm	P&G Multinational FMCG Producer	OGILVY JKT Multinational Communication & Ad	OGILVY AMS Multinational Communication & Ad	MICROSOFT AMS Multinational Software Company
DOMINANT WORKPLACE						
High rise building Most staff works in the central office in the rented space, some works on the field twice a month.	High rise building All staff work at the office 5 days a week.	High rise building All staff work at the office 5 days a week, from 8.30-5.30pm.	High rise building All staff work at the office 4 days a week and 1 day work from home, 8 hours (flex).	High rise building All staff work at the office 5 days a week.	Old bike factory All staff work at the office 5 days a week.	High rise building Flexible working
						
USE & DESIGN OF SPACE						
Mix of cellular office & open space All staff work with an entitled desktop, and manager level and above have cellular office.	Mix of rooms & open office Each staff has their own entitled desk, with mostly own desktop. Some departments have dedicated rooms.	Open office Each staff has entitled desktop in an open space with high density.	Mix of rooms & open office Staff could choose different table everyday and also activity-based workspace. Only some use desktops.	Mix of rooms & open office Each staff has entitled desktop, but there are different areas for recreation & discussions.	Open office Each staff have entitled desktop in an open layout space.	Mix of rooms & open office Staff could choose different table everyday and also activity-based workspace. Only some use desktops.
						
DESICION MAKING/ DESIGN PROCESS						
Indirect bottom up approach	Top down approach	Indirect bottom up approach	Global bottom up + Top down approach	Top down approach	Top down approach	Mix of (global) top down & bottom up approach
ZONING						
						
AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE	AVERAGE SIZE/ FTE
22.5S sqm/FTE	13.8 sqm/FTE	5.4 sqm/FTE	11.1 sqm/FTE	10.4 sqm/FTE	22.5 sqm/FTE	NA
GUIDELINES AVAILABILITY						
YES	NO	NO	YES	YES	YES	YES
PRIVATE OFFICE BASED ON MANAGEMENT HIERARCHY						
>5 different kinds of rooms starting from manager level	only for directors	only for directors	NA	only for directors	only for directors	NA
WODI RESULT ON SATISFACTION LEVEL						
36% on organization 69% on architecture 55% on interior 71% on transparency 29% on privacy 29% on concentration 80% on communication 55% on IT 55% on storage & archive 55% on lighting	35% on organization 35% on architecture 24% on interior 29% on transparency 18% on privacy 18% on concentration 65% on communication 41% on IT 29% on storage & archive 59% on lighting	18% on organization 64% on architecture 36% on interior 30% on transparency 20% on privacy 40% on concentration 50% on communication 10% on IT 10% on storage & archive 70% on lighting	NA	NA	NA	NA
WODI RESULT ON PERFORMANCE SUPPORT						
70% on productivity 65% on innovation 90% on information exchange	65% on productivity 24% on innovation 59% on information exchange	50% on productivity 60% on innovation 70% on information exchange	NA	NA	NA	NA
MATCH OF INDICATORS' SATISFACTION BETWEEN WODI & DISCRETE CHOICE RESULT						
60% on stimulation 50% on privacy 57% on comfort	43% on stimulation 25% on privacy 37% on comfort	47% on stimulation 38% on privacy 45% on comfort	NA	NA	NA	NA
>50% MATCH	<50% MATCH	<50% MATCH				

5.4. The Survey

The survey was designed to gain anonymous inputs from employees both for their satisfaction on their workplace and their preferences. It consists of two parts, started with the questions taken from the WODI-light toolkit, and the questions using discrete choice modelling, where employees are required to choose one of the two possible ambiances shown in each question.

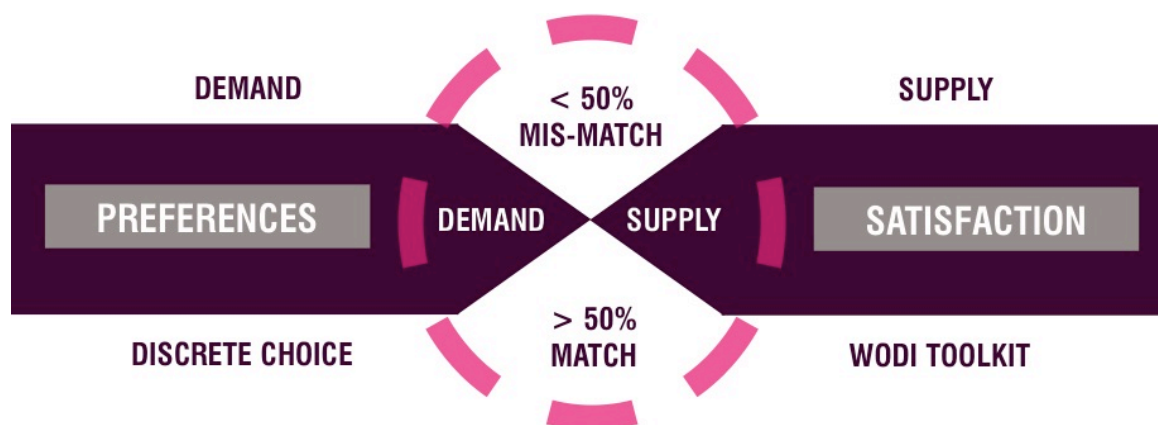


Figure 36 — Sections of the questionnaire

The questionnaires were dispersed via online. Three companies from the case studies agreed on participating in the survey, namely MedcoEnergi, PTI-Architects and Egis Indonesia. To acquire a more generic sample for comparison with the general data of the WODI toolkit results in the Netherlands, more participants were gathered through social network. The criteria of the participants were set, whereby each has to be working or have experience in working in an office of private companies in Jakarta, and not limited to any nationality or industry.

5.4.1. WODI Toolkit for the Satisfaction Measurement

The light version of the WODI toolkit is used in the first part of the survey. Twenty questions were solicited towards the participants in order to see their satisfaction towards the organization, its work process and the physical working environment itself. Examples of the full questionnaire could be seen in appendix 2.

The WODI toolkit itself was developed by the Centre for People and Building, to evaluate workplaces for different purposes such as benchmarking, space utilization and other measurements related to workspace utilization (Maarleveld, et al., 2009). In the Netherlands itself, the toolkit has been used in various organizations across the country. Although other survey toolkits are available within the field of facility management, WODI light has the advantage of its applicability for both conventional and innovative offices (Maarleveld, et al., 2009).

The variables or the so-called factors in the WODI toolkit used in the questionnaire of the current research, are listed in the table below:

Table 19 — Relation between each factor, variables & indicator

Factor	Variables	Indicator
Organization	Management, salary, colleagues, team spirit, job security, social engagements & freedom of work	Stimulation
Content of the work	Content and complexity of work	Privacy, Stimulation, Comfort

Functionality	Space for official meetings, space for informal meetings, zoning, activity based workplace use & orientation	Privacy, Stimulation, Comfort
Ergonomics	Dimension of the workplace, dimensions of furniture, comfort of furniture, flexibility of furniture, and adaptability of the workplace	Privacy
Aesthetics	Use of materials, use of colour, furnishing & architecture	Stimulation, privacy
Transparency & inspiration	Level of transparency, inspiring interior	Privacy, Stimulation
Psychological aspects	Not being seen, heard or disturbed, distinction of status, space for personal attributes, confidentially & freedom in work	Privacy, Stimulation
Appearance of the work environment	Contribution of the work environment to wellbeing, being proud, and media attention, the workplace being attractive, inviting, a front piece and nice atmosphere	Stimulation
Communication	Communication with colleagues, informal and formal consultation, contact ability, exchange of knowledge and experience and environment stimulates communication	Stimulation
Concentration	Being able to work concentrated, not being distracted, satisfaction about concentrated activities	Privacy, stimulation
Archive	User friendliness of the archives, central archive, personal archive, way of filing and satisfaction about filing	Comfort
IT	Computers, network, copier, fax, software and assistance of help desk	Stimulation
Facility Management	Reception, mail delivery, opening hours, satisfaction helpdesk, lunch room, coffee and team cleaning, security, support during meetings and making reservations	Stimulation
Indoor Climate - Lighting	Temperature, ventilation, air quality, acoustics, artificial lighting, day light, personal control of lighting and heating and noise of climate installation - Artificial lighting, day light personal control of lighting	Stimulation
Perceived productivity	The work environment being supportive to concentration, communication, desk work, telephoning, meeting, archiving and administrating, stimulation of high-standard work and being productive and providing a nice workplace	Stimulation

Using the WODI toolkit on this research enabled the benchmarking of each result from the case studies. Consequently, the factors are translated into these clustered questions concerning satisfaction level:

Table 20 — Relation of topics on each question & indicator from the personal behaviour

Question topic	Indicator
Satisfaction with organization	Stimulation

Satisfaction with architecture of the building	Privacy, Stimulation, Comfort
Satisfaction with the interior design & ambience	Privacy, Stimulation, Comfort
Satisfaction with transparency in the layout	Privacy
Satisfaction with privacy in the office arrangement	Privacy
Satisfaction with the possibility to concentrate	Privacy, Stimulation
Satisfaction with the possibility to communicate	Stimulation
Satisfaction with the IT performance	Stimulation
Satisfaction with storage & archive facility	Comfort
Satisfaction with the lighting in the workplace	Comfort, Stimulation
Support on productivity	Stimulation
Support on creativity & innovation	Stimulation
Support on information exchange	Stimulation

5.4.2. Discrete Choice Experiment for Preference Measurement

After understanding the process of idea inception from the organizations' perspectives and behaviours towards the products (including the satisfaction level), the next step is to see what actually are the preferences of the users. The purpose of this second part of the survey is to measure whether the case was successful or not. The users in this case mean all users of the workplace, not depending on their function in the organizations' structures.

Discrete choice analysis is one of the variances of conjoint analysis, where participants might choose among a set of options available to them to discover their preferences and what variables affect their choices. This method allows the prediction of market performance of new or existing service offerings. In addition to that, this choice modelling look forward to see what participants might like, taken into account that the experiment is designed correctly (Verma, 2010). This experiment has already proven in different fields including the hospitality industry (Verma, 2010), and can be done for different fields of studies. An experimental design is often displayed as a matrix. The factors are the columns/ variables/ attributes with two or more fixed values or levels. These matrix of levels of values are combined to be tested against people's preferences to study the effects of the levels on a dependent variable (Kuhfeld, 2010).

The discrete choice analysis requires participants as decision makers (users, customers, etc.) to make choices in the simulated situations derived from realistic variations of expected market offerings (Verma, 2010). These offerings should be a combination of variables, listed from qualitative assessment (e.g. interviews, literature/ case studies, industry data, focus groups) and other resources. These lists of variables then be compiled into different combinations. For instance, in the case of office market (Gijsselaar, 2010), the variables could be the market features (e.g. vacancy rate, GDP, employment, absorption rate, office stock, supply), location features (e.g. distance, parking, accessibility, amenities), and building features (e.g. age, GFA, floor, architectural quality). Of course the decision of which variables to be included will depend on the researcher's priorities or objectives. For instance, when going deeper into the building feature, the choice model could be a combination of the architectural quality, with the total floor area and age of the building.

After compiling the choice sets, these options will be given to decision makers to test their preferences, which then will be analysed statistically and through an econometric model design. The econometric models are used

to identify key empirical patterns in the survey responses, providing relative weighting for each explanatory variable (e.g., location, architectural quality, etc.).

In the marketing field, two different preferences are mentioned concerning consumer's choice, namely the revealed and stated preferences. The former could be seen through consumers' actions. However, this preference merely captures their opinion on economic goals. Therefore, to quantify design characteristics that capture aesthetics in a relatively realistic setting, the employees are confronted to choose from a set of variables merged in image representations, as done in other studies, including the Schiphol passenger (van Oel & van den Berkhof, 2013). These images could prevent the problem of semantic scales issues, where the participants would most likely have different cognitive measurements, which are harder to compare. Although different methods such as ranking methods with scale or regression analysis with the rating as dependent variable are available, discrete choice model is found to be better in estimating ones' stated preference (van Oel & van den Berkhof, 2013). Furthermore, users or the employees are more sensitive to pictures compared to text. The basic experiment involves people seeing sets of products and making choices (Kuhfeld, 2010). The participants are encountered with a multiple choice, where each choice consists of different combination of product attributes such as price, colour, fabric/ ingredients, etc. As an example, one multiple-choice question of a watch product preference could consist of different combination of the fabric, brand and price, with different choices as follows:

- Watch from genuine leather of brand A for €50.
- Watch from aluminium steel of brand B for €30.
- Watch from genuine leather of brand B for €50.
- And so forth

The same type of attributes combination scheme is done to the questions of the discrete choice method.

Referring back to this research, the last part of the survey was used to answer the employees' preference with such approach explained as the discrete choice method. The attributes were taken based on the information gained through the observations on case studies, as well as the literature study (R. S. Batenburg & D. J. M. van der Voordt, 2008; Hua, et al., 2010; Schatz & Bowers, 2005; Vischer, 2007; Wang & Boukberi, 2010). The attributes and their levels are combined in multiple sets, creating 80 variation of different model, for 8 sets of questions. Each question set will consist of 5 questions, where employees have to choose between 2 images, which represent the attributes combination.

The subsequent list is the physical attributes, which were selected from the literature study and case studies, while still considering the linkage with the factors and variables of the WODI Toolkit.

Table 21 — list of factors in the vignette and its link to the literature/ observation findings

Factors	Literature review / observation findings
Furniture	This attribute/ element was proposed by Dul et al (Dul, et al., 2011) as one of the influencing elements towards creativity. The use of furniture could symbolize status and comfort at the same time.
Colours	Vischer (2007) included colours in architectonic details, which are likely to affect 'emotion-focused' coping behaviour in situations of workspace stress. It does appear that colour can influence workers' moods and, in general, that warm colours are exciting and cool colours are calming (Schatz & Bowers, 2005).
Artificial lighting	Artificial lighting could be related to the degree of control of one of the ambience factors in the office. Moreover, artificial lighting could also support visual comfort. What is used in the vignettes to describe the

	lighting in the office space is a general lighting, which provides a substantially uniform level of illumination throughout an area, and often used in office buildings (US Army Corps of Engineers, 1997).
Daylight	Daylight research has linked increased comfort and productivity with window size and proximity, as well as with view out, control over blinds and shielding from glare (Vischer, 2007).
Partition material & height	Partition is one of the ways to create visual, and sometimes, acoustic privacy. Different materials create different feel for visual and acoustic privacy.
Floors material	Floor material could be one other way to create sound privacy and territoriality.
Window/ openings	The impact of window proximity also depends on the culture. For instance, in Japan, the highest proximity to window tend to be less productive (Jones Lang Lasalle, 2012a).
Outside view	The idea of outside view is in line with the daylight issue, which could either enhance or reduce comfort and productivity. There are also different kinds of outside view, such as the view to greenery or the view towards parking place, et cetera. In other words, different outside view will create different level of concentration, privacy, comfort and also innovation level. Some views tend to be more inspiring than others.

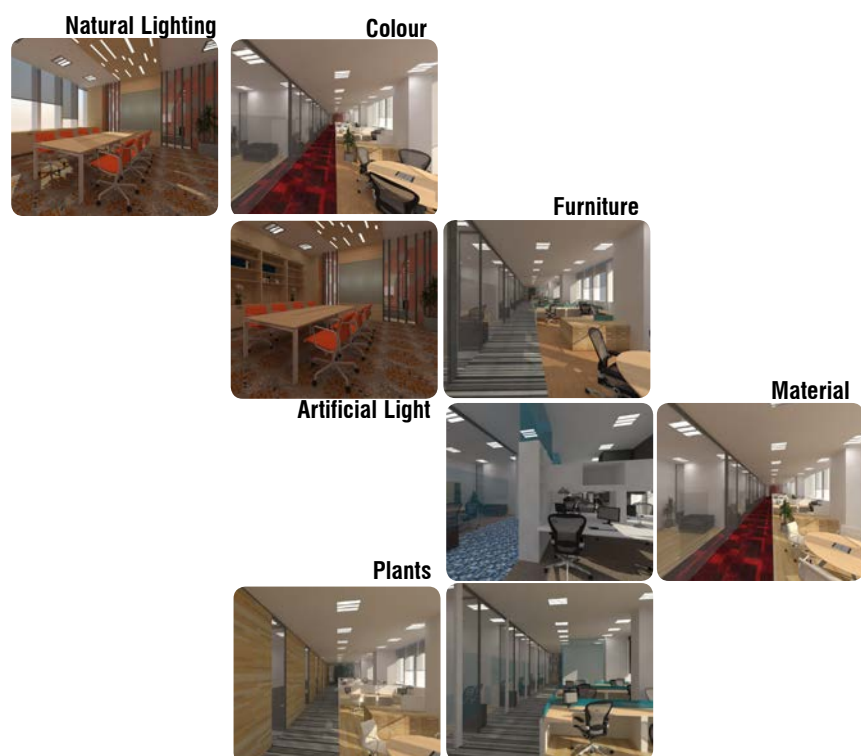


Figure 37 - Sample of how different attributes were combined on the discrete choice method

Each factor was translated further into one or more physical aspect in the office, which regulates or influences the factors. Table 17 explains the different levels of each attribute. The different levels of the attributes were essential in creating the questions. Based on the same approach with the basic combination sampling of the

previous discussed discrete choice method, 80 combinations were created using an optimization procedure. Each question consists of two combinations, thus 40 questions were created. However, to keep the interest of the participants during the survey, each participant was asked to answer 5 questions. This means, the 40 questions were distributed into different questionnaires so each participant received 5 discrete choice questions. Therefore, 8 different versions of the questionnaire were created, where each includes the same 20 questions of WODI toolkit part and five-selected discrete choice question per questionnaire. The dispersion of the questionnaire was done randomly using an online questionnaire program, thus researcher did not select any particular questionnaire for any particular person. An example of the questionnaire is included in appendix 2.

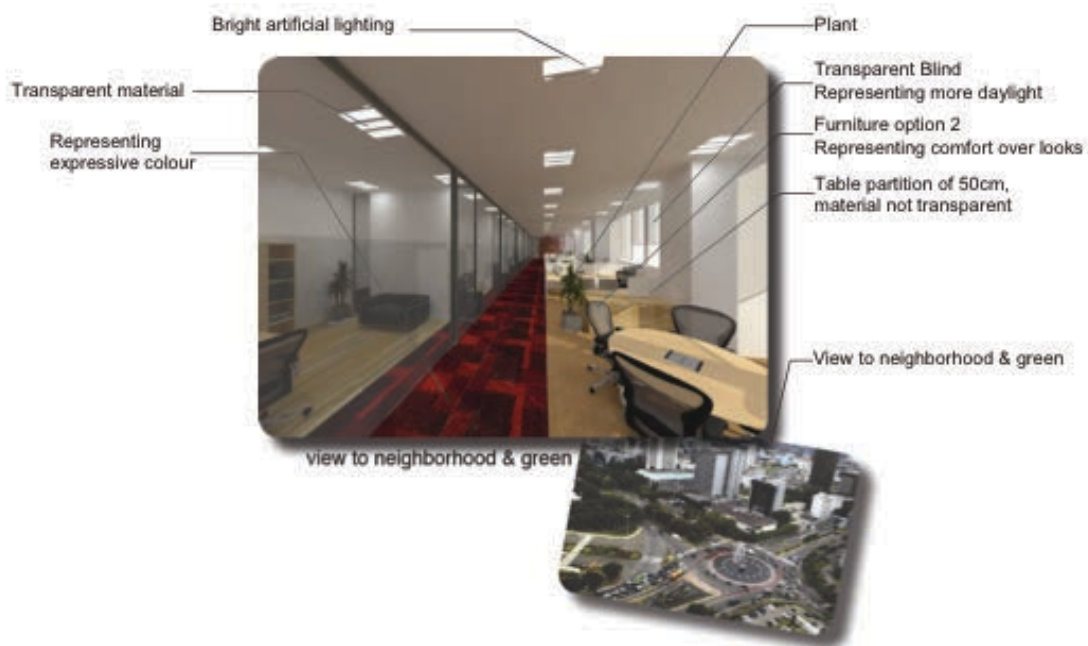
Table 22 — Attribute levels

Attribute	Attribute level 1	Attribute level 2	Attribute level 3
Furniture	Furniture option 1 The option 1 represents the preference on aesthetics over comfort. The example of the furniture with higher aesthetical quality could uses the chair used in the directors' office in the case study of MedcoEnergi.	Furniture option 2 Option 2 for the furniture represents the choice on comfort over aesthetics. The furniture used to represent higher comfort is a chair with more ergonomic design compare to option1.	NA
Colour	Neutral The colour neutral represents the cool colours such as blue and green. However, in the vignette designs, the colour of grey in the carpet is used to represent this option, as well as white for the non-translucent table partition material.	Expressive The expressive level represents warm colours such as red or yellow. The colour chosen was red in the carpet and table partition material.	NA
Artificial lighting	Warm artificial lighting Typical fluorescent light consists of 4x 140watt lights per fixture.	Bright artificial lighting Typical fluorescent light consists of 4x 178watt lights per fixture.	NA
Table partition's height	20cm Although in other case studies there is also the option of desks without partition, the 20cm partition height is chosen to give the sense of territoriality (Vischer, 2007) within each workstation.	50cm This refers to the example of the workstations in the case study of MedcoEnergi and P&G Jakarta.	NA
Table partition's material	Semi-translucent To represent the other type of workstation with no restriction to vision, but still	Non-translucent This non-translucent material is representing not just territoriality, but also privacy	NA

	some territoriality, the semi-translucent material is used.	with sight restrictions.	
Cubicles	<p>With cubicle</p> <p>In the case of Egis Indonesia, cubicles are still used, which are still appreciated by the employees as a mean of giving solution of privacy without closing the entire layout.</p>	<p>Without cubicle</p> <p>In all other cases, cubicles are not used anymore. The tables are separated indeed with partitions, but the maximum height is 50cm, with a combination of translucent and non translucent material.</p>	NA
Room partition's material	<p>Semi-translucent</p> <p>Although the offices observed are using open layout system, some rooms are still separated from the open layout, such as the directors' rooms, meeting rooms etc. In most cases, semi-translucent material such especially glass is used for partitions.</p>	<p>Non-translucent</p> <p>While other cases choose to give more transparent feel in the workplace environment, Egis Indonesia still choose to use non-translucent walls with a small combination of glass.</p>	NA
Floors material	<p>Carpet</p> <p>The idea of using carpet as flooring material gives the image of higher noise reduction within the office.</p>	<p>Wooden floor</p> <p>The wooden floor is actually not commonly used in Indonesian high-rise building, compare to marble and carpet. But the look of wood is still used often and replaced with other materials like laminate with wood tecture.</p>	NA
Blinds (Natural lighting)	<p>Non translucent</p> <p>Non-translucent blinds allow less natural light to come through. Therefore, this level is used to represent the intensity of daylight is favoured.</p>	<p>Translucent</p> <p>This is the opposite of the first level, a way to maximize the daylight, though still reducing its intensity.</p>	NA
Plants	<p>With plants</p> <p>Plants as interior elements are believed to reduce stress level. With this level, it will be tested on whether it is actually taken into account as a more important factor compare to the other attributes.</p>	<p>No plants</p> <p>This is the opposite of the condition in level 1 of the plants attribute.</p>	NA

Outside view	Parking/ road	Neighbourhoods & greenery	No view
	Due to the high amount of traffic in Jakarta, and as a metropolitan city, roads and parking area are common views for office buildings. The aim of this level is to see whether this is a desired condition in comparison with the others, or the opposite.	The ambience of neighbourhoods and green view for offices in Jakarta will be another high-rise buildings as sampled in the figure below.	This is a condition when there is no view available, due to the high-density issue. However, this condition is not very often happen in the Jakarta CBD area.

Each figures for the discrete choice method will have one level of each attribute listed in table 17. The picture below explains how the different attributes were put together.



5.4.3. Survey participant

The survey participants are divided into two main groups. The first one are the participants from the observed companies, who agreed on following the survey, while an additional number of participants are gathered through the social network. As mentioned before, the companies who opened the possibility for questionnaire dispersion were MedcoEnergi, PTI-Architects and Egis Indonesia. By the end of the data collection, there are 174 participants collectively, from both groups, with 121 participants who completed the whole questionnaire, while the rest dropped the questionnaire before the last question. The dispersion itself was done online through NetQ/Collector, which enables the possibility to create a random dispersion of the 8 different Discrete Choice question sets. Out of the 174 participants, 104 came from the companies contacted and 70 participants came from the social network.

The reason behind adding the social network participants was to obtain higher numbers of cases, to acquire a more general overview on satisfaction and preferences level amongst employees working in Jakarta. Criteria used to select participants from the social network were currently working or previously having worked in an office in

Jakarta and being from any nationality. Participants were not required to stem from an organization with innovative workplace environment e.g. flex working, activity-based workplace management, etc.

5.4.4. Survey Result

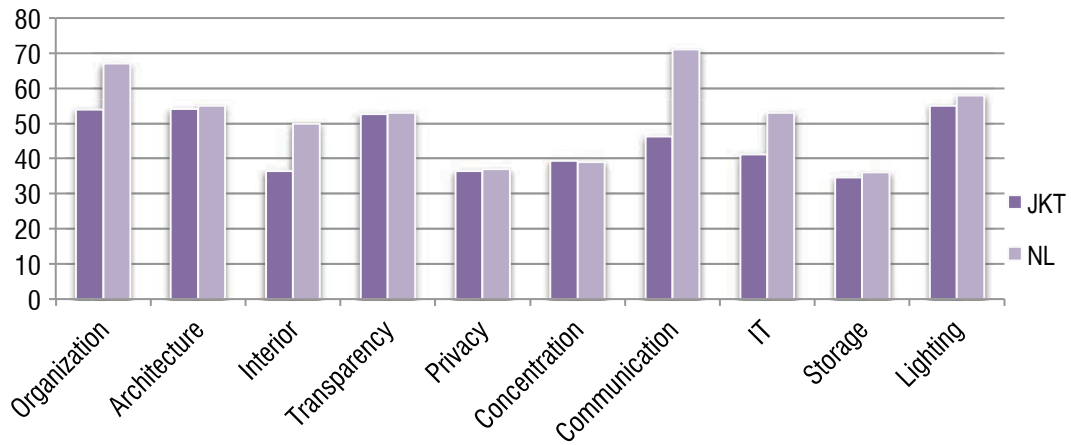
OVERALL WODI RESULT

In general, the satisfaction level of the participants in Jakarta, based on the WODI questions, are above 50%. The detailed per case of the WODI result was shown in the case study findings of the previous part of the chapter. Meanwhile, the detailed results of the satisfied, neutral and not satisfied answers of each question are listed on the graphs in appendix 3.

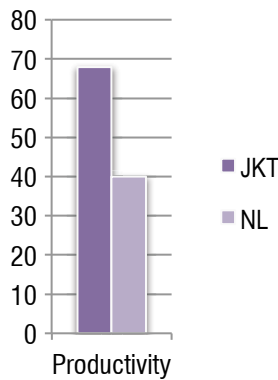
Table 23 — Result of questions from the WODI toolkit from 174 participants

	Satisfied	Dissatisfied	Indicator
Satisfaction with organization	54%	16%	Stimulation
Satisfaction with architecture of the building	54%	18%	Privacy, Stimulation, Comfort
Satisfaction with the interior design & ambience	37%	24%	Privacy, Stimulation, Comfort
Satisfaction with transparency in the layout	53%	40%	Privacy
Satisfaction with privacy in the office arrangement	37%	36%	Privacy
Satisfaction with the possibility to concentrate	39%	33%	Privacy, Stimulation
Satisfaction with the possibility to communicate	46%	25%	Stimulation
Satisfaction with the IT performance	41%	34%	Stimulation
Satisfaction with storage & archive facility	35%	35%	Comfort
Satisfaction with the lighting in the workplace	55%	21%	Comfort, Stimulation
	Supportive	Unsupportive	
Support on productivity	68%	12%	Stimulation
Support on creativity & innovation	32%	32%	Stimulation
Support on information exchange	19%	19%	Stimulation

The results shown on graphic 4 revealed the similar pattern of both the cases in Jakarta and the Netherlands. Indeed, it was not a fully representative sample on comparing the cases in Jakarta with the results of the data covering the whole Netherlands participants. However, this is the closest possibility on benchmarking the data of each country, since it is not possible to benchmark more cases considering the time available.



Graphic 4 — Comparison with the database of WODI in Dutch cases

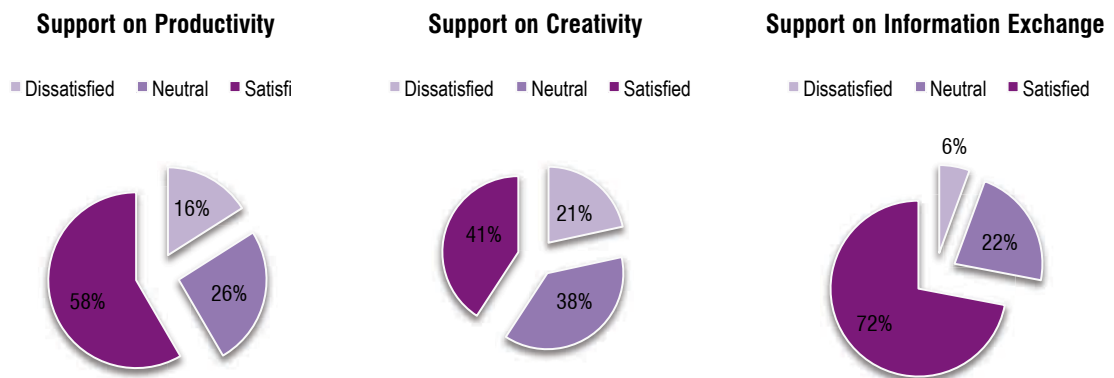


Graphic 5 — Comparison support on productivity in Jakarta and the Netherlands

In answering how the office is supporting their productivity, 64% of participants in Jakarta believe that their current workplaces support their performance (Graphic 2 & 3), which is 24% higher than the average of the Dutch result. This evidence certainly could not represent the overall the Jakarta working class. However, this result might suggest that the employees in Jakarta have less demand on quality of workplace compare to the ones in the Netherlands.

72% of the participants in Jakarta also believe that their workplaces support the information exchange (Graphic 4). This fact is much likely to be associated with the high level of the communication satisfaction shown before. The fact all cases studied in Jakarta are applying an open office concept, could be the reason behind this. Meanwhile, the majority of participants from the social network could also have the open office concept.

The only result below 50% on the questions of how the workplace supports the working process is concerning the creativity and innovation support (Graphic 5). A more user involvement during the design process could be one way to achieve a more creative environment.



Graphic 6 - WODI result on support on productivity, creativity and information exchange

DISCRETE CHOICE RESULT

Since testing showed no significant differences in outcomes amongst the different subgroups (i.e. employees working for one of the participating companies or participants recruited through the social network), all subgroups were combined into one large sample for further analyses. Based on the result of the discrete choice part of the survey, the preference of the users could be listed according to its utility function showed in the parameter estimates or from the hazard ratio. The hazard ratio shows the likelihood the reference level of interest is preferred over the reference level. If both were equally preferred, the Hazard Ratio would be 1.0. The parameter estimate presents the ranking of importance of each variable, as listed below, and described in table 24:

```

main effects Multinomial logit Model Using Catmod
The CATMOD Procedure
Data Summary
Response          C          Response Levels      2
Weight Variable   None          Populations        78
Data Set          DATSPSS       Total Frequency    1272
Frequency Missing 448          Observations       1272

Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics
Criterion          Without          With
                  Covariates      Covariates
-2 LOG L          860.889         798.668
AIC                860.889         822.668
SBC                860.889         875.844

Testing Global Null Hypothesis: BETA=0
Test              Chi-Square      DF      Pr > ChiSq
Likelihood Ratio  62.2209         12      <.0001
Score             60.2521         12      <.0001
Wald              56.4277         12      <.0001

Analysis of Maximum Likelihood Estimates
Parameter          DF      Parameter Estimate   Standard Error   Chi-Square   Pr > ChiSq
FurnitureLower_qual_ 1      0.41460              0.12963          10.2288       0.0014
ColorNeutral         1      0.30838              0.13009          5.6188        0.0178
LightingBright       1      0.17743              0.14584          1.4800        0.2238
TableDivHeight50cm  1      0.40151              0.13829          8.4299        0.0037
TableDivMatDivider_n 1      0.12611              0.14884          0.7179        0.3968
RoomPartRoom_partiti 1      0.44847              0.13420          11.1677       0.0008
RoomPMatRP_non_trans 1      0.14337              0.15260          0.8826        0.3475
FloorWood           1      0.04347              0.13249          0.1076        0.7428
BlindsBlinds_non_tra 1      0.14995              0.13515          1.2309        0.2672
GreeneryPlants       1      0.16084              0.12236          1.7278        0.1887
WindowView_to_neighb 1      0.45917              0.14124          10.5695       0.0011
WindowView_to_parkin 1      0.50443              0.14725          11.7358       0.0006

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Figure 38 — SAS result on parameter estimate

Table 24 - List of attributes' preferences

No	Attributes	Attributes Level Preferred	Indicator	Discussions & argumentation
1	View & window	With view to parking & neighbourhood	Stimulation	View from the window, especially with greeneries, could reduce stress level, and create a getaway view from their computer screen or other documents on the

		d/greenery		desk. It also could stimulate or motivate employees, such as stimulating new ideas.
2	Room partition material	Non translucent	Privacy, territoriality & control	The uneasy feeling of being controlled by others may be the reason why non-translucent material is more preferred.
3	Cubicle usage	Cubicle	Privacy & territoriality	In the earlier days of office work, cubicles were widely used globally, started from the Northern American countries (Duffy, 1997). Nowadays, cubicles are still being used, however, the attempt on creating less vision barrier is being done.
4	Furniture	Comfort over aesthetics	Comfort	Although aesthetics is also an important aspect of creating a nice ambience for working and humans are basically visual beings (Boray, et al., 1989; R. Gifford & Ng, 1982), but the ergonomics of the furniture is considered to be more important. Thus, comfort goes beyond looks in this case. Due to the amount of time spend in the office; employees need to be facilitated with the proper furniture. Comfort is a must.
5	Table partition height	50cm	Privacy & territoriality	Although employees like to work in an open layout, privacy is still needed and could be improved by the use of higher partition between tables.
6	Colours	Neutral colours	Stimulation	Based on the overall results of both the three companies surveyed and the participants from the social network, most participants choose to have neutral colours with mid-range importance level compare to other attributes. However, this situation could differ in other industry or used differently for the different type of workspace on activity-based workplace management. For instance, red is the appropriate colour used in most of the interior elements of Ogilvy Jakarta's office, which not just represent the company colour and identity, but also vibrancy and idea creation, as well as the dynamics of their working culture. Hence, the colour red is not used in all of the rooms, but other cool colours such as white, is used in the meeting room.
7	Lighting	Bright lighting	Comfort & Stimulation	The effect of lighting in the office to the employees could be translated to comfort and stimulation. For instance, the right amount of light could give comfort, and bright lighting could stimulate the employees to work.
8	Plants	No plant	Stimulation	Although plants are considered to create a relaxing feel in an interior setting, the importance of plants availability for the employees is not highly significant. This can be the fact that employees can already be

				stimulated/ relaxed through the view from the window, which could also contains greenery. Therefore, having a window with view (especially containing greenery) is necessary. In cases where greenery view is not possible, one solution could also be in creating an inner court.
9	Blinds	Translucent	Comfort	Blinds in this case, are used to represent the daylight. The use of translucent blinds is more preferred than the non-translucent one, which is a clear option to have more daylight coming to the office space.
10	Table partition material	Semi translucent	Privacy, territoriality & concentration	Although workplace concept nowadays, and as seen in the cases observed, mostly are using an open office concept, boundaries between workstations are still considered to be means of giving the employees the feel of privacy and territoriality. In the end, it could also relate to the ability to support concentration. Some employees could concentrate more when their visions are not distracted, while others are okay with visual distractions.
11	Floor material	Carpet	Privacy, territoriality & stimulation	The different materials, colours or patterns used for the floor will also create different ambience and stimulation. Another impact is the possibility to create a sense of privacy and territoriality.

5.4.5. Cross Analysis WODI & Discrete Choice Result

From the overall result of the discrete choice questionnaire, it was revealed that employees feel the higher importance of stimulation compared to privacy and comfort. This relates to how work and the performance is measured by productivity level, and not the happiness level of the employees, although in reality, they are correlated with each other. Happier employees are proven to have tendencies of becoming more productive (Choose People, 2012; Kramer & Amabile, 2012; Zelenski, Murphy, & Jenkins, 2008). Nevertheless, in working, employees need to be stimulated either by their boss, colleagues, or the physical environment. The physical workplace environment itself could trigger or hamper new ideas or productivity on different levels. An example of this could be how window view to the outside could generate new ideas, decrease stress level, but could similarly hamper concentration at some points. Another example could be on how a layout arrangement could drive employees to meet accidentally and have small conversations, which could lead to idea generation, but can also create distracting noise for others. The examples show that besides the importance of the stimulation effect of one workplace design, it could also be a limitation for another aspect. Therefore, privacy and comfort is also considered as important indicators in workplace design. Although interaction is also an important aspect to support stimulation process, privacy is considered almost as important as stimulation. This issue could be closely linked to the type of work being done. When the work requires high level of concentration or confidentiality, privacy should be considered as a must.

CROSS-CHECK ON SATISFACTION & PREFERENCE

Consequently, from the overall research of the satisfaction level from the 174 participants both from the case studies and social network, none of the indicators were yielding scores of more than 50% satisfaction level. This

indicates that there is still a need for improvement in at least another 50% of the organizations where the participants work. However, this condition is only an indicator of how the total sample looks alike and should not be taken for granted. This kind of method could also be analysed per organization, both for post-occupancy evaluation and redesign preparation. When an organization could gather employees' feedback of such information lists, it would be possible to create a better understanding on what the users want, and provide them with better facilities in the future. The preference level could also be an indicator of which aspect should be taken into account the most considering investment in the facility management, in this case workplace management.



Figure 39 — Cross check on result of the WODI part & discrete choice questions from all 174 participants

Indeed, it would be impossible to achieve 100% satisfaction on all factors and variables. As employees are different individuals with different needs and characters, then one size fits all solution is not the answer. Therefore, one lesson can be drawn from this situation besides the tailor-made solution is on the importance of creating choices or options within the workplace. Since options give a sense of control to the employees, it could be more likely for satisfaction level to increase.

5.5. Answer of Sub-question 4

“What are the implementations of the current workplace design in Jakarta?”

Based on the 5 case studies in Jakarta, 3 out of 5 cases did the activity-based workplace arrangement as discussed by Duffy (2008) and van Meel et al (2010), specifically MedcoEnergi, Ogilvy and P&G, with two out of these three are multinationals. While the other two cases, Egis Indonesia and PTI-Architects, are not entirely in favour for investing more in workplace management. However, PTI-Architects did some attempt on creating some areas to be multifunctional, despite the limitations they are facing in terms of budget and the area square-meter.

In terms of workspace, most of spaces in all five cases observed have an open layout, which means reducing the amount of privacy per individuals. Equality was shown the most in the case of P&G, where there is no dedicated workstation per person. Even the country manager has no private room, and this is valid for all P&G subsidiaries, as they manage it within their global guidelines. Ogilvy and MedcoEnergi's activity-based workplace is not entirely with un-entitled desktop, but still supported with various workspace types. Both companies also have private offices for the upper management level. However, MedcoEnergi significantly showed the high amount of hierarchy by arranging private offices starting from the manager level, senior manager, and directors.

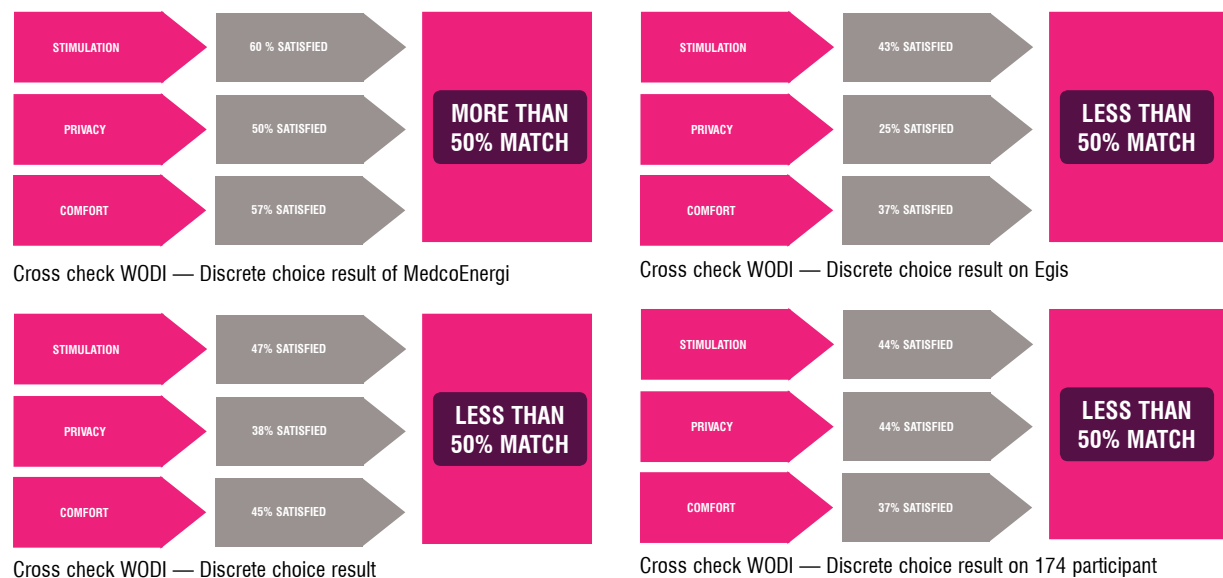
What are the differences between the Netherlands and Jakarta concerning decision-making process of a workplace design?

The main difference between the cases in Jakarta and Amsterdam concerning the process would be the level of top down approach being done during the process. From the five cases studied and observed in Jakarta, only two cases showed an indication of indirect bottom-up approach. MedcoEnergi did their own research and project management through their in house facility management department called the General Service. Since their own employees conducted a research on their own, as well as the process of tendering and procurement for the building process, it could be taken into account as the indirect bottom up approach. The other case of P&G, actually did a bottom up approach, but through the global corporates, which could not be taken into account in this case. Meanwhile, PTI-Architects did an indirect bottom up approach as well, but directly through having their own employees in designing the current workplace. On the process of Microsoft Amsterdam, a deliberate strategy was done while considering employees' perception and attitude towards working in their environment (Microsoft, 2010).

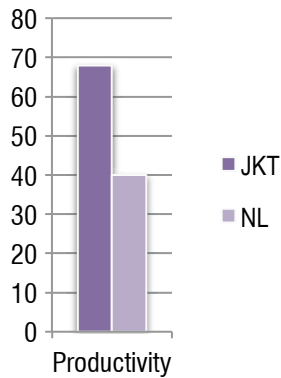
Besides the combination of bottom up and top down approach done in the Dutch case of Microsoft, the initial investments made by the two Dutch reference cases are also showing a great deal of urgency they put into creating a better working environment. While on the Indonesian cases, out of three local company cases, only MedcoEnergi was fully aware of the possibility of organizations' improvements made possible by a better workplace design, particularly the activity-based workplace. Meanwhile, Egis Indonesia did not see the workplace as their main concern at the moment, due to the other target they are aiming for. However, the management do consider the need of creating a better working environment.

How do the workers in Jakarta's case studies perceive their current workplaces?

Based on the survey result, including the ones from the social network, it was found that less than 50% of 174 participants did not found that their workplaces meet their preferences over stimulation, privacy and comfort. From the three case studies surveyed, only one did have an average of more than 50% satisfaction over the three indicators, which is MedcoEnergi.



Since the WODI results explain satisfaction level from different aspects, the answer of this question could be divided based on the aspects of the workplace. One highlight would be the low satisfaction level on the IT infrastructure, which could also support the reason why only one company (P&G) really endorse the employees to work from home from the five cases in Jakarta. However, despite some low satisfaction level and the mismatch found on the workers' perception, 72% of the 174 participants believe that their current workplace support productivity.



Graphic 7 — Comparison support on productivity in Jakarta and the Netherlands

What are the preferences of workers in the Jakarta's case studies concerning workplace design?

The preference of course vary, but from the discrete choice method it was revealed that the indicator that they preferred as the most important one is stimulation, which could also be translated as the ability to attract and retain employees in the office. It includes giving them sense of belonging, and some status. Accordingly, control also stimulates employees to become happier (Choose People, 2012; Veitch & Gifford, 1996), while self-actualization give the stimulation on the creation and innovation process (Jones Lang Lasalle, 2011). Stimulation leads to motivation, and furthermore also new ideas and innovation.

What lessons can be learned from the Netherlands in implementing their workplace?

The important lessons which can be learned from the Dutch cases is certainly their combination of a top down and bottom up approach, as well as the possibility to create a flexible working hour for their employees. The physical design of course will vary depending on the needs, budgets and objectives. However, the process of engaging employees while still having the main objectives of the organization accomplish or translated through the workplace do matter.

6. Conclusion



Based on the previous chapters, this part will deliberate the conclusions and the analyses behind them.

6. Conclusion

Based on the overall literature study, culture and workplace management do correlate, however, it is not necessarily be correlated with the national cultures, but more towards company or organizational cultures. However, the behaviours found in the workplace of different countries do differ (van Meel, et al., 2010).

Hypotheses

- “Organizations in Jakarta are aware on the importance of the physical workplace, but did not show any sign of bottom up approach on this matter.”

This hypothesis could not be generally proven, since the sample of the case studies could not represent the whole population of organizations in Indonesia. However, the three local case studies did not show a direct bottom-up approach. Two of the five organizations did an indirect bottom-up approach (MedcoEnergi & PTI Architects), and two other did not show any sign of bottom-up approach (Ogilvy & Egis Indonesia). On the other hand, P&G, although not showing any sign of bottom-up approach from their Indonesian subsidiary, may already have conducted a study for their global network, before implementing the global workplace management guidelines.

- “The settings of workplaces in Jakarta will tend show hierarchical characteristics e.g. representing status.”

This hypothesis could be rejected, since the physical workplace itself does not really represent the local culture. Only two out of five cases in Jakarta did show signs of the Indonesian characteristics based on the observations (MedcoEnergi & Egis Indonesia). However, one could see also from the characteristics of the industry, as another way to explain the characteristic of the physical workplace.

- “Employees in Jakarta will tend to have low satisfaction level on their workplace, due to their low result on the indulgence vs. restraint index.”

This hypothesis could be approved based on the results of the WODI part of the questionnaire. Based on the results, the graphs, indeed the average of the total 174 participants' satisfaction level was lower than the one found on the Dutch CfPB database (Center for People and Buildings, 2013). With some evidence found on the fewer bottoms up approach being done by the organizations observed in Jakarta, it could be one of the supporting evidence on why the employees were not fully or at least 50% satisfied with their current workplaces. The evidence showed in the two cases surveyed in Jakarta, for instance, did show the result of how lack of bottom up approach for workplace arrangement creates lack of satisfaction level.

Process Focus

On the process level, the direct approach towards employees or users on decision-making of the workplace design was not seen. Only two companies out of five cases in Indonesia showed an indirect bottom up approach. These two companies, MedcoEnergi and PTI Architects used the perspective of their employees through their own department or employees who set the workplace guidelines or in also the design. In the case of MedcoEnergi, the department of General Service is responsible to the company's facility management, and was also responsible to initiate the workplace change in 2009. This department did their own research on location for the new space based on the employees' addresses, as well as personal insights as MedcoEnergi's

employees. On the case of PTI Architects, it was their own employees who did the current workplace designs, which give them the employees' insights on the important needs of the user.

Another important factor of the process is the availability of guidelines, which could emphasize on the design, user behaviour, or both. During the research, it was found that the four out of five companies visited in Indonesia have guidelines concerning the workplace, except PTI Architects. Egis Indonesia, however, did not use their global guidelines due to the small organization size they have in Jakarta. Although during observations it was not possible to see all the company workplace guidelines, it was mentioned during the interviews with the key-persons that P&G has workplace guidelines concerning both the design and the behaviour in the workplace policy, while Ogilvy has workplace guidelines, which emphasize more on the design and what it represents. MedcoEnergi set the workplace guidelines concerning design as well, while the behaviour policy lays mainly on the issue of workplace safety.

Although national culture did give impacts on workplace management decision making, amongst all the evidence found in correlation with the national culture differences, the distinctions are even stronger when correlated with organizations' culture as well as field of industry. Multinational companies such as P&G and Ogilvy chose a higher tendency towards equality and activity based working. Although in the case of Ogilvy, it was not the option to give rotating desk policy due to the PC dedicated for everyone, while in P&G, all employees, except the administration staffs are working with laptops.

Product Focus

Based on the observation on five different cases in Indonesia as well as the literature studies on the reference cases in The Netherlands, it could be seen that physical evidence of distinctions based on national culture evidence on the product level did exist in the workplace. The first Indonesian case, MedcoEnergi, did show a higher hierarchical level not just on the working culture, but also in the physical workplace. Private offices are entitled for employees starting from the manager level. The higher the position, the bigger the room size, the better the furniture quality, the more electronic devices provided in the room. The case of Egis Indonesia did also showed the higher level of hierarchy, while PTI architects and Ogilvy did not really show the same high level of hierarchy. Last but not least, P&G Jakarta showed the least hierarchy, even a perfect equality of spatial benefits for all employees concerning their rotating desk policy. In terms of activity-based working, P&G showed the highest choices concerning the activity-based workspace options, while PTI showed the least control over workspace type, since the employees has their own desk, with 2 meeting rooms, pantry, IT corner, and directors' rooms. However, this issue could be caused by the limited cost provided by the organization. On the other hand, the reference cases in the Netherlands shows more transparency and less hierarchy compare to cases in Jakarta. The office of Ogilvy Amsterdam for instance, showed more transparency by using more glass walls and open layout, while the same company in Jakarta chose different approach to create more confidentiality. While the activity-based workspaces could be found more in Ogilvy Jakarta compare to Ogilvy Amsterdam. Microsoft Amsterdam also shows equality of space within their office, as seen in P&G Jakarta.

- Literature evidence and the observation of the case studies did show link and correlations on how the culture shaped the physical workplace environment. National culture influence did exist, but not as strong as the influence of organizational culture and the culture of the industry, which was not specifically discussed in the literature study. Evidence base, in the implementation of innovative workplace as shown in P&G and Ogilvy, the national culture is overwhelmed by the organizational culture, while on the case of MedcoEnergi the hierarchical Indonesian culture could really be seen from the spatial arrangement, whilst PTI-Architects somehow shows balance between the influence of national culture, organizational culture and leaders' culture. However, two case studies showed least

focus towards workplace management issue, namely PTI-Architects & Egis Indonesia, due to cost barrier.

Then, the research question will be answered.

“What are the users’ preferences on the physical workplace environment in Jakarta, which are perceived, as supportive to higher productivity?”

➔ Based on the survey results, the preferences of the employees are:

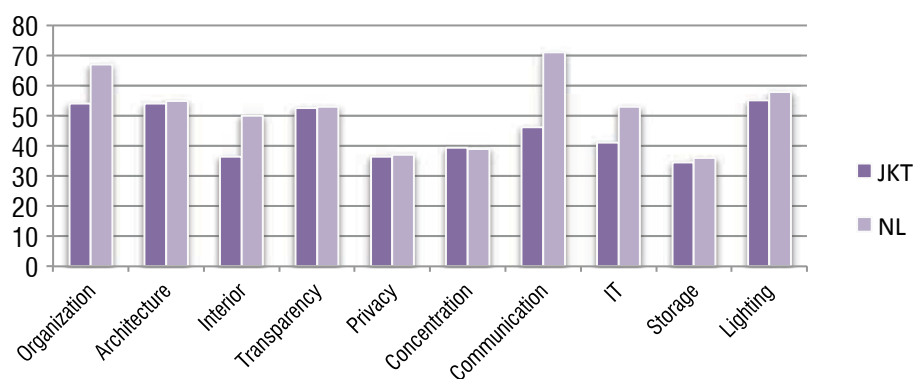
Table 25 —List of importance preferences based on the discrete choice result from 174 participants

No	Attributes	Attributes Level Preferred	Indicator
1	View & window	With view to parking & greenery	Stimulation
2	Room partition material	Non translucent	Privacy & territoriality
3	Cubicle usage	Cubicle	Privacy & territoriality
4	Furniture	Comfort over aesthetics	Comfort
5	Table partition height	50cm	Privacy & territoriality
6	Colours	Neutral colours	Stimulation
7	Lighting	Bright lighting	Comfort & Stimulation
8	Plants	No plant	Stimulation
9	Blinds	Translucent	Comfort
10	Table partition material	Semi translucent	Privacy, territoriality & concentration
11	Floor material	Carpet	Privacy, territoriality & stimulation

Thus, the ranking of the factor is:

4. Stimulation
5. Privacy
6. Comfort

It could be seen from the table that the important factors preferred by the employees in Jakarta mainly prove the high significance demand over stimulation and privacy, while comfort is seen as a less important factor. The preference for stimulation as the most important factor could be explained by the fact that the stimulation indicator is meant to support employees in terms of ideas generation, reducing stress level, increase working motivation, and so forth. The idea of having stimulation as the most preferred indicator is in line with the idea of workplace being supportive for employees’ productivity.



Graphic 8 — Comparison of the WODI result from the 174 participants in Jakarta with the Dutch database

However, when these indicators are combined with the satisfaction level, the average of the total satisfaction level does not reach 50% for all three namely stimulation, privacy and comfort. This means, more than 50% of the total participants, who are in this case employees working in Jakarta, did not find their workplace meet the expectations. This condition certainly cannot be taken for granted or generalized for all workplace in Jakarta, however it shows some unawareness from the management level on understanding what the users want.

When the satisfaction level between the findings from the WODI database in the Netherlands are compared with the satisfaction level on the overall survey results in Jakarta, the average of the total satisfaction level did not show a significant difference. However, the results in the Netherlands reach an average of 52% of satisfaction level for the 10 topics (architecture, interior, etc.). While the results of the WODI from the participants in Jakarta only show 45% of satisfied employees. This result could be caused by the fact that the case studies who were observed and allowed the survey, did not do a direct bottom up approach, leading the decision making of the workplace based on the management's predictions of what the employees want.

Zooming on the cases in Jakarta only, the findings were partially revealed on why the average satisfaction level of the participants in Jakarta did not reach an average of 50%. The cross-analysis between the satisfaction level and the importance preferences, which both were translated into the three main indicators of comfort, privacy and stimulation also did not reach 50% on each indicator set. The average of the stimulation indicator satisfaction level was 44%, the same with the privacy, while the comfort indicator reached only an average of 37%. On the per case level, only one out of three cases showed an average of more than 50%, the MedcoEnergi (see chapter 5: case comparison).



Figure 40 - Cross check on result of the WODI part & discrete choice questions from all 174 participants

As a conclusion, all three indicators were not sufficiently addressed through the workplace management in the three surveyed cases, as well as in the office of the other participants from the social network. As for the main indicator, stimulation seem to be weighed as the most important factor to be managed in a physical workplace environment. Like it or not, employees need to be motivated from time to time. Especially when they are working on a high pressure projects or during deadlines. Nonetheless, this does not mean that the issue of privacy and comfort are not important. The sense of control, which included in the comfort indicator, is very much important in allowing employees to choose their own working space based on the activity and their own pace. All three should be balanced in order to create a better workplace environment.

Indeed, the workplace design implementations in Jakarta still need extensive improvements. Organizations tend to put less attention in this case, and manage a top-down approach on the decision-making, neglecting the importance of employee engagement. Although the implementations found in the Dutch cases are also not the perfect solutions, but lessons could be learned on how the combination of employee engagement with top down

decision-making could lead to a more comprehensive design. Additionally, company guidelines are considered to be another important factor in supporting the consistency of the top-down approach.

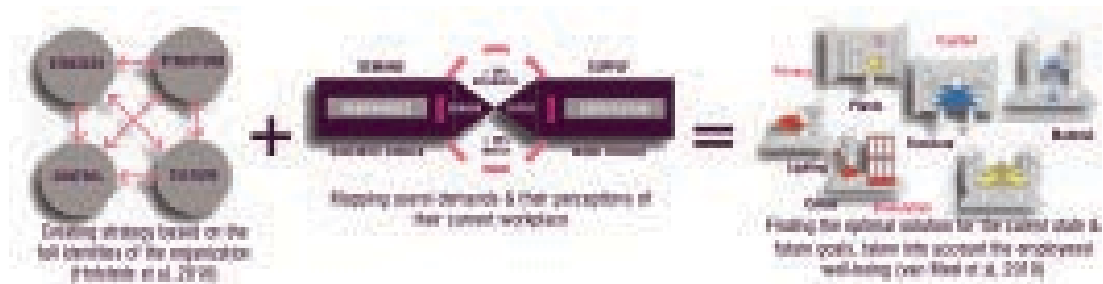


Figure 41 - the step-by-step approach to align organization's objectives & employee engagement

Innovative workplace design, as in this case activity based workplace is one way to engage the employees and enhance their performance. It is indeed impossible to manage all characteristics of employees' needs in the workplace. However, by creating as much options and flexibility by creating multi-usage workspaces, employees will have the sense of control, which could stimulate them and motivate them in using spaces based on their current state. The idea is to create the optimal solution from the integrated strategy, which aligned users' needs & demands as well as the organizations' objectives. Survey method used in this research (the combination of WODI toolkit & the discrete choice method) could be one solution for mapping the users demands.

7. Discussions



As part of the further analysis of the whole research, this chapter will discuss the phenomenon found during the research process and the linkage to the previous theories.

7. Discussions

After both theoretical and empirical processes are done, the following question will be answered in the discussion:

➤ How can we optimize the benefits of workplace design in Jakarta?

“How can the findings in the literature give solutions to the issues found in the case studies?”

The main issue found from the research is how the visited workplace did not suffice the expectation of the employees.

Based on the findings, the case studies showed a diverse approach to accommodate and facilitate employees in the office. Some organizations are more aware than the other concerning the workplace management. This has to do with the organizations' objectives and aim. Some organization such as Egis did not see workplace management as an important aspect to be enhanced at the moment due to more important issues such as company growth, finding new projects, et cetera. However, there is this intangible impact from the physical workplace environment, such as indirectly increase productivity.

The approach to provide the optimal stimulation, privacy and comfort should be aligned with the company's strategy. This issue was also discussed by Hofstede et al. (2010) on how the strategy is a result of organization's culture. Strategies are carried out through the existing structure and control system, and their outcome is modified by the organization's culture, thereby all elements influence each other (Hofstede, et al., 2010). The study discussed by Hofstede et al. (2010) shown that as long as quantitative studies of organizational cultures are not used as isolated tricks but are integrated into a broader approach, they are both feasible and useful.

Moreover, as a more practical solution, an activity-based workplace could also be translated as creating spaces, which are meant for multi-purpose. This can already be seen from the example in almost every cases visited in Jakarta. Therefore, not only mapping the strategy and company's value are important, but also mapping the activities as part of the culture itself, should be part of creating another solution. Multi-purpose area is especially efficient for organizations with space or budget limitations.

“How can the preferences of the employees improve to the decision making of the future workplace design in Jakarta?”

Employees preferences on high demand over stimulation effect of the workplace, which could comprise on the value of attraction/ belonging in the workplace, esteem on working harder and to achieve better result on the

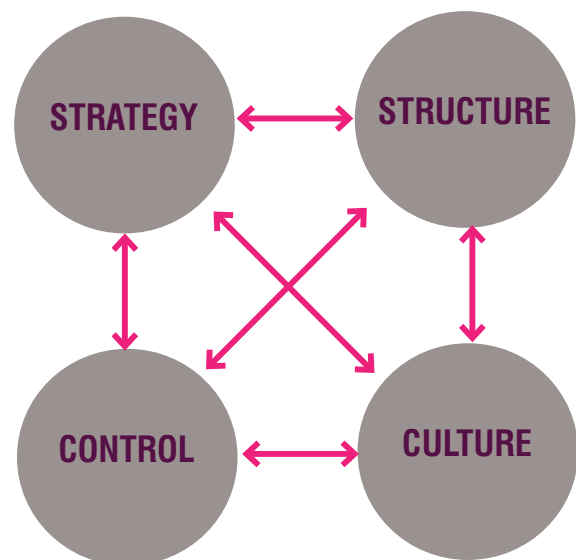


Figure 42 - Strategy, structure, control and culture in organization (Hofstede, et al., 2010)

career path, self actualization, status and control could explain on how a workplace should not just facilitate the basic physiological needs of the employees, but also to encourage them to work more efficient, be proud of their company/ organization, as well as giving them the ability to choose, e.g. through the choices workspace, possibility to change indoor climate including lighting, and so forth. In the end, a workplace should not only adjust the organization's value, but also the individuals inside, which are all different, with different characters and backgrounds.

In the end, it does not matter in which country the workplace is located. The hands-on decision making, which is tailor-made for the different kind of activities and individual types, would provide more satisfaction for the employees, compare to the standardized ones. This also implies for the multinationals that if each subsidiaries are given the ability to decide their own workplace management, but still aligned with the global corporate guidelines.

The results from the WODI and the discrete choice analysis in this research could also not be taken for granted. The findings here only create a benchmark, and some picture on how the satisfaction and preference could be a match or not, while still connect them with the process and the background of the companies, as done in the three surveyed companies. If this list could be spread to a wider group or companies and workers, the benchmark could be more generalized, and useful for future organizations' needs.

As a round up, one of the inputs from Kornberger and Clegg (2003) could be well noted, that in order to increase innovation and creativity, we have to create a "generative building that allows and encourages plurality, contradictions and dis-census, through its spatial organization". Additionally, when preferences are acknowledged through options within the workplace, it gives a sense of control, which will also enhance satisfaction level, on choosing the most appropriate workspace for their activities and personal choices. The case equality and activity-based workplace management of P&G Jakarta, as well as the higher satisfaction level found in the MedcoEnergi were the examples of how control given by workspace options for the employees lead to a greater workplace success.

8. Reflection & Recommendations



This part will show the reflections from the researcher's point of view on how the research was conducted, as well as recommendations for further research and possible societal improvements are deliberated based on the research findings.

8. Reflection & Recommendation

8.1. Reflection

8.1.1. Reflection on Workplace Management in Jakarta

(Relation between the project & wider social context)

By the end of the research, it could be confirmed that the issue of workplace management in Jakarta is still not explored enough. Resources on this issue concerning cases in Indonesia or particularly in Jakarta are still rare. Therefore, it was not easy to perform the benchmarking process between cases. The reason for this could be that the companies are mostly restricted to themselves, including the hierarchical process on sharing data. They were also not aiming for any workplace change in the short term, thus it was only by the researcher's approach that the companies opened up. Therefore, it creates some reluctance for these kinds of research or benchmarking attempts.

After seeing and studying the cases both in Jakarta and the Netherlands, it was found that workplace management was not considered as such an important issue compare to other crucial matters concerning companies' main core businesses. However, it is important to create the awareness, starting from the early stages that managing the workplace to gain optimum impact for supporting working activities. However, awareness grows when the organization's size is bigger. More people equals square-meter. Bigger organizations tend to face the problem of efficiency more often, compare to smaller ones. Especially when the company also work internationally, with local subsidiaries, or known as multinationals. However, with the advancement of technology, and the possibility of mobile working, maintaining and increasing efficiency was also made possible. This approach too, has been implemented in Indonesian organizations, however more common in the multinationals' local subsidiaries, such as seen in the P&G Jakarta. Although cannot be generalized, local companies are not still aware of the positive benefits of mobile working. And even though their employees are used to work remotely from the office, the organizations are still not able to give a full freedom for them to work from home or elsewhere but the office, due to the lack of control.

Further on, looking on the condition of Jakarta as a metropolitan city, the issue of workplace management could actually contribute to employees' welfare. By creating more possibilities for home working or flexible working, employees could achieve for greater work-life balance, while at the same time reduce the number of commuters per day. However, the consequences would be to invest more on IT infrastructure. Furthermore, companies could also reduce the number of square meter, knowing that less people would work in the office daily. Another important aspect to support the flexible working culture, is to create guidelines or policies concerning the maximum day or hour spent outside the office, as well as the involvement of the leader to control the effectiveness and efficiency of the working process, without having the employees in the office the whole time.

8.1.2. Reflection on the Research Process

(Relation between the research, the research design and theoretical framework)

In relation with its relationship with the Real Estate Management Laboratory of Department Real Estate and Housing, Faculty of Architecture TU Delft, this research lays within the core of facility management, where offices or workspace are one of organizations' most important assets. Managing workplaces could enhance greater companies' efficiency such as less overtime hours, less expenses concerning facility management issues, and strengthen organizations' performance i.e. through supporting staff' activities and communication.

During the entire process, the research design has been renewed several times, adjusting the limitations of time and confidentiality issues. Nevertheless, it is important to create a fixed research purpose or target, to help the decision-making and planning for the future. The process of this research could be pictured as a looping process, where there are always changes or adjustments on the previous steps, when the next steps are being done. For example, the research started out to be done with the same level of in depth study between cases in the Netherlands and Indonesia. However, due to the limited amount of time and accessibility to companies for the survey, it was not manageable to create the same level of in depth study. The looping process itself is already defined beforehand since the beginning of the research. This approach was done due to the nature of a research itself, where results and findings could be traced back with the initial purpose and findings.

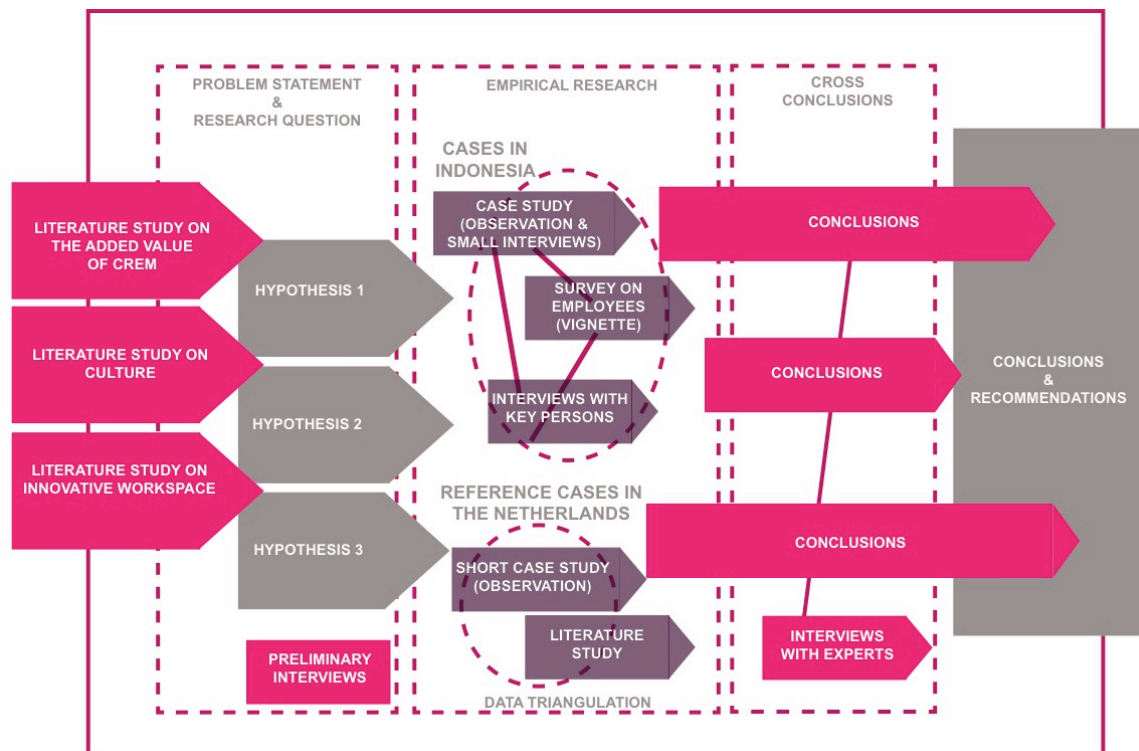


Figure 43 — Research design

To recover this issue, literature review and a quick observation on one Dutch case were done. The accessibility to find more open resource for the Dutch cases made this possible, thus it was not that hard to complete the study.

It is considerably important to determine the purpose of the research and executive summary in the beginning of the process. However, although known as a solid fact, that solid aims & objectives are necessary to enhance the working process, it was not easy to manage the consistency of the research aims & objectives, since further findings, both from literature studies and empirical research, may suggest the contrary of the initial aims & objectives. The limitations of resource accessibility, company accessibility and time limits also push the researcher to be more flexible and if necessary change the research design into a more reasonable practice concerning the issues.

8.2. Recommendation

8.2.1. Recommendation on the Societal Relevance

Since data benchmarking in Asia over workplace management issue is still rare, it would be good to start on mapping the needs and satisfaction level of employees both on the interior and building level. It is also important to quantify the efficiency achieved by the companies through their energy use or expenses, as well as the rent or square meter/FTE. In having these kinds of raw data, organizations could learn more about the real examples of workplace management and its benefits. At the moment, local organizations, especially in Indonesia, may be reluctant to pay more attention into the issue of workplace management since they might not be aware of the positive benefits. That it is not just about eliminating costs, reducing square meter of net office space, but also increasing employees' satisfaction, communication, and supporting the working process as a whole. The lesson learned from the Microsoft Amsterdam case proves that productivity could be increased, with undoubtedly real estate costs reduction, and enhancing reputation in the market, as well as to retain and attract top talent (Microsoft, 2013). Like it or not, today's workforce are more aware about the perks and flaws of the activity-based workplace management. Thus, it will be a positive investment both for the entire organizations, and each employee.

When an organization is preparing for a workplace change, the first thing to do is to look on organization's objectives, to see what kind of image they would like to show both to employees and to others outside the organization. Further on, it is important to map the kinds of activities conducted in the workplace and to observe how the previous workplace is being used by the employees. These information can then be used for creating an activity-based workplace, where employees could work according to the space required, such as individual workspace for concentration based working, shared office or team room for collaborative work, and so forth.

Although activity-based workplace is suitable for the today's mobile working culture, the result could be different for every organization. A lot of factors influence this, including national culture, the culture of the organization and the industry's culture.



Figure 44 - the step-by-step approach to align organization's objectives & employee engagement

Concerning the correlation of activity-based workplace and the possibility of more flexible working hours and support over home working, Jakarta as the main location of the research could benefit from this, if the flexible working as well as home working are implemented on more organizations. Thereby, it will increase the possibility to reduce commuter and traffic issue. Compare to the Netherlands who has already 35% of their workforce working in flexible hours, if the same percentage could be implemented in Jakarta's workforce, there could be 1,8million citizens who do not depend themselves on the regular working hours, and could minimize their obligation to travel/commute for working.



8.2.1. Recommendation for Further Research

In the future, research concerning workplace management issue could also be done not only through comparison between countries, but also through comparison between industries, or different organizations in the same field.

Data benchmarking is important to give insights to companies on what they could do in optimizing their workplace management.

Since the discrete choice method and the WODI toolkit could be cross-analysed for different purpose, this method could also be used for other types of facilities such as hospitals, or even education centre, but with different approach on the satisfaction questions, since WODI toolkit was specifically made for the workplace cases.

Appendix



Appendix

Appendix 1 — Space Classification

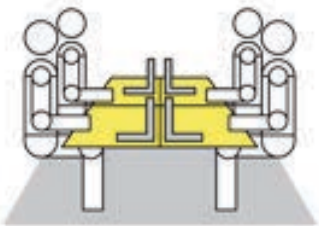
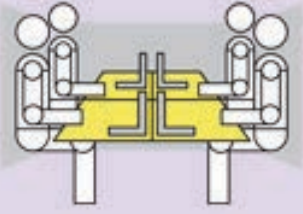
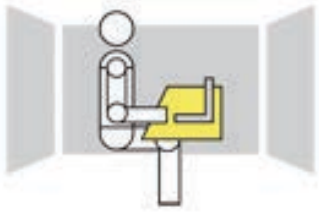
Workspace type	Use & Activities	Size & Layout	Image
Workspaces			
Open office	Solo work requiring relatively little concentration, Collaborative work Creative work requiring, such as architectural firm	Min. 6sqm per workstation Avoid desk arrangements in which people sit with their back towards circulation routes	
Team space	Collaborative work Solo work with medium concentration	Min. 6sqm per workstation	
Cubicle	Solo work with medium concentration	Min. 6sqm per workstation	

Figure 45 Open office (van Meel, et al., 2010)

Figure 46 Team space (van Meel, et al., 2010)

Figure 47 — cubicle (van Meel, et al., 2010)


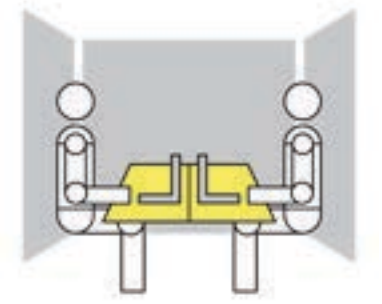
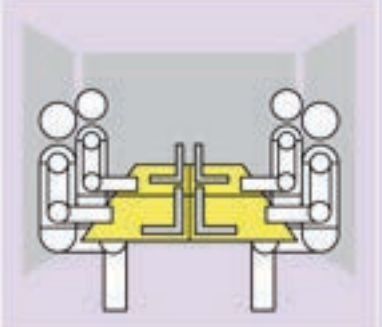

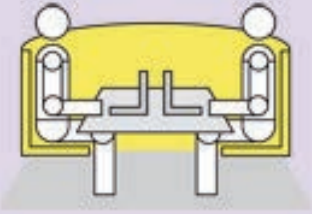
<p>Private office</p>	<p>Solo work with high concentration</p> <p>Solo work with high confidentiality issue</p> <p>Work requiring many small meetings, alternated with regular desk-based activities</p> <p>Activities, which could disturb others e.g. telephone</p>	<p>Min. 9sqm per workstation, which includes space for booth and desk for two-people-meeting.</p> <p>Preferably the desk arrangement with direct sight to the door.</p>	
<p>Shared office</p>	<p>Work concerning concentration and also collaboration</p> <p>Collaborative work with interaction between two or three people.</p>	<p>Min 6sqm or 7.5sqm with a meeting desk</p> <p>The desk could be arranged face to face to increase interaction or back to back to increase concentration.</p> <p>Preferably the desk arrangements give direct view to the door(s).</p>	
<p>Team room</p>	<p>Collaborative work with frequent team interaction</p> <p>Solo work of medium concentration</p> <p>Work with a certain degree of confidentiality e.g. auditing.</p>	<p>Min 6sqm or 7.5sqm with a meeting desk</p> <p>The desk could be arranged face to face to increase interaction or back to back to increase concentration.</p> <p>Preferably the desk arrangements give direct view to the door(s).</p>	
<p>Study booth</p>	<p>Solo work with high concentration</p> <p>Work with a high degree of privacy e.g. conference call.</p> <p>Work, which could disturb others e.g. telephone calls</p> <p>Can be on a flexible use/ bookable</p>	<p>Min. 6sqm per workstation</p> <p>Preferably the desk arrangements give direct view to the door(s).</p>	

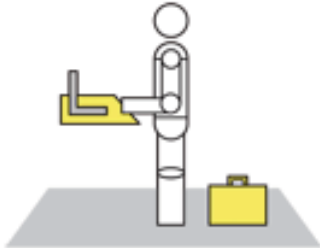
Figure 48 - Private office (van Meel, et al., 2010)

Figure 49 - Shared office (van Meel, et al., 2010)



Figure 50 - Team room (van Meel, et al., 2010)

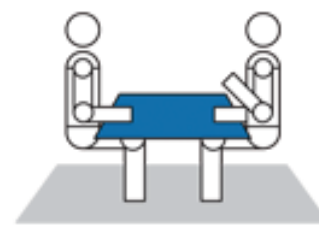


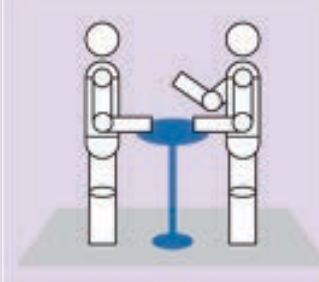
Figure 51 - Study booth (van Meel, et al., 2010)

<p>Work lounge</p>	<p>Solo work with relatively little concentration e.g. reading trading journals</p> <p>Colaborative work with informal interaction</p> <p>Mostly used in a “first-come-first-serve” basis</p>	<p>Min 4sqm per workstation</p>	 <p>Figure 52 - Work lounge (van Meel, et al., 2010)</p>
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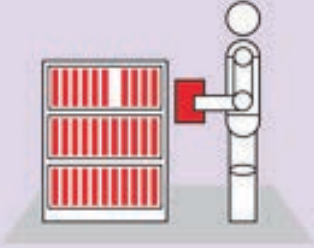

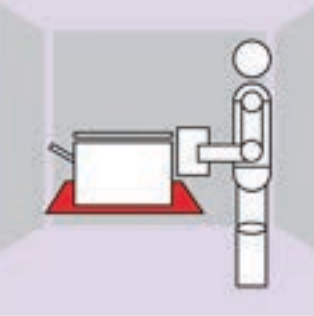

<p>Touch down</p>	<p>Work concerning little time and little concentration</p> <p>Mostly used in a “first-come-first-serve” basis</p>	<p>Min. 4sqm per workstation</p>	 <p>Figure 53 - Touch down (van Meel, et al., 2010)</p>
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Meeting spaces




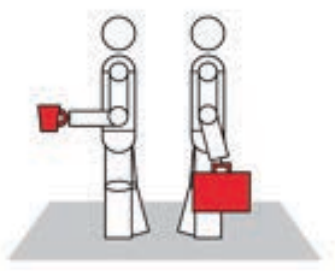
<p>Small meeting room</p>	<p>Useful for small meetings or confidential discussions</p> <p>Mostly used in a “first-come-first-serve” basis</p>	<p>Min 2sqm per person</p> <p>If possible is equipped with conference call or videoconference tools.</p>	 <p>Figure 54 - small meeting room (van Meel, et al., 2010)</p>
<p>Large meeting room</p>	<p>Useful for scheduled meetings, confidential discussions or presentations</p> <p>Mostly centrally managed, can be used through booking arrangement</p>	<p>Min. 2sqm per person</p> <p>Arrangement of face to face settings for people to have a discussion</p> <p>Complemented with wall for projections and if possible is equipped with conference tools.</p>	 <p>Figure 55 - Large meeting room (van Meel, et al., 2010)</p>

<p>Small meeting space</p>	<p>For small ad-hoc meetings</p> <p>For non-confidential discussions</p> <p>Mostly used on a first-come-first-serve basis</p>	<p>Min. 1.5sqm per person</p>	
<p>Large meeting space</p>	<p>For large informal meetings</p> <p>Mostly for non-confidential meetings and presentations</p> <p>Mostly used on a first-come-first-serve basis</p>	<p>Min. 1.5 dwm per person</p> <p>The layout could be managed that all attendees face each other.</p>	
<p>Brainstorm room</p>	<p>For brainstorming sessions and workshops, semi-confidential presentations and discussions</p> <p>Mostly is centrally booked and maintained</p>	<p>Min 3sqm per person</p> <p>The layout could be managed that all attendees face each other</p> <p>One wall for project-ions</p> <p>Equipped with flexible furniture, flip charts, white board or similar, for enabling creativity and innovation</p>	
<p>Meeting point</p>	<p>For small and short ad hoc meetings and non-confidential discussions</p> <p>Mostly used on a 'first-come-first-serve' basis</p>	<p>Min 1sqm per person</p>	

Support spaces

<p>Filing space</p>	<p>Storage and management of the frequently used documents and files</p> <p>Can also be used as storage space</p>	<p>Around 1sqm per filing cabinet, including clearance for circulations</p> <p>In others could be 1 linear meter per person (available shelf per person)</p>	 <p>Figure 60 - Filing space (van Meel, et al., 2010)</p>
<p>Storage space</p>	<p>Provision of commonly used office supplies</p> <p>Storage of other materials</p>	<p>One room per floor/ department</p> <p>Min 1sqm per storage cabinet (including clearance for proper access to the cabinet)</p>	 <p>Figure 61 - Storage space (van Meel, et al., 2010)</p>
<p>Print & copy area</p>	<p>Printing, copying, scanning, binding, etc.</p> <p>Regularly combined with waste collection facilities</p> <p>Creates serendipities and casual conversations</p>	<p>Recommended 1 copy area per 50 workstations depending on the speed and capacity of the copier</p> <p>Min. 6sqm per copier (including proper clearance of a medium sized multifunctional).</p>	 <p>Figure 62 - Print & copy area (van Meel, et al., 2010)</p>
<p>Mail area</p>	<p>Collection and delivery of incoming and outgoing mail</p>	<p>Dependant on how the collection and distribution of mail are organized</p> <p>Depends strongly on the number of 'pigeon-holes' and cabinet type.</p> <p>In some cases, the building already provided their own mail collection & delivery service.</p>	 <p>Figure 63 - Mail area (van Meel, et al., 2010)</p>

<p>Pantry area</p>	<p>Obtaining beverages and packaged food.</p> <p>Creates serendipities and casual conversations</p>	<p>Recommended to be 1 pantry area per floor/ 50 workstations.</p> <p>Min. 1.5sqm per vending machine + 1sqm per person using the machine / waiting in line.</p>	 <p>Figure 64 - Pantry area (van Meel, et al., 2010)</p>
<p>Break area</p>	<p>Used as break out area from work</p> <p>Rituals area such as office parties</p> <p>Can also be used for meetings or other temporary use</p> <p>Creates serendipities and casual conversations</p>	<p>Recommended to be 1 break area per 100 workstations.</p> <p>Min. 2sqm per seat.</p>	 <p>Figure 65 - Break area (van Meel, et al., 2010)</p>
<p>Locker area</p>	<p>Storage of personal belongings.</p>	<p>Recommended to be one locker area per department/ per floor.</p> <p>Depends on the number and types of the locker.</p>	 <p>Figure 66 - Locker area (van Meel, et al., 2010)</p>
<p>Smoking room</p>	<p>Used for smoking.</p> <p>Creates serendipities and casual conversations</p>	<p>Recommended 1 area per 100 workstations, depending on the company's smoking policy</p> <p>Min. 1.2sqm per smoker.</p>	 <p>Figure 67 - Smoking room (van Meel, et al., 2010)</p>

Library	<p>Work with concentration such as reading, writing and studying</p> <p>Can also used for informal meetings when properly equipped</p> <p>Regularly combined with work lounges and touch downs</p>	<p>Min 1sqm per book cabinet plus 3sqm per study place.</p>	 <p>Figure 68 — Library (van Meel, et al., 2010)</p>
Games room	<p>Playing games</p> <p>Break out area from work</p> <p>Social interaction with colleagues.</p> <p>Creates serendipities and casual conversations</p>	<p>Sizes vary on the type of facilities available in the room.</p>	 <p>Figure 69 - Games room (van Meel, et al., 2010)</p>
Waiting area	<p>Waiting</p> <p>Reading magazines/ brochure</p> <p>Using laptop/ telephone</p> <p>Watching the news or other media</p>	<p>Min. one per floor or building</p> <p>Min. 2sqm per seat</p>	 <p>Figure 70 - Waiting area (van Meel, et al., 2010)</p>
Circulation space	<p>Moving through the building</p> <p>Pacing or wandering around</p> <p>Creates serendipities and casual conversations</p>	<p>Between 10-15% of the overall usable floor area</p> <p>Concerning a corridor of min. 1.2m width</p>	 <p>Figure 71 - Circulation space (van Meel, et al., 2010)</p>

Appendix 2 — English Questionnaire Form

Workplace Satisfaction & Preferences questionnaire

Note: The following four questions are asked for general knowledge development. Personal information will never be linked to individual responses, All data will be processed anonymously.

1. Sex:
 - Male
 - Female

2. What is your age?
 - < 31 years
 - 31 - 40 years
 - 41 - 50 years
 - 51 - 60 years
 - > 60 years

3. What is your level of education?
 - Primary Education
 - Secondary Education
 - Vocational Secondary Education
 - Undergraduate (University Bachelor Level)
 - Postgraduate (University Master or PhD)
 - Other

4. How long have you been working for this organization?
..... year

Note: The following questions are asked to get the best possible image of the work processes within the organization.

5. On average, what percentage of your working time is spent in the following locations?
Please ensure that the total adds up to 100%.
 - a. Inside the building ... %
 - b. En route, travelling ...%
 - c. At home ...%
 - d. At another location (e.g. teaching or external research) ... %

6. What percentage of your work time do you spend on the following activities?
The total number of hours you spend in the office per week is regarded as 100%. Divide your time percentage wise between the various activities so that the total amounts to 100%. Calculate the total number of hours, and thereby also your average activity pattern, by referring to a standard work week.
 - a. General desk work ...%
 - b. Desk work where you are not to be disturbed ...%
 - c. Desk work where interaction with colleagues is necessary / required ...%
 - d. Planned meetings / interaction ...%

- e. Unplanned meetings / interaction ...%
- f. Telephone ...%
- g. Reading (longer than 30 minutes in one stretch) ...%
- h. Document management (archiving, copying, reference work, drawings, etc.) ...%
- i. Other ...%

7. If you are provided with a fixed individual workplace, which of the following types of workplaces are most suitable in describing your workplace?

- Workplace in open plan layout
- Individual workplace
- Individual workplace with meeting area
- Workplace in a 2-person setting
- Workplace in a 2-person setting with meeting area
- Workplace in a 3-person setting
- Workplace in a 3-person setting with meeting area
- Workplace in a 4-person setting
- Workplace in a 4-person setting with meeting area
- Workplace in a 5-6 person setting
- Workplace in a 7-8 person setting
- Workplace in a layout for >8 people
- I have no dedicated individual workplace

Note: The satisfaction related questions are to be answered according to a five-point scale from very dissatisfied (=1) to very satisfied (=5). Also the option 'not applicable' can be selected.

8. How satisfied are you with this organization? (e.g. culture, management, workstyle)
This includes the way in which guidance is provided, contact with colleagues, agreements regarding the use of the workplace environment, labor agreements, career advancement, provision of information, and freedom in your choice of workplace, work style, and working hours.

Answer:

- 1 2 3 4 5 NA

9. How satisfied are you with the architecture and appearance of the building?

This includes the exterior of the building.

Answer:

- 1 2 3 4 5 NA

10. How satisfied are you with the interior design and ambience?

This includes the use of color, choice of materials and the interior design.

Answer:

- 1 2 3 4 5 NA

11. How satisfied are you with the openness and transparency of the workplace environment?

Answer:

- 1 2 3 4 5 NA

12. How satisfied are you with the manner in which the workplace environment facilitates privacy?
Privacy refers to whether or not you can be heard, seen, or disturbed by others, as well as differences based on status, space for personal attributes, freedom to act and appropriate space according to your work requirements, and the possibility to work with confidential documents.

Answer:

1 2 3 4 5 NA

13. How satisfied are you with the opportunities to concentrate?
Can you perform your work without being unnecessarily distracted?

Answer:

1 2 3 4 5 NA

14. How satisfied are you with the opportunities for communication?
Communication refers to the quality, possibility and support of formal and informal meeting with colleagues, managers and external contacts. This also includes accessibility via e-mail and telephone, the manner in which you and your colleagues can be located by others and the sharing of knowledge and experience.

Answer:

1 2 3 4 5 NA

15. How satisfied are you with the archive and storage facilities?
This question refers to both your personal archive, the departmental and the central archive - both in digital and physical format.

Answer:

1 2 3 4 5 NA

16. How satisfied are you with the IT supporting services?
This includes not only all computers and software, the speed and stability of the network, printers, copiers and fax machines, but also new software and the support / help desk service for troubleshooting.

Answer:

1 2 3 4 5 NA

17. How satisfied are you with the lighting of your own workplace?
Lighting refers to the access of day light, the possibility of regulation of daylight, the lighting and the possibility of regulation of the amount of artificial light.

Answer:

1 2 3 4 5 NA

Note: The following three questions are to be answered on a five-point scale from completely unsupportive (=1) to fully supportive (=5). Also the option 'not applicable' can be selected.

18. To what extent does the workplace environment support your own productivity?
The workplace environment can support activities such as deskwork, telephoning, meeting or archiving. It can also contribute to the possibility for communication or concentration, and provide stimulation for performing productive, high quality work. As such, the workplace environment can improve your own productivity, that of your team or even that of the whole organization

Answer:

1 2 3 4 5 NA

19. To what extent does the workplace environment support the exchange of information?

Answer:

1 2 3 4 5 NA

20. To what extent does the workplace environment support the creativity and the joint development of new ideas?

Answer:

1 2 3 4 5 NA

Note: Choose one of the pictures in the following questions, according to your preferences (priority such as colours, natural and artificial lighting, etc.)

21. Which of the following ambience will be the most supportive for your communication & productivity?



view to road & parking



view to neighborhood & green



22. Which of the following ambience will be the most supportive for your communication & productivity?



no view



view to neighborhood & green



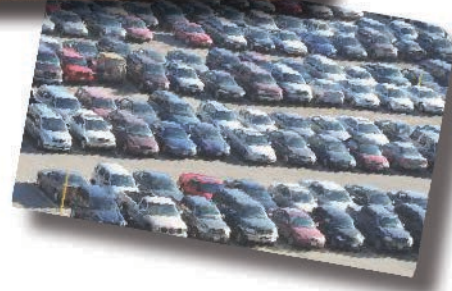
23. Which of the following ambience will be the most supportive for your communication & productivity?



no view



view to road & parking



24. Which of the following ambience will be the most supportive for your communication & productivity?



view to neighborhood & green



view to road & parking



25. Which of the following ambience will be the most supportive for your communication & productivity?



view to road & parking



no view

break

Appendix 3 — Overall Questionnaire Result

Total participant: 174 participants

Organization	No.	Percentage
PTI	16	9.2
P&G	6	3.4
EGIS	21	12.1
MEDCO	30	17.2
social network	101	58
Total	174	100

Table 26 - Gender of the whole participants

Gender	No.	Percentage
Male	60	49.2
Female	62	50.8
Total	122	100

Table 27 - Education level of the whole participants

Education	No.	Percentage
Primary education	26	15.8
Secondary education	33	20
Vocational Secondary Education	55	33.3
Undergraduate (University Bachelor Level)	28	17
Postgraduate (University Master or PHd)	23	13.9
Total	165	100

Table 28 - Age category of the whole participants

Age category	No.	Percentage
< 31 years	67	55.4
31 - 40 years	31	25.6
41 -50 years	16	13.2
> 60 years	7	5.8
Total	121	100

Table 29 - Working length of the whole participants

Working period	No	Percentage
<2 years	57	34.3
2-5 years	79	47.6
6-10 years	16	9.6
> 10 years	14	8.4
Total	166	100

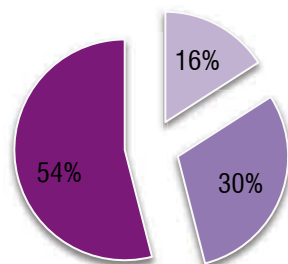
Table 30 - Workplace type of the whole participants

Workplace Type	No.	Percentage
Open plan layout	25	21.6
Individual workplace	19	16.4
Individual with meeting area	9	7.8
2person setting	4	3.4
2 person setting with meeting area	20	17.2
3 person setting	7	6
3 person setting with meeting area	2	1.7
4 person setting	5	4.3
4 person setting with meeting area	3	2.6
5-6 person setting	14	12.1
7-8 person setting	4	3.4
>8 people layout	4	3.4
No dedicated individual workplace	116	100
Total	25	21.6

WODI RESULTS

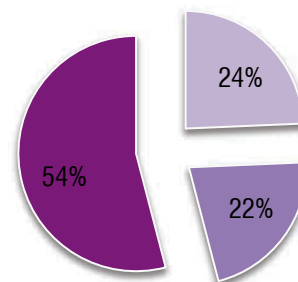
Satisfaction on organization

■ dissatisfied ■ neutral ■ satisfied



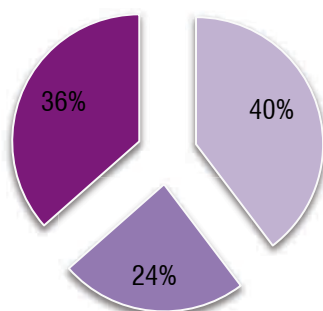
Architecture

■ dissatisfied ■ neutral ■ satisfied



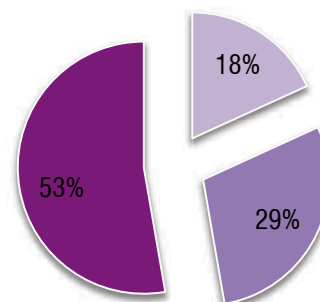
Interior

■ dissatisfied ■ neutral ■ satisfied



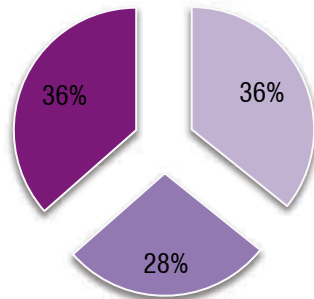
Transparency

■ dissatisfied ■ neutral ■ satisfied



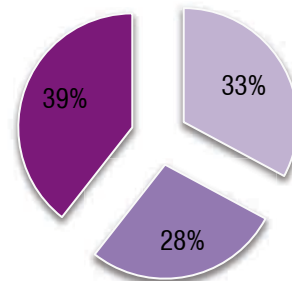
Privacy

■ dissatisfied ■ neutral ■ satisfied



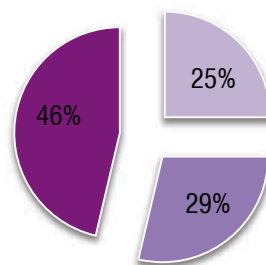
Concentration

■ dissatisfied ■ neutral ■ satisfied



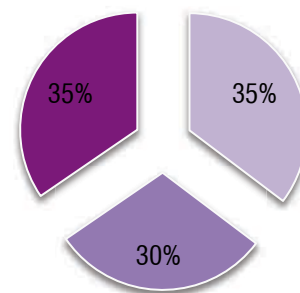
Communication

■ dissatisfied ■ neutral ■ satisfied



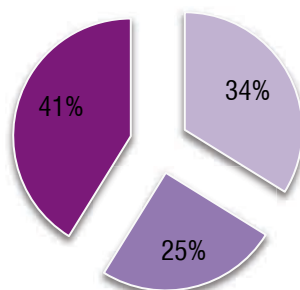
Storage

■ dissatisfied ■ neutral ■ satisfied



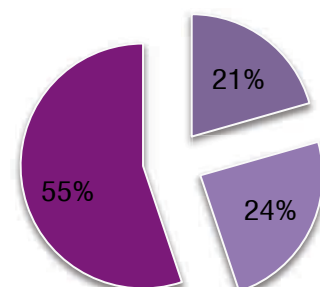
IT

■ dissatisfied ■ neutral ■ satisfied



Lighting

■ dissatisfied ■ neutral ■ satisfied



Highlighted comments:

- A good document control
- Office for designers need no boundaries and should be able to be modified at times
- An open office is more preferable, but privacy is still needed
- I like the design of my workplace, but maybe they need to re-layout the interior
- Interior design of the office has the most influence towards productivity
- Productivity is very much dependent on the office design, but also on the relation between colleagues.
- The high level of traffic congestion in Jakarta drives the workers to be already stressed when arriving to the office. Therefore, view to outside is a must.
- This questionnaire is good to support the layout design of my current workplace
- Interesting questionnaire, especially the part with the pictures
- Office interior design has prime influence to enhance employee's productivity
- This questionnaire is effective to give input about the effective ambience to support the work process
- The interior design should be taken into account the characteristics of the employees in relevance with their tasks/ jobs
- Prefer open space work area with glass separation, accent and ornament that trigger creativity
- Comfort in the office interior really influence productivity
- Outside view could be replaced by creating interesting elements inside such as green interior.
- Workplace design should entail comfort, good support system, nice environment, good accessibility and supporting good communication.

References



References

- Appelbaum, E., & Batt, R. (1994). *The new American Workplace*. Ithaca, New York: ILR Press.
- Balkin, D. B., Tremblay, M., & Westerman, J. (2001). Workplace Innovations in Large, Unionized Canadian Organizations. *Journal of Business and Psychology*, 15(Spring 2001).
- Batenburg, D. R. S., & van der Voordt, D. J. M. (2008). *Do Facilities Matter? The influence of facility satisfaction on perceived labour productivity of office employee*. Paper presented at the European Facility Management Conference.
- Batenburg, R. S., & van der Voordt, D. J. M. (2008). *Do Facilities Matter? The influence of facility on perceived labour productivity of office employee*. Paper presented at the European Facility Management Conference.
- Boray, P., Gifford, R., & Rosenblood, L. (1989). Effects of Warm White, Cool White and Full-Spectrum Fluorescent Lighting on Simple Cognitive Performance, Mood and Ratings of Others. *Journal of Environmental Psychology*, 9, 297-308.
- Brill, M., Margulis, S., & Konar E. (1984). Using Office Design to Increase Productivity. *Workplace Design and Productivity Buildings*, 1.
- Brunia, S. (2008). *Personalization in non-territorial Offices - A study of a human need*. Delft: Center for People and Buildings.
- Center for People and Buildings. (2013). Center for People and Buildings. Retrieved 5 May 2013, 2013, from <http://www.cfpb.nl/>
- Choose People. (2012). Return on Investment of Happy Employees. Retrieved from <http://www.petsmartcharities.org/resources/Return-on-Investment-of-Happy-Employees-40K-E.pdf>
- Colliers International. (2012a). *Asia pacific Office Market Overview: 1Q 2012*. Beijing: Colliers International.
- Colliers International. (2012b). *Asia pacific Office Market Overview: 2Q 2012*. Beijing: Colliers International.
- de Jonge, H., Arkesteijn, M. H., den Heijer, A. C., Vande Putte, H. J. M., de Vries, J. C., & van der Zwart, J. (2009). *Corporate Real Estate Management: Designing the DAS Frame*. Delft: Delft University of Technology.
- de Vries, J. C. (2007). *Presteren Door Vastgoed Onderzoek Naar de Gevolgen van Vastgoedingenrepen voor de Prestatie van Practical Examples*. Delft: Eburon.
- Den Heijer, A. C. (2006). *Managing the University Campus*. Delft: Delft University of Technology - Department of Real Estate & Housing.
- Disdukcapil DKI Jakarta. (2011). Jumlah Penduduk Provinsi DKI Jakarta. Jakarta.
- Duffy, F. (1997). *The New Office*. London: Conran Octopus Limited.
- Duffy, F. (2008). *Work and The City*. London: Black Dog Publishing Limited.
- Dul, J., Ceylan, C., & Jaspers, F. (2011). Knowledge Workers' Creativity and the Role of the Physical Work Environment. *Human Resource Management*, 50(6), 715-734.
- Egis Indonesia. (2013). Egis Indonesia: Building your future. In P. E. I. Indonesia (Ed.). Jakarta: PT. Egis International Indonesia.
- Gensler Architects. (2008). *The U.S. Workplace Survey*. Washington D.C.
- Gifford, R. (2002). *Environmental Psychology: Principles & Practices* (3rd ed.). Victoria: Optimal Books.
- Gifford, R., & Ng, C. F. (1982). The relative contribution of visual and auditory cues to environmental perception. *Journal of Environmental Psychology*, 2, 275-284.
- Gijselaar, R. (2010). *Decision-Making Criteria for the Acquisition of Office Buildings: Do building features decide?*, Delft University of Technology, Delft.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the mind* (3rd ed.). Chicago: The McGraw-Hill Companies.

- Hua, Y., Loftness, V., Kraut, R., & Powell, K. M. (2010). Workplace collaborative space layout typology and occupant perception of collaboration environment. *Environment and Planning B: Planning and Design*, 37, 429-448.
- IndexMundi. (2012). Indonesia Economy Profile 2012. Retrieved 28 September 2012, 2012, from http://www.indexmundi.com/indonesia/economy_profile.html
- Jones Lang Lasalle. (2011). *Attracting and Inspiring the Knowledge Worker: Applying Maslow's hierarchy to drive productivity in the workplace*. Chicago: Jones Lang Lasalle.
- Jones Lang Lasalle. (2012a). *Driving Effective Workplace in Asia*. Singapore: Jones Lang Lasalle.
- Jones Lang Lasalle. (2012b). *Investment Case for Indonesia*. Jakarta: Jones Lang Lasalle.
- Joroff, M., & Becker, F. (1993). Strategic Management of the fifth resource: Corporate Real Estate. *Industrial Development Research Foundation*, 49, 12-38.
- Kloet, F. (2007). The Syntax of Space and Nationalities. *LEADER, May-June 2007*, 36-39.
- Kornberger, M., & Clegg, S. R. (2003). The Architecture of Complexity. *Culture and Organization*, 9(2), 75-91.
- Kramer, S., & Amabile, T. (2012). Employee Happiness Matters More Than You Think.
- Krismantari, I. (2012, 17 July 2012). Redefining The Office. Retrieved 5 October 2012, 2012, from <http://www.thejakartapost.com/news/2012/07/17/defining-office.html>
- Kuhfeld, W. (2010). Experimental Design: Efficiency, Coding, and Choice Designs *Marketing Research Methods in SAS* (Vol. 9.2). Cary: SAS Institute Inc.
- Leesman. (2012). *Leesman Review 10K*. London: Leesman Index.
- LeesmanIndex. (2013). Leesman. *Leesman Benchmarking* Retrieved 16 April 2013, 2013
- Maarleveld, M., Volker, L., & van der Voordt, D. J. M. (2009). Measuring employee satisfaction in new offices – the WODI toolkit. *Journal of Facilities Management*, 7(3), 181-197.
- Martens, Y. (2011). Creative workplace: instrumental and symbolic support for creativity. *Facilities*, 29(1/2), 63-79.
- McElroy, J. C., & Morrow, P. C. (2010). Employee reactions to office redesign: A naturally occurring quasi-field experiment in a multi-generational setting. *Human Relations*, 63(5), 609-636.
- MedcoEnergi. (2013). MedcoEnergi. Retrieved 3 March 2013, 2013
- Microsoft. (2009). *Software Company Boosts Sales and Employee Satisfaction*. Amsterdam: Microsoft.
- Microsoft. (2010). The Future of Business Productivity. *EMEA Press Center - A regional gateway to Microsoft*, 2013, from <http://www.microsoft.com/presspass/emea/presscentre/pressreleases/FutureofBusinessProductivity.aspx>
- Microsoft. (2013). Microsoft. *Company Information* Retrieved 30 April 2013, 2013, from <http://www.microsoft.com/about/companyinformation/en/us/default.aspx>
- Mintzberg, H. (1987). The Strategy Concept I: Five Ps for Strategy. *California Management Review*, 30(Fall1987).
- Morgan, M. J. (1993). How Corporate Culture Drives Strategy. *Long Range Planning*, 26, 110-118.
- Ouye, J. A. (2011). *Five Trends that Are Dramatically Changing Work and the Workplace*. Chicago: Knoll.
- Oxford University Press. (2012). Oxford Dictionary. Retrieved 18 September 2012, 2012, from <http://oxforddictionaries.com/>
- Plijter, E. B. (2012). *Managing the Workplace in a Globalized World*. Delft University of Technology, Delft.
- Procter & Gamble. (2012). P&G. Retrieved 5 Maret 2013, 2013
- Riratanaphong, C. (2006). Flexible Workplace: Benefits and Concerns in Facilities Management. *Journal of Architectural/ Planning Research and Studies*, 4(2).

- Riratanaphong, C. (2009). Innovative Workplace Design: A Case Study of the Faculty of Architecture. *Journal of Architectural/ Planning Research and Studies*, 6(3).
- Riratanaphong, C., & van der Voordt, D. J. M. (2011). *Impact of Workplace Change on Satisfaction and Productivity: A comparative analysis of case studies in Thailand and the Netherlands*. Paper presented at the EuroFM Research Symposium.
- Schatz, S. L., & Bowers, C. A. (2005). 10 Questions on Room Color: Answers for Workplace Designers. *Ergonomics in Design: The Quarterly of Human Factors Applications*, 13(21), 21-27.
- Schein, E. H. (1992). *Organizational Culture and Leadership* (2nd ed.). San Fransisco: Jossey-Bass Publishers.
- Senge, P. M., Schein, E., de Geus, A., & Gallwey, T. (1998). *The New Workplace: Transforming the charater and culture of our organizations*. Masachusets: Pegasus Communications, Inc.
- Studio Ramin Visch. (2013). Studio Ramin Visch. Retrieved 17 June 2013, 2013, from <http://www.raminvisch.nl/>
- The Brookings Institution. (2012). *Global Metro Monitor 2011: Volatility, Growth and Recovery*. Washington D.C.: The Brookings Institution.
- Trompenaars, F., & Hampden-Turner, C. (1997). *Riding The Waves of CUlture: Understanding cultural diversity in business*. Naperville: Nicholas Brealey Publishing Limited.
- US Army Corps of Engineers. (1997). *Design Guide for Interiors*. Omaha: US Army Corps of Engineers.
- van der Voordt, D. J. M. (2003). *Costs and Benefits of Innovative Workplace Design*. Delft: Center of People and Buildings.
- van der Voordt, D. J. M., Y.M.D., I.-K., & Gosselink, A. (2011). An organization-centered Accommodation Choice Model. In S. Mallory-Hill, W. P. E. Preiser & C. G. Watson (Eds.), *Enhancing Building Performance*: Wiley-Blackwell.
- van Meel, J. (2000). *The European Office: Office design and national context*. Rotterdam: 010 Publishers.
- van Meel, J., Martens, Y., & van Ree, H. J. (2010). *Planning Office Spaces: a practical guide for managers and designers*. London: Laurence King Publishing.
- van Oel, C., & van den Berkhof, D. (2013). Consumer preferences in the design of airport passenger areas.
- Veitch, J. A., & Gifford, R. (1996). Choice, Perceived Control and Performance Decrements in The Physical Environment. *Journal of Environmental Psychology*, 16, 269-276.
- Verma, R. (2010). Customer Choice Modeling in Hospitality Services: A Review of Past Research and Discussion of Some New Applications. *Cornell Hospitality Quarterly*, 51(4), 470-478.
- Vischer, J. C. (2007). The effects of the physical environment on job performance: towards a theoretical model of workspace stress. *Stress and Health*(23), 175-184.
- Wainwright, E. (2010). The office is always on: DEGW, Lefebvre and the wireless city. *The Journal of Architecture*, 15(2), 209-218.
- Wang, N., & Boukberi, M. (2010). Design recommendations based on cognitive, mood and preference assessments in a sunlit workspace. *Lighting Research and Technology*, 43(55), 55-72.
- Zelenski, J. M., Murphy, S. A., & Jenkins, D. A. (2008). The Happy-Productive Worker Thesis Revisited. *Journal of Happiness Studies*, 9, 521-537.