

# Exploring the Innovative Workplace Design in Jakarta



**Name** : Pamela I. B. Jouwena  
**Student No.** : 4187997  
**Email** : Pamela\_jouwena@yahoo.com  
**Address** : Balthasar van der Polweg 484 2628 BT, Delft – The Netherlands

**Specialty** : Real Estate Management Laboratory  
**Department** : Real Estate & Housing  
**Faculty** : Architecture  
**University** : Delft University of Technology

**1<sup>st</sup> Mentor** : D. J. M. (Theo) van der Voordt  
**2<sup>nd</sup> Mentor** : Clarine van Oel  
**External Examiner** : Ad Straub



## 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 has been around for decades and still intrigue debates and discussions among them (Appelbaum & Batt, 1994; Brill, Margulis, & Konar E., 1984; Duffy, 1997; Krismantari, 2012; Chaiwat Riratanaphong & van der Voordt, 2011; Senge, Schein, de Geus, & Gallwey, 1998; van der Voordt, 2003; van Meel, 2000). Duffy (1997) also contributed in 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. Furthermore, the contribution of the development of technology and ICT also 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).

These ideas and contribution from the experts about office design as an added value towards organizations started from the western culture, namely the Northern European and North American countries. Subsequently, these ideas were also 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 investigate this issue in Indonesia, to find 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 the perception and preferences of their employees.

**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. **This research will explore the implementations of current office designs in Jakarta, and how it affects their productivity.**

**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 (D. R. S. Batenburg & D. J. M. van der Voordt, 2008; Brunia, 2008; Chaiwat Riratanaphong, 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 was conducted and compared, to gain descriptive information about the products and organization perspectives. Afterwards, surveys towards the employees in Jakarta) was elaborated through employees' perception in Jakarta.

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

**Findings** - Based on the theoretical part of the research, both Indonesia and the Netherlands are two very different countries in the aspect of culture. Therefore, the hypotheses concluded refer to the possibilities on the distinctive physical environment characteristics. Furthermore, the empirical part of the research did not show anonymous distinctions based on the cultural aspects, but more based on the different industry characteristics, as well as organization characteristics. The results of the WODI questionnaire also showed the same pattern between the Dutch and Indonesian result, on different types of satisfaction level, while the physical characteristics defined by the result of the discrete choice analysis, showed significant preference on privacy and comfort, which does not show specific relations between cultural aspect and the physical environment of the workplace. 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.

**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 (Gifford, 2002).*

Managing the appropriate physical environment in workplaces is considered important nowadays, as international and local corporates compete to win the same battle. 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.

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 offices have been introduced in Indonesia. Additionally, publication and research in this field is still rare in the country. Therefore this idea came up, to conduct case studies in Jakarta, with the additional insights of the publications and literature review from the Dutch cases. Interviews, case studies and survey will be 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, as part of another stepping-stone to my future career.

Enjoy reading!

# EXECUTIVE SUMMARY

## INTRODUCTION

Workplace management is one of the solutions for corporates to enhance the working environment based on their values and objectives.

## 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 answering organizations' objectives. Furthermore, indications of the preferences of the physical characteristics could be an input for the future improvement.

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

Employees' perception towards their productivity supported by their current offices

With general research on:

Employees' satisfaction of their current office design

To match these two factors concerning employees' satisfaction and perception, several variables will be measured with indicators through literature studies, case studies (including observations & interviews) and surveys as methods of data collection and research as its own entity. Furthermore, to find the possible solutions towards future upgrade, a survey over satisfaction and preferences will be conducted.

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 that area.

## RESEARCH QUESTION

The intended result(s) of this research will be the users' preferences on the physical workplace environment in Jakarta, which are perceived as supportive to increase their productivity. The problems will also be based on the issue of innovative workplace and current working cultures. Thus, the main research question would be:

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

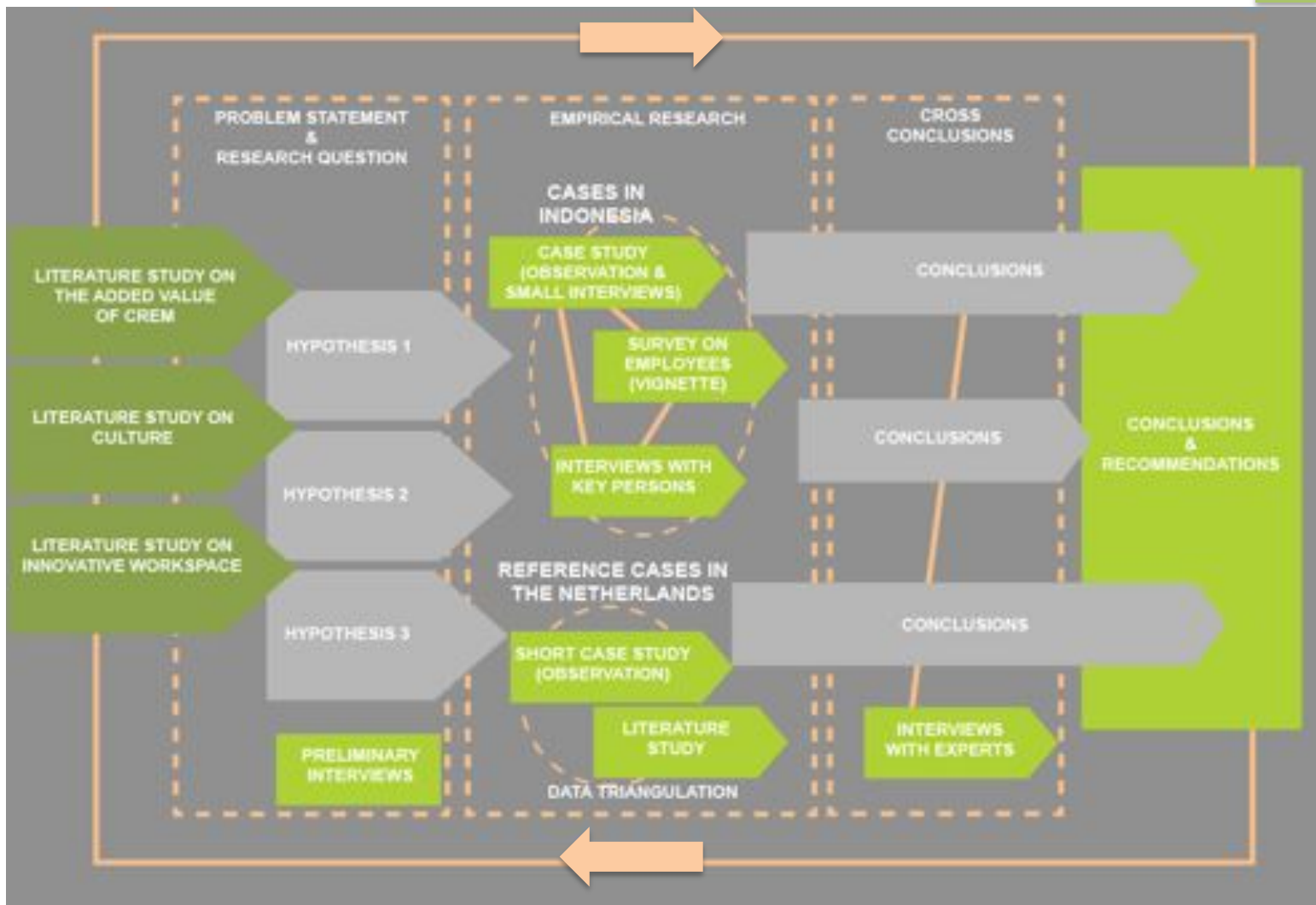


Figure 1 - Research Design

**THEORETICAL APPROACH**

In accordance with the research design, the theoretical framework consists of three different subjects. The innovative workplace will discuss about the different discussions of new ways of working, advantages, disadvantages and the possibilities that a well-designed and innovative workplace could give, based from the previous researches. Culture in the workplace will be an input of the Indonesian and Dutch comparison. Indexes created by Hofstede (Hofstede, et al., 2010) will be one of the measurements in comparing both countries' culture. The first theory about the added value of Corporate Real Estate Management (CREM) was added almost at the end of the research process, to explain the initial process of accommodation strategy to achieve organizations' objectives.

All three topics are important as a foundation 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.

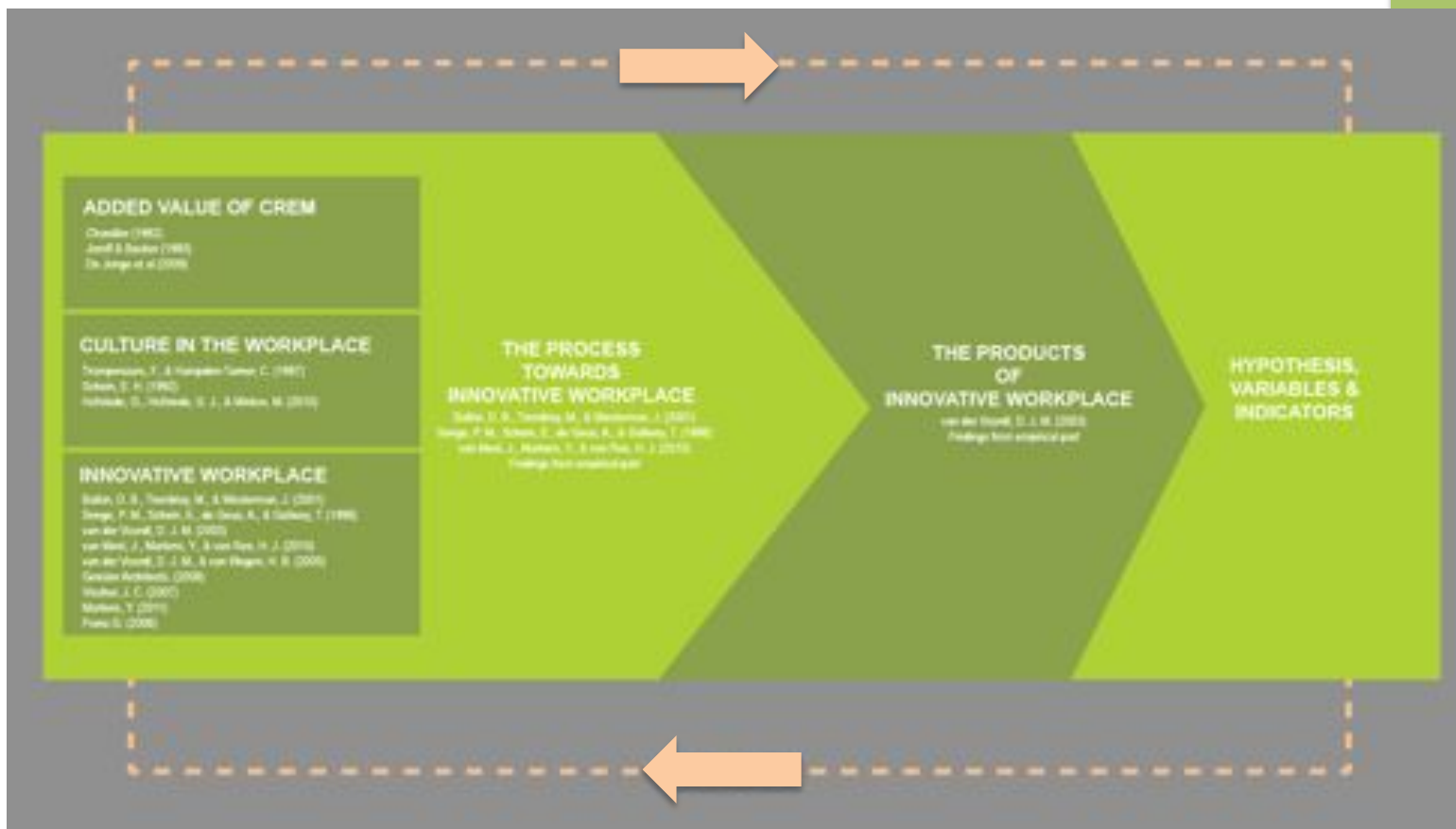


Figure 2 - Theoretical framework

### 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.

### CONCLUSIONS

Before answering the main research question, the three first hypotheses will be discussed:

- *“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 high satisfaction level on their workplace, due to their high result on the indulgence vs. restraint index.”*

This hypothesis could be rejected based on the results of the WODI part of the questionnaire. Based on the results, the graphs of both Indonesian and Dutch results showed the same pattern,

As a conclusion, 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 1 – Level of the importance of each attribute

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

➤ During the process of a workplace change, all case studies in Indonesia did not show signs of **direct user involvement**.

➤ **Location** is a one critical issue, which was proven from the case studies in Jakarta. Prestige is also taken into account, which proves the importance of **status** in their culture. However, this might bias with the corporate culture in general.

➤ Only one case study use un-entitled desktop system, which is P&G. The **conventional office** is still more common in Indonesian organizations.



- With the high traffic congestion & lack of public transport in Jakarta, a well-designed office is considered as one important element in reducing employees' **stress level**.
- Based on the comments from the survey result, also complemented from the findings in the observations, users are considerably aware of the benefits of a better workplace management

# CONTENT

<b>ABSTRACT</b> .....	<b>2</b>
<b>PREFACE</b> .....	<b>3</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>4</b>
<b>CONTENT</b> .....	<b>9</b>
<b>1. RESEARCH INTRODUCTION</b> .....	<b>11</b>
1.1. Personal Motivation .....	11
1.2. Problem Statement .....	12
1.3. Research Aim & Objectives .....	13
1.4. Research Target Groups .....	13
1.5. Relevance of The Research .....	13
1.5.1. Academic Relevance .....	13
1.5.2. Societal Relevance .....	14
1.6. Main Research Question .....	14
1.7. Research Design .....	15
1.7. Theoretical Framework.....	16
<b>2. Corporate Real Estate &amp; The Objectives</b> .....	<b>18</b>
2.1. Corporate Real Estate Management.....	18
2.2. The Major Corporate Objectives .....	18
2.3. Real Estate Strategy .....	19
2.3. Answer of Sub-question 1 .....	20
<b>3. Workplace Design &amp; Management</b> .....	<b>21</b>
3.1. The New Office Concept.....	22
3.2. The Role of Workplace Design for Organizations.....	23
3.3. Transformation of Office Design .....	25
3.4. The Human Approach on Office Design .....	33
3.5. Answer of Sub-question 2.....	35
<b>4. CULTURE &amp; WORKPLACE BEHAVIOUR</b> .....	<b>38</b>
4.1. Culture in General .....	38
4.2. The Role of National Culture.....	39
4.3. Organizational Culture.....	41
4.4. Answer of Sub-question 3.....	42
<b>5. THEORY INTEGRATION</b> .....	<b>44</b>
5.1. The Process towards Innovative Workplace .....	44
5.2. The Products of Innovative Workplace .....	44
<b>6. EMPIRICAL RESEARCH</b> .....	<b>45</b>
<b>6.1. Indonesian Case Study</b> .....	<b>45</b>
6.1.1. Indonesian Case Study Process .....	45
6.1.2. Location Overview: Jakarta .....	46
6.1.3. Case Study Results.....	47
<b>6.2. Dutch Reference Case</b> .....	<b>61</b>
6.2.1. Dutch Reference Case Study Process.....	61
6.2.2. Location Overview: Amsterdam & Its Culture .....	61
6.2.3. Reference Case Study Results .....	62
<b>6.3. Case Comparison</b> .....	<b>65</b>

<b>6.3. The Survey</b> .....	<b>67</b>
6.3.1. WODI Toolkit for the Satisfaction Measurement .....	67
6.3.2. Discrete Choice Experiment for Preference Measurement .....	67
6.3.3. Survey Result .....	69
<b>7. CONCLUSION</b> .....	<b>72</b>
<b>8. DISCUSSIONS</b> .....	<b>74</b>
<b>9. REFLECTION &amp; RECOMMENDATION</b> .....	<b>75</b>
9.1. Workplace Management in Jakarta .....	75
9.2. Concerning the Topic & Management of the Research .....	75
<b>APPENDIX 1 – ENGLISH QUESTIONNAIRE FORM</b> .....	<b>76</b>
<b>APPENDIX 2 – QUESTIONNAIRE RESULTS</b> .....	<b>86</b>
<b>References</b> .....	<b>91</b>

## CHAPTER 1

# 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 be transplanted directly from west to east.

Workplace design as one of companies' strategies to aim 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 has 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**, I chose Indonesia as the first country of my research, with Jakarta as the main location due to its 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 various 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, Volker, & van der Voordt, 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 have to also change the culture in their organizations (Schein, 1992). In majority, change in the physical workplace environment is in line with the change on organizational structure. It is noted that the success of alternative offices is determined by the underlying strategy and the method of implementation in particular (van der Voordt, 2003). What is then, a successful workplace? Workplace professionals know that there is an intrinsic relationship between workplace design and employee performance, but seem to struggle to present a watertight case (Leesman, 2012). In this case, the term successful refers to the corresponding results between the initial objectives of the company with the outcomes. In the workplace change strategy, companies are driven by several goals (van der Voordt, 2003), which can be the variables 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

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

Employees' perception towards their productivity supported by their current offices

With general research on:

Employees' satisfaction of their current office design

To match these two factors concerning employees' satisfaction and perception, several variables will be measured with indicators through literature studies, case studies (including observations & interviews) and surveys as methods of data collection and research as its own entity. Furthermore, to find the possible solutions towards future upgrade, a survey over satisfaction and preferences will be conducted.

Concerning the selection of the research topic, publication in the field of innovative office or new ways of working in Indonesia is still scarce. Organizations seem to have less awareness towards the issue of workplace innovation and the impacts on their employees. In Asia, companies tend to implement the workplace change from a top-down approach (based on an interview with researcher on office design based in Europe). However, the products seen so far such as hoteling or hot-desking system, open layout space, et cetera are quite similar compare to the others in the western countries. The process, perceptions, preferences and behaviour towards the products on the other hand, may differ (concluded from an interview with an Asia-Pacific property consultant based in Singapore).

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 that area.

### 1.3. Research Aim & Objectives

The major aim of this research is to find the particular needs of workers in Jakarta, based on their preferences. The research will focus more on the perceptions of the products, with extra input about the process, since both are one entity. A product would not exist without a process occurring beforehand (see figure 2: theoretical framework). These preferences will create the possibilities of approaches for the companies willing to change their office arrangements to aim certain objectives. Especially in Indonesia as a developing country, which is seen as a very promising market for real estate industry at the moment (based on an interview with property consultant based in Singapore). Therefore, these companies would know what types of process and design approaches, which are appropriate for their intended objectives and strategies. The possibilities will be explained through the combination of variables and indicators explained further in this proposal (see figure 1: research design).

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

### 1.4. Research Target Groups

The main objective of this research is to fulfil the final thesis obligation to graduate from TU Delft Architecture faculty, master track Real Estate and Housing. Moreover, the side objective is to learn how to conduct a research and encounter professionals from the real estate industry, also from different fields of expertise, where the research will be conducted. As to the problem statement itself, the objective is to explore whether innovative workplace could work in Jakarta, and the distinctive characteristics of the workplaces in Jakarta.

Two target groups are listed in this research, namely the property consultants, who are familiar with this research but have not been able to do an integrated research of the market in Indonesia, and the corporates willing to further develop they workplace in the near future.

### 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.

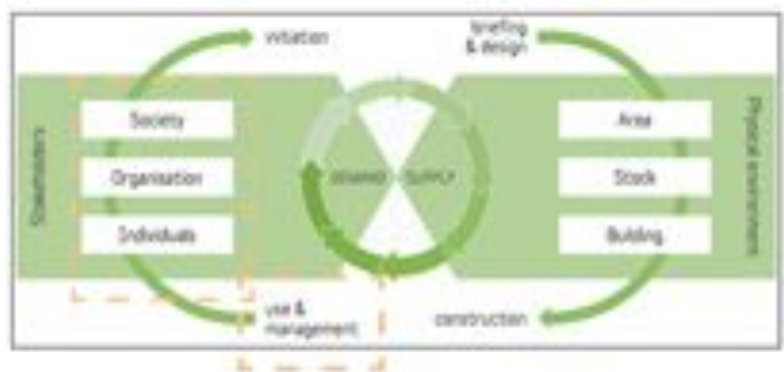


Figure 3 - Academic relevance

## 1.5.2. Societal Relevance

Workplace design and its development towards the current trends have been the 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. 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 the 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 to add Indonesia on the radar.

Organizations in Indonesia, especially Jakarta as the particular research area in this topic, need to be aware of the importance of the added value of balancing the demand and supply of their facilities such as the workplace. In matching the demand of their employees and other needs in accordance with the corporate objectives, company is actually one step closer in achieving their objectives. 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.

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 research question emerge:

➤ **“What are the users’ preferences on 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?
  - c. What is real estate strategy in terms of acquiring corporates’ objectives?
2. What can be found in the literature about the 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 influence of ones culture on their 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. What are the perceptions of the workers in the case studies in Jakarta?
  - c. How do the workers in Jakarta's case studies perceive their current workplaces?
  - d. What are the preferences of workers in the Jakarta's case studies concerning workplace design?
  - e. 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 four domains, hypotheses were concluded and contribute to the attributes and variables to measure the case stu-

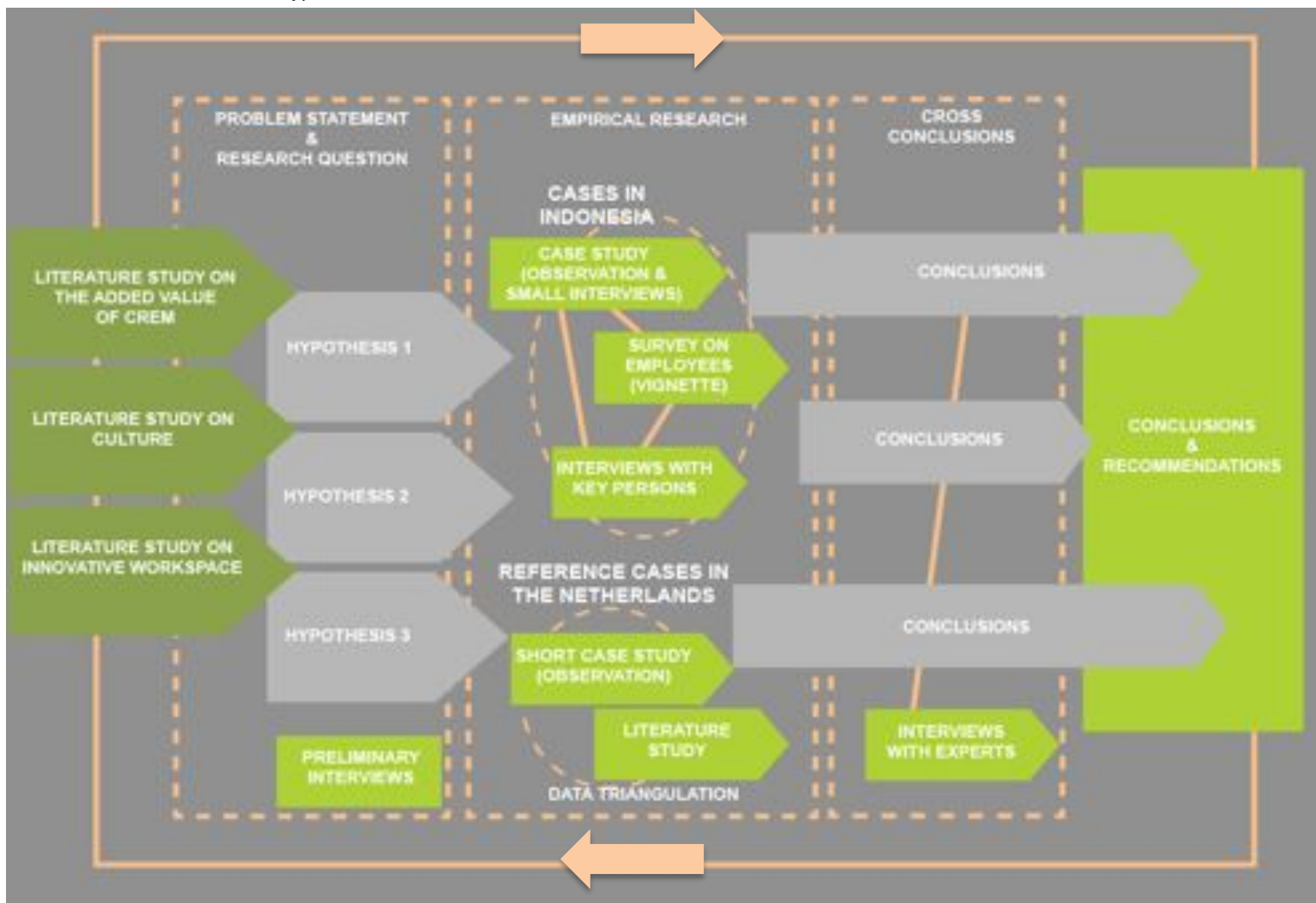


Figure 4 - Research Design

dies and data gathered from case studies, surveys and the interviews. Based on the three different domains, three hypotheses will be concluded, which will be tested afterwards during the empirical research.

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. At the end of the empirical research, each case are surveyed through online questionnaire, which is formed by a combination of the WODI light toolkit from the Centre for People and Buildings (Center for People and Buildings, 2013) and a set of discrete choice modelling, which allows the participants to choose one of two rendering images. More explanation of the survey will be given in chapter 6. Out of five case studies conducted in Jakarta, only three agreed on having the survey for their employees. Therefore, two cases, would not contribute on answering the preference of employees in Jakarta. However, the questionnaire is sent also to a wider range of participants from the researcher's social network, to create a more general sample about this issue of preference and satisfaction in Jakarta.

The empirical research is an attempt to answer both research question and the hypotheses, which will be the conclusions in the end. These different conclusions will be sent to the experts, who will be interviewed to give inputs on the discussions. The inputs of the experts is a combination of the first attempt to discuss the research with a third party outside the university, as well as to see their views on the output of the research, will contribute to the further discussions and recommendations on the report.

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

## 1.7. Theoretical Framework

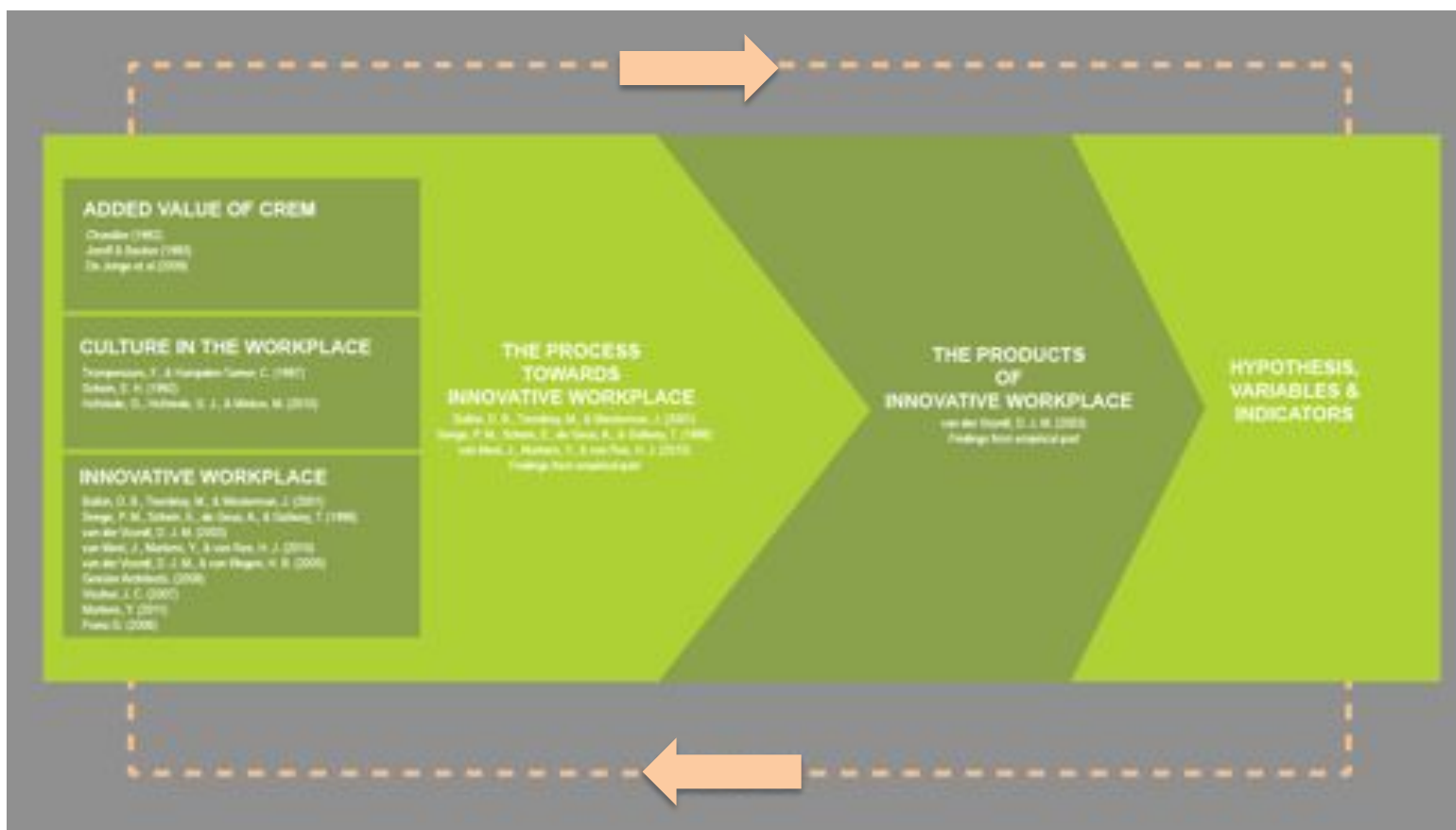


Figure 5 - Theoretical framework

In accordance with the research design, the theoretical framework consists of three different subjects. The innovative workplace will discuss about the different discussions of new ways of working, advantages, disadvantages and the possibilities that a well-designed and innovative workplace could give, based from the previous researches. Culture in the workplace will be an input of the Indonesian and Dutch comparison. Indexes created by Hofstede (Hofstede, et al., 2010) will be one of the measurements in comparing both countries' culture. The first theory about the added value of Corporate Real Estate Management (CREM) was added almost at the end of the research process, to explain the initial process of accommodation strategy to achieve organizations' objectives.

All three topics are important as a foundation 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 did not show any sign of bottom up approach on this matter.”*
- *“The settings of workplaces in Jakarta will tend show hierarchical characteristics e.g. representing status.”*
- *“Employees in Jakarta will tend to have high satisfaction level on their workplace, due to their high result on the indulgence vs. restraint index.”*

The reasoning behind the hypotheses will be discussed in chapter five. All hypotheses will be answered after the empirical research, based on the findings on the cases and the survey results.

## CHAPTER 2

## 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?
- 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 stands between 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. The Major Corporate Objectives

The major focus within this research is the domain of the facility management, where corporates have to deal with their daily operation 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 of the 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 towards information technology have created different mind-sets for corporates in managing their facilities (de Jonge, et al., 2009; Duffy, 1997). Both workplaces and business process was changed overnight.

The added value of real estate is defined as the contribution towards organisations’ objectives. De Vries 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 realising the objectives (de Jonge, et al., 2009), as stated 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 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, in complementary with 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. For Mintzberg, it consists of five Ps at the same time, namely:

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

Subsequently, Starren (1998) also contributed and mentioned that a strategy is the overall framework within 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.

To manage the match between supply and demand, research on the DAS Frame was developed, which implies the step-by-step approach towards determining the (mis)match of current and future demands and supply of an organization's real estate.



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

Each strategy should be based on the aims of companies, 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 of 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 management is one of the most important corporate resources, which stands between the demands and supplies of the company.

*“What are the major objectives of corporates?”*

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

- 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 or multiple ways to fill in the gaps between supply and demand in the present and the future. 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.

## CHAPTER 3



### 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?

Today's workforce has new requirements and expectations. The members of the workforce also differ, starting from the baby boomers until the millennials (McElroy & Morrow, 2010). These different generations of workforce also now considered as the insights towards workplace design requirements. The baby boomers are considered as 'technically challenged', more formal and have a sense of entitlement. The Gen-Xers are 'technically savvy' and more informal and entrepreneurial. While the millennials or Gen Y are the generations starting to enter the new labour force are more exposed towards modern technology, which are considered as excellent in multi-tasking. These being said, explains another distinctions of the current members of most organizations, which create various expectations in one organization, including in countries as Indonesia and the Netherlands.

In responding the varied expectations of the employees, companies and organizations create strategies and approaches to enhance the employees' performance and increase their happiness. 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 is through enhancing the quality of the physical space or the office. Today's workplaces are unique. Employees can work and communicate directly. With the development of technology, organizations are enabled to collaborate and communicate inside and outside the companies 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.

*“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)*

Furthermore, 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.

### 3.1. The New Office Concept

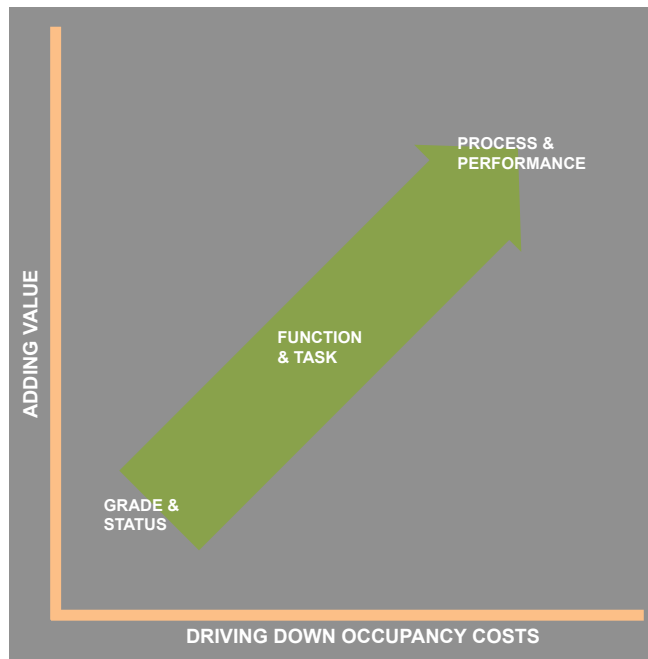


Figure 7 - The new office (Duffy, 1997)

In accordance with the development of corporate real estate management, Duffy mentioned how workplace concept has changed over the years, both in terms of the process and the physical characteristics. The focus has turned more towards the added value of the organizations' objectives and also financially, in driving down 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 client and the employees. Therefore, workplace management is considered important to strengthen the effort to achieve organizations' missions.

In one recent interview with a property consultant working in Asia Pacific region, it was also mentioned that the first trend of

enhancing workplace efficiency started during the economic crisis, where global corporates were forced to tighten their budget. 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 focussing more towards the added value of the company through enhancing the quality of a workplace as one of their organizational strategies. Especially in countries as Indonesia, where high numbers of new investments are entering the developing market. These new investments are driving companies to be more competitive, where workplace improvements could be one way in doing this. Occupancy costs are no longer the main concern, although efficiency still is.

In the real estate management industry, the focus of innovation in the workplace is on the physical workplace characteristics (van der Voordt, 2003), which will be the main focus on this research. The physical interventions of the offices include open job-oriented or organization-oriented housing, which compensates flexible or agile workspace such as hot-desking, hoteling and other terms of innovative workplace-design or the new office. 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.

Based on a recent interview with a consultant and researcher of office design working in Europe, innovative office could also be described as a way to enhance the innovation of a company. This 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

Those three aspects, performance, process and people, are all affected by the positive or negative contribution of the physical workplace. 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.

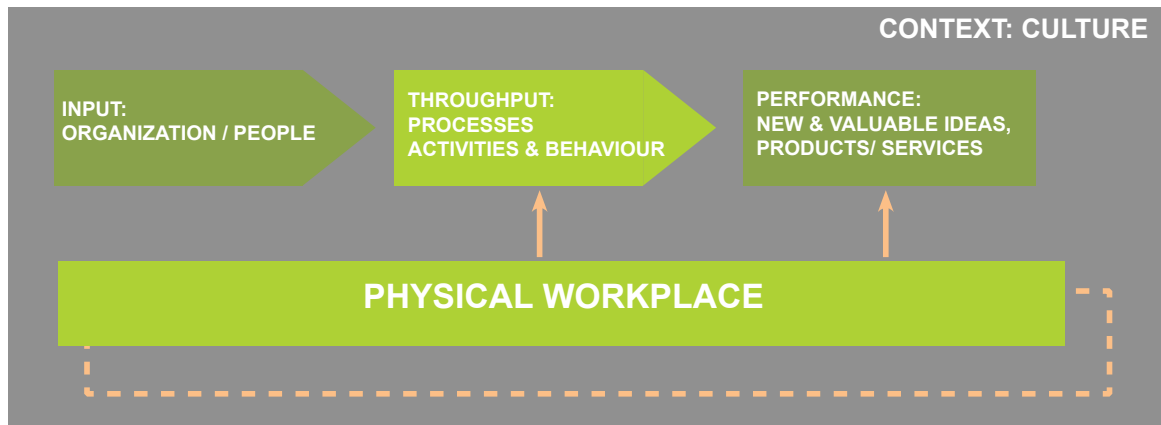


Figure 8 - Relation between physical workplace and performance. Adapted from: Martens (2011)

Other terms of describing innovations in the workplace such as new ways of working, flexible working and the new office are also introduced by other researchers (Duffy, 1997; Chaiwat Riratanaphong, 2006, 2009; van der Voordt, 2003). The 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 technologies. 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 normal in some places. Furthermore, the term 'new workplace' is really relative to the subject related. 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. The same issue is relevant with the comparison between the Netherlands and Indonesia as an example. Flexible workplace has been a way of working also for public organizations in the Netherlands (Center for People and Buildings, 2013; Chaiwat Riratanaphong & van der Voordt, 2011), where employees are not just free to choose their own desk, but also is supported to work from home in one or two days during the 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 are 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 Gensler's survey results 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 dissensus, through its spatial organization".



Figure 9 – 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.



Figure 10 - Survey result from Leesman Index - (LeesmanIndex, 2013)

More recently, Leesman (LeesmanIndex, 2013) also support the importance of the design of organizations' offices. More than 50% 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.

Other aspects that could 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 could explain 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, we add visibility 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.

### 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:

The continuing distribution of organizations

The availability of enabling technologies and social collaboration tools

The coming shortage of knowledge workers

The demand for more work flexibility

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 in also opposed 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 office which was first introduced in the US (van Meel, 2000) was still popular.

In the literature concerning environmental psychology of the workplace, although not particularly for the innovative workplace, Vischer (2007) listed some variables concerning the important aspects in a workplace such as user's ergonomic, natural and artificial lighting, layout of the office plan, and noise.

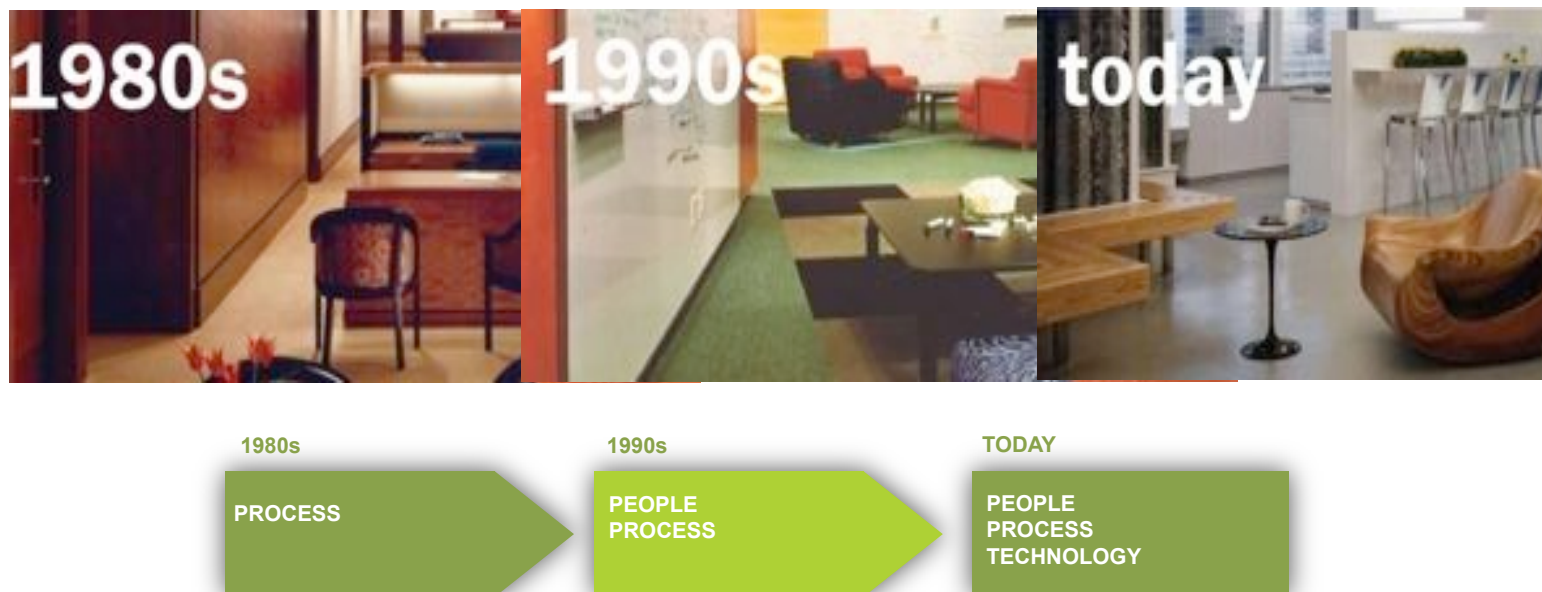


Figure 11 - Office design transformation (Gensler Architects, 2008)

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 networked than linear. Hierarchy is fading in the workplace, and the design is more flexible, adaptable to change. Companies also became more aware in creating amenities, which focus on attracting talent. Hoteling (non territorial office space, where each employee could reserve the space on first come first serve basis) was also introduced to enable mobility. Today, technology is already integrated with every aspect of the working process, while the 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 (Duffy, 2008).

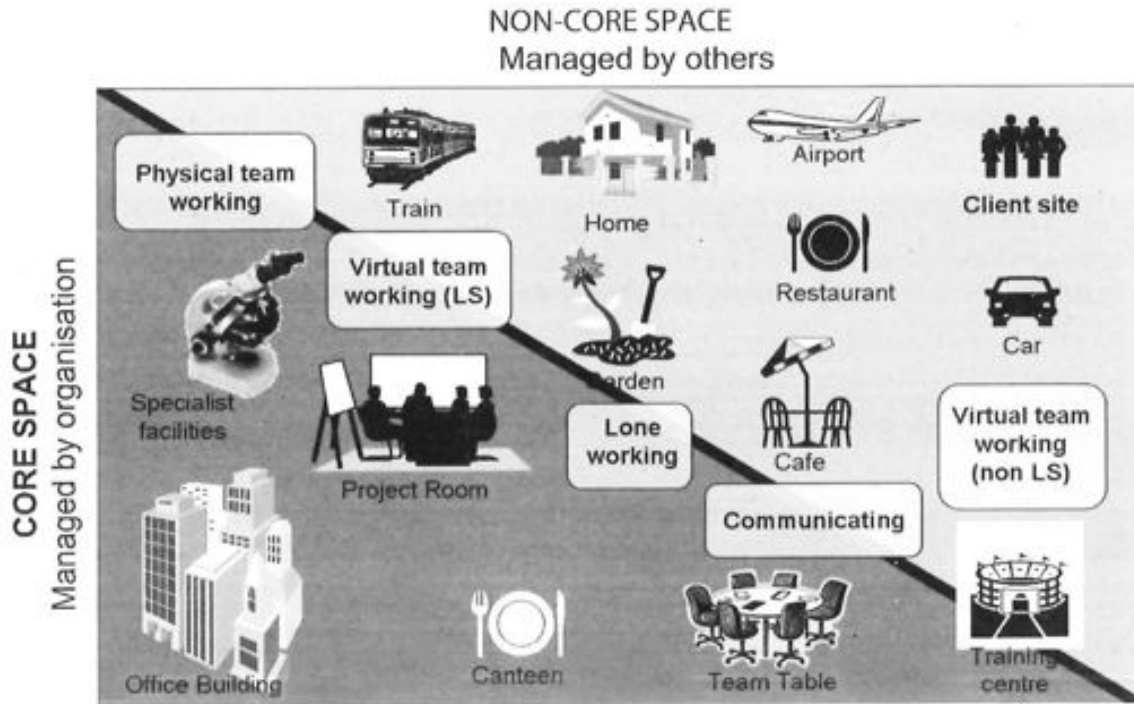
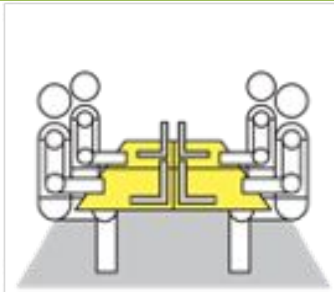
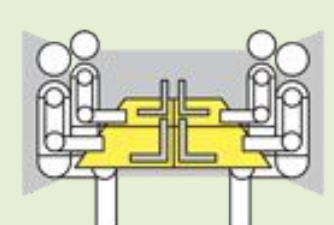


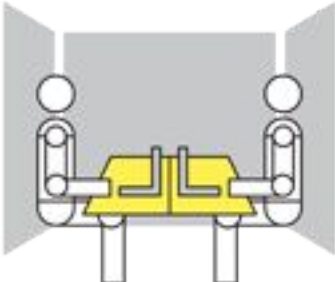
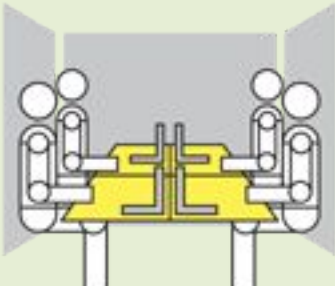

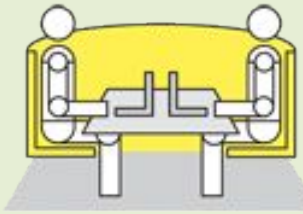
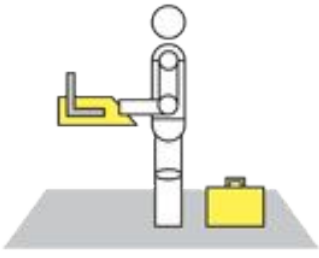
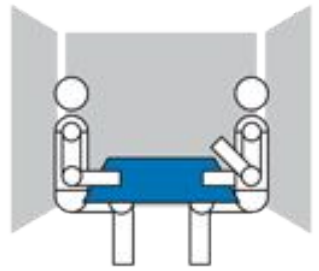


Figure 12 - Activity based workspace organization (Duffy, 2008)


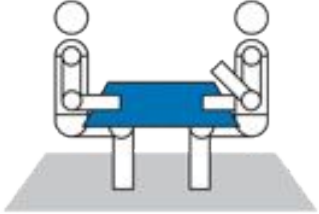

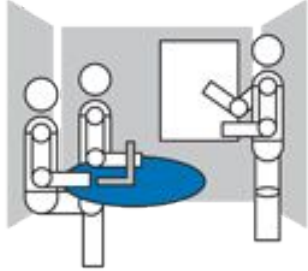
In complementary to this activity based workspace design, van Meel et al. (van Meel, Martens, & van Ree, 2010) tried to distinguish and explain the different types of workspaces and its characteristics, as shown below:

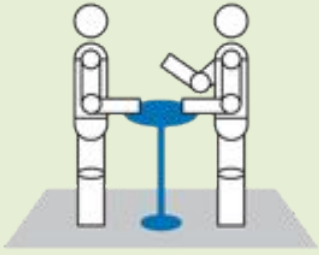
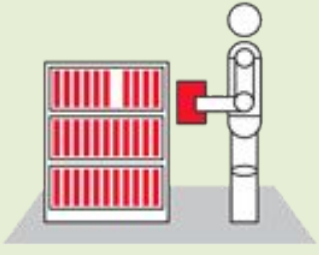

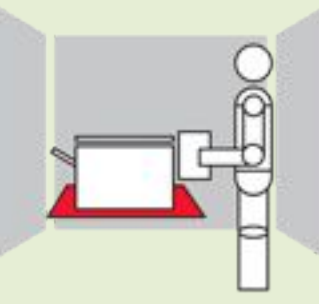
Workspace type	Use & Activities	Size & Layout	Image
<b>Workspaces</b>			
Open office	Solo work requiring relatively little concentration,  Collaborative work  Creative work requiring, such as architectural firm	Min. 6sqm per workstation  Avoid desk arrangements in which people sit with their back towards circulation routes	 Figure 13 Open office (van Meel, et al., 2010)
Team space	Collaborative work  Solo work with medium concentration	Min. 6sqm per workstation	 Figure 14 Team space (van Meel, et al., 2010)





Cubicle	Solo work with medium concentration	Min. 6sqm per workstation	 <p>Figure 15 – cubicle (van Meel, et al., 2010)</p>
Private office	<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>Figure 16 - Private office (van Meel, et al., 2010)</p>
Shared office	<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>Figure 17 - Shared office (van Meel, et al., 2010)</p>
Team room	<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>Figure 18 - Team room (van Meel, et al., 2010)</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 be disturbed 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>	 <p>Figure 19 - Study booth (van Meel, et al., 2010)</p>
<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 20 - Work lounge (van Meel, et al., 2010)</p>
<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 21 - Touch down (van Meel, et al., 2010)</p>
<p><b>Meeting spaces</b></p>			
<p>Small meeting room</p>	<p>Useful for small 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 22 - small meeting room (van Meel, et al., 2010)</p>

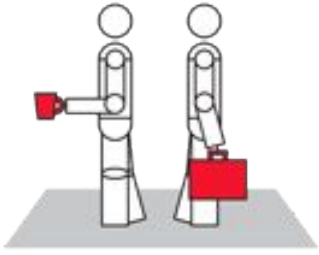


<p>Large meeting room</p>	<p>Useful for scheduled meetings, confidential discussions or presentations</p> <p>Mostly centrally managed, can be used through booking arrangement</p>	<p>Min. 2sqm per person</p> <p>Arrangement of face to face settings for people to have a discussion</p> <p>Complemented with wall for projections and if possible is equipped with conference tools.</p>	 <p>Figure 23 - 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>Figure 24 - Small meeting space (van Meel, et al., 2010)</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>Figure 25 - Large meeting space (van Meel, et al., 2010)</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 projections</p> <p>Equipped with flexible furniture, flip charts, white board or similar, for enabling creativity and innovation</p>	 <p>Figure 26 - Brainstorm room (van Meel, et al., 2010)</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>	 <p>Figure 27 - Meeting point (van Meel, et al., 2010)</p>
<p><b>Support spaces</b></p>			
<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 28 - 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 29 - Storage space (van Meel, et al., 2010)</p>
<p>Print &amp; 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 30 - Print &amp; 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 &amp; delivery service.</p>	 <p>Figure 31 - 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 32 - 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 33 - 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 34 - Locker area (van Meel, et al., 2010)</p>

Smoking room	<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 35 - 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 36 - 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 37 - 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 38 - 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 39 - Circulation space (van Meel, et al., 2010)</p>
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It is not mandatory for every organization to have all the workspace types or supporting areas 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 on their current demands and 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:

- Location: whether employees are obligated to work in the office, or have freedoms to work elsewhere.
- Use: whether employees get their own personal workstation, or do they have to share space.
- 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.
- Appearance: whether the ambience of the space is neutral or expressive (visually arresting)
- Filing: whether the work is more digitally recorded (paperless) or on paper
- Standardization: whether the office concept is use for the whole companies within departments, and/or branches.

### 3.4. The Human Approach on Office Design

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 exiting business culture and members of an enviable team. Staffs are usually motivated by the image of certain 'landmark buildings' as well as 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 (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.

Furthermore, 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, the working activities themselves consist of different categories (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 is 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.

### 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 employees' development process and also sense of belonging as parts of 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 millenials, 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 fade from the working population, and different type of working process will develop. The result could be the endless grow of technology dependent process, where communications and basic working process will be endorsed by everything related to technology and its development.



Figure 40 - Office transformation

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 discrete choice part of the survey, are:

Table 4 - List of the variables of workplace's physical characteristics

<b>Furniture</b>	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.
<b>Climate</b>	Climate could be one of the factors towards control and comfort.
<b>Room colours</b>	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).
<b>Artificial lighting</b>	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.
<b>Daylight</b>	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).



<b>Partition heights &amp; materials</b>	Partition is one of the ways to create privacy. Different materials create different feel for visual and acoustic privacy.
<b>Floor materials</b>	Floor material could be one other way to create sound privacy and territoriality.
<b>Windows &amp; outside view</b>	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).

## CHAPTER 4

## 4. CULTURE & WORKPLACE BEHAVIOUR

This chapter will elucidate the further question of:

“What are the influence of ones culture on their 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).

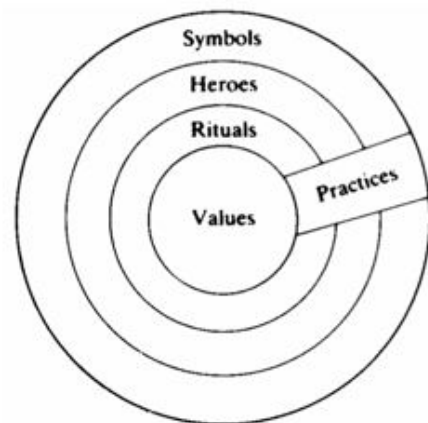


Figure 41 - Onion diagram (Hofstede, Hofstede, & Minkov, 2010)

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. 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.

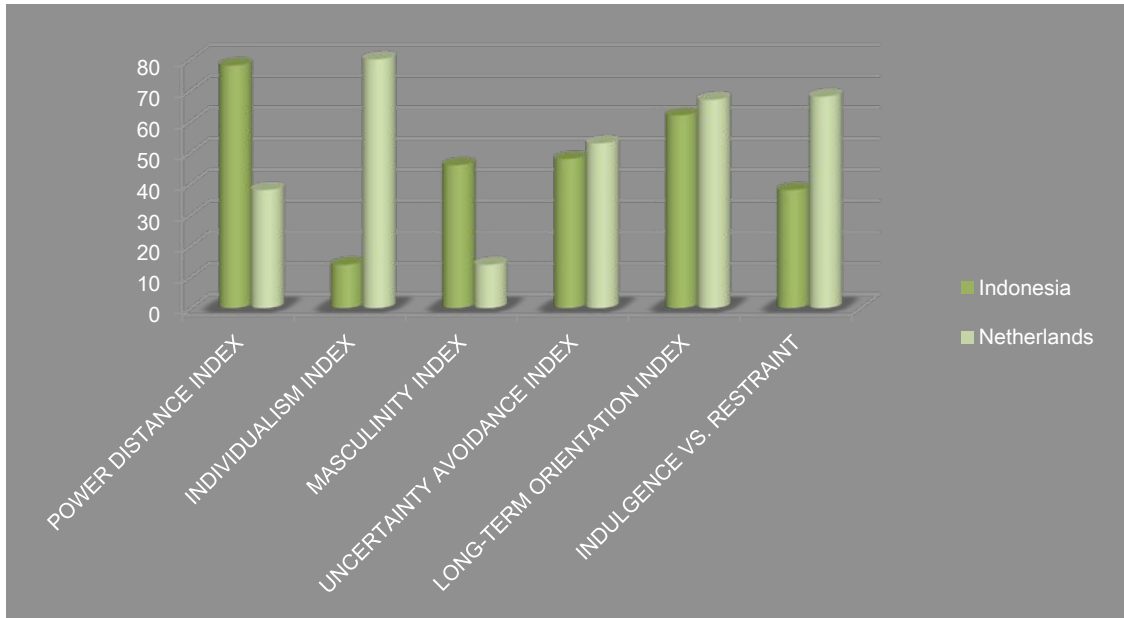


Figure 42 – Comparison between Netherlands and Indonesia, based on Hofstede and Minkov's indexes (2010)

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.

Table 5 – 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 Low: balance in male and female needs	Technical orientation materials 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 hierarachical 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

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). 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).

The same measurement over value of culture mentioned before also occurs in measuring each employee's culture in companies. 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.

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.



Figure 43 - Organizational images (Trompenaars & Hampden-Turner, 1997)

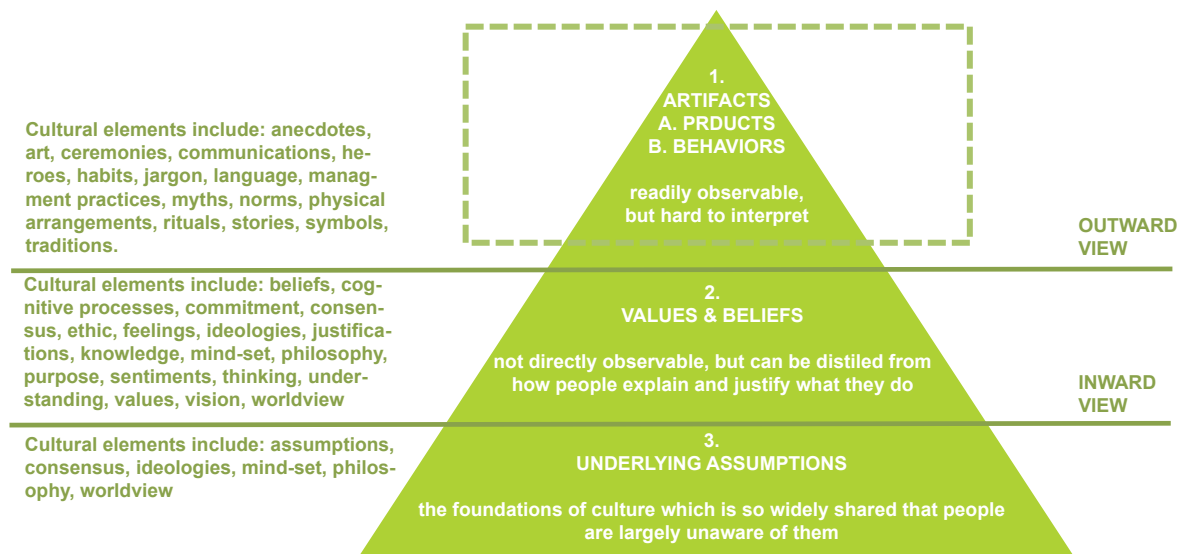


Figure 44 – Organizational culture & its manifestation (Schein, 1992)

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).

#### 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 in general tend to be more easily indulged than the Dutch

*“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.

As a result, the following question could be answered:

*“What are the influence of ones culture on their 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.



## CHAPTER 5



## 5. THEORY INTEGRATION

### 5.1. 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.

### 5.2. 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 higher indulgence level of the Indonesians,

➤ *“Employees in Jakarta will tend to have high satisfaction level on their workplace, due to their high 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 and interviews to check on the products of the workplace design.

## CHAPTER 6

## 6. EMPIRICAL RESEARCH

The empirical research part will be done both in Indonesia and the Netherlands, with more in depth studies in Jakarta, Indonesia. 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. By the end of the empirical research, the preferences of the employees will be revealed by the discrete choice part of the survey.

### 6.1. Indonesian Case Study

#### 6.1.1. Indonesian Case Study Process

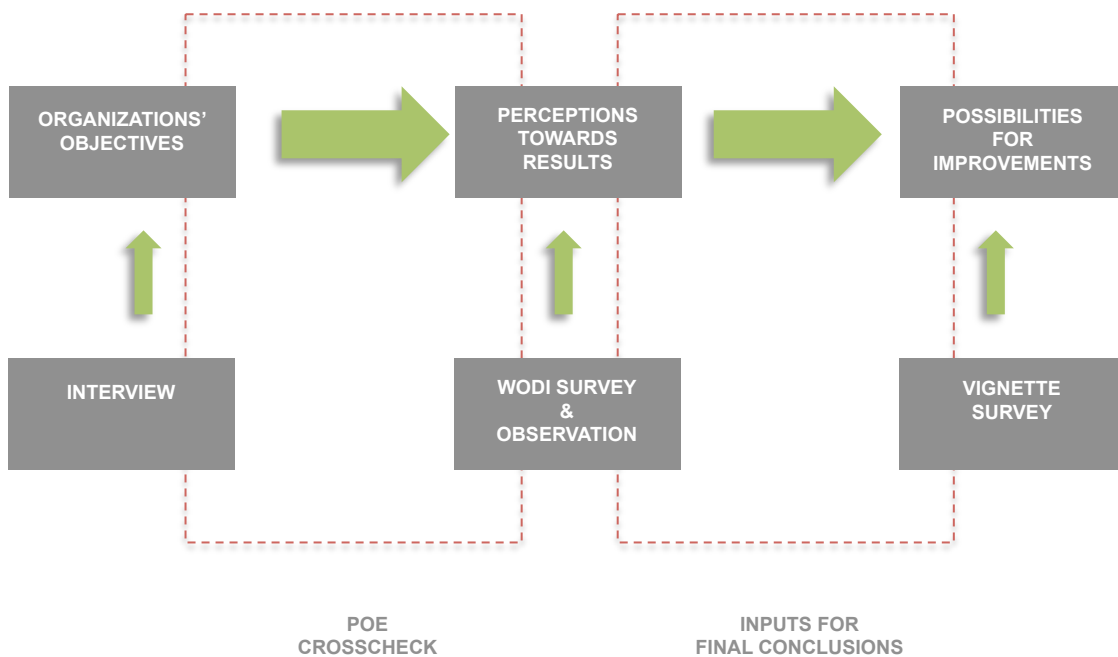


Figure 45 - Indonesian case phase

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 & Boukber, 2010). Table 2 explains the integration of the variables, indicators and the attributes of the physical environment, which influence ones' perception towards their working environment.

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. 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.

### 6.1.2. 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 17<sup>th</sup> 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 2<sup>nd</sup> 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 create 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, 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.

### 6.1.3. Case Study Results

#### 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 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, 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.

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

This hierarchical system as a combination of the influences from their field of work as oil and gas company, as well as the national culture, is quite on the contrary with their values. 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.

### **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 throughout the organization, be it through the working process or the layout and the design of the office. Through the working process, the high power distance index is seen through the interaction between team members and their seniors or team leaders. Referring the manager as "the boss" is considered normal within the organization. Within the space arrangement and the design, gaps could be seen through the type of work space 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 with health and safety issue. This influences company's policies and procedures in the office and on the field. In other words, the company is more process oriented than result oriented. Innovations are emphasized on 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.

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 be also 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 space given to the CEO is 183.35sqm/FTE and 13.4sqm/FTE for the comptrollers. Each staff has a dedicated workstation, even for 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 "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.

Another unique usage of the facility is how the company facilitates the Christian employees to do their worship every Friday break. Providing also the common floor (on the 28<sup>th</sup> 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 28<sup>th</sup> 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 just the security, but also the efficiency of the employees' usage of the workplace such as overtime. 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 6 - 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

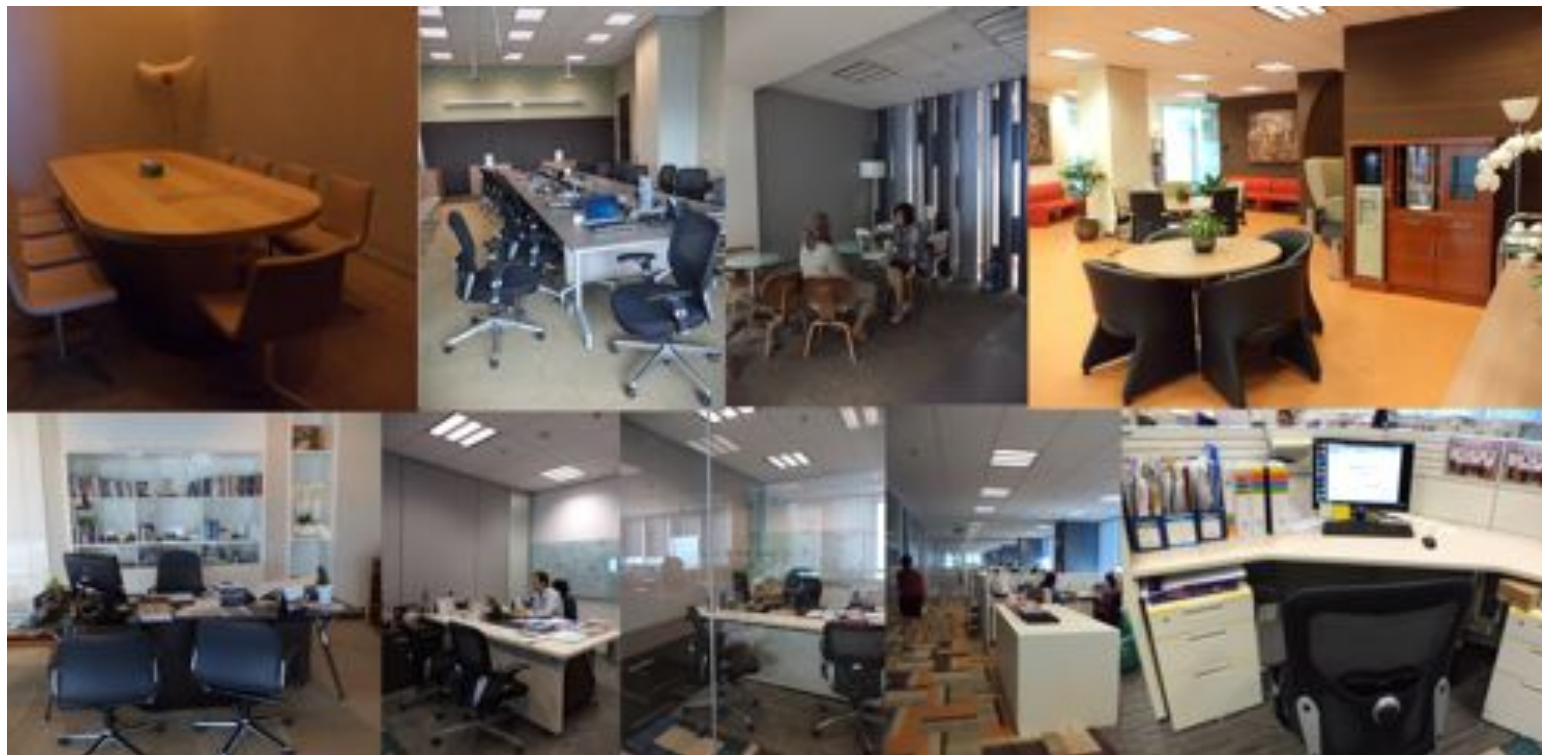


Figure 46 - Various workspaces in MedcoEnergi

Being relatively a new building, the aesthetic quality of the building is considered above standard, compare to the other building in the CBD area. Located in the Sudirman CBD, the area 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.

## SURVEY RESULT

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

Table 7 - WODI part result of MedcoEnergi's participants

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

## 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 the family oriented type of organization. However, the power distance index is not as high as seen in MedcoEnergi. The younger workforce and owner might have contributed to this issue, as well as the foreign colleagues working together in the company. However, the low individuality index 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 result oriented, however the processes are being controlled with 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 structure of the organization is the common M structure form, consists of multiple directors, follow by associate directors, seniors and juniors and the support systems. 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.

### **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

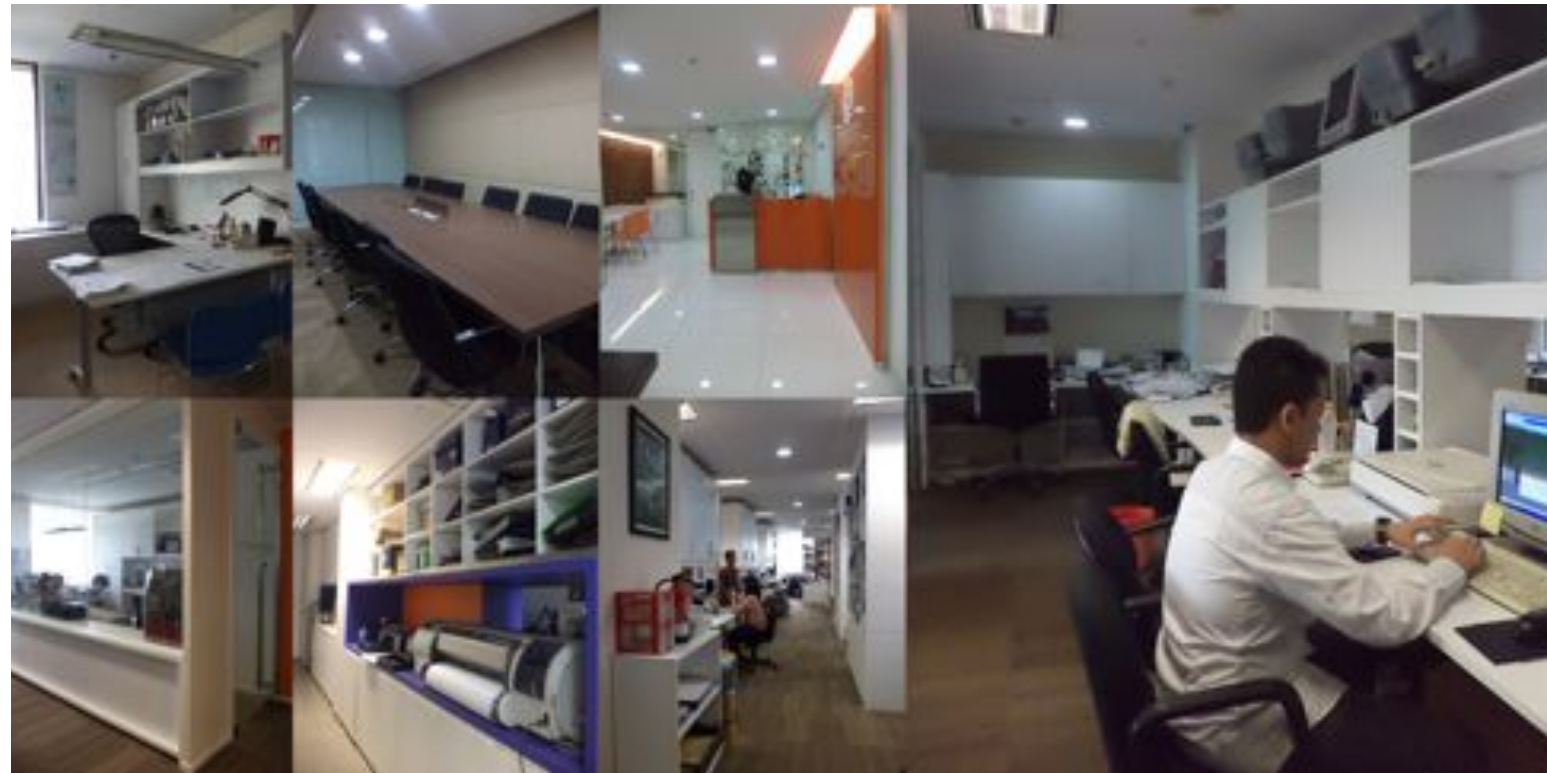


Figure 47 - Various workspaces in PTI Architects

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.

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.

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 8 - Available workspace type in PTI-Architects

<b>Workspace</b>	<b>Meeting Space</b>	<b>Support Space</b>
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 9 - WODI result of the participants from PTI-Architects

	Satisfied	Dissatisfied
Satisfaction towards organization	18%	27%
Satisfaction on architecture of the building	64%	18%
Satisfaction of the interior design & ambience	36%	18%
Satisfaction of transparency in the layout	30%	20%
Satisfaction towards privacy in the office arrangement	20%	40%
Satisfaction on the possibility to concentrate	40%	20%
Satisfaction on the possibility to communicate	50%	20%
Satisfaction on the IT performance	10%	60%
Satisfaction on storage & archive facility	10%	50%
Satisfaction towards the lighting in the workplace	70%	20%
	Supportive	Unsupportive
Support towards productivity	50%	10%
Support towards creativity & innovation	60%	20%
Support towards information exchange	70%	0%

### 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 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.

#### 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 very Indonesian, although some foreign professionals are managing the organization. This high influence of the Indonesian culture could be explained by the very local characteristics found in the construction industry.

## 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.

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.

Table 10 - 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 48- Various workspaces in Egis Indonesia

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

Table 11 - WODI result of participants from Egis Indonesia

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

#### 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 their 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.

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 12 - 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 49 - Various workspaces in Ogilvy Jakarta

## 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.



Figure 50 - P&G global company values (Procter & Gamble, 2012)



Figure 51 - Various workspaces in P&G Jakarta (taken by GBS & JLL of P&G Jakarta, 2012)

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, which broaden the perspectives of the employees. Teamwork is highly maintained, since each team is responsible for different products and process.

#### 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 a 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.

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:

Table 13 - Available workspaces in P&G 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

## 6.2. Dutch Reference Case

### 6.2.1. Dutch Reference Case Study Process

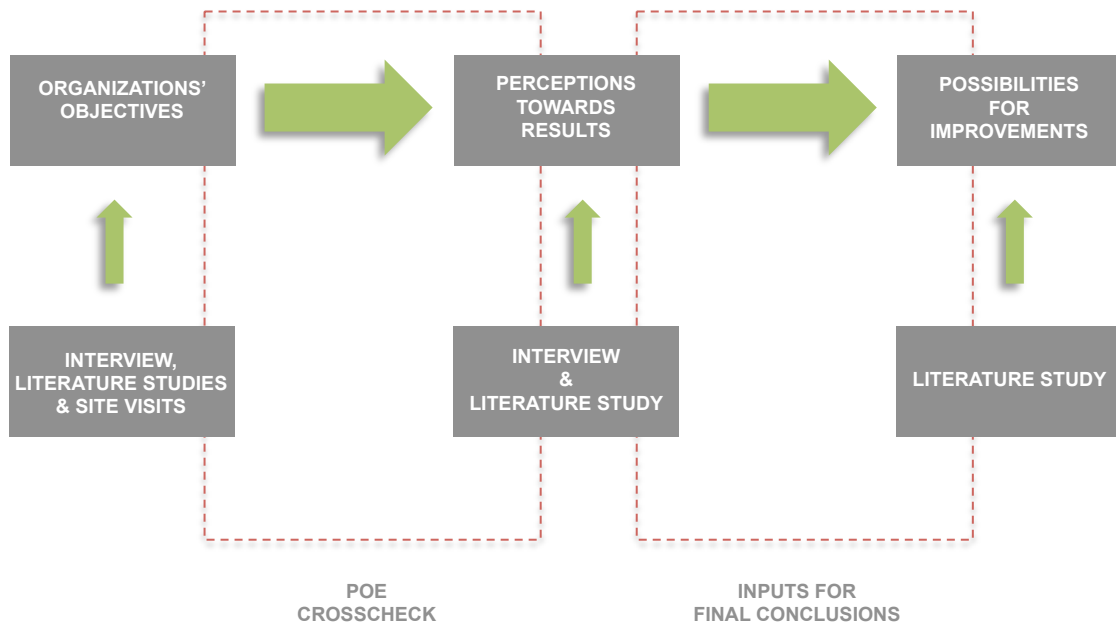


Figure 52 - Process of the Dutch reference case study

Although initially was 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.

### 6.2.2. Location Overview: Amsterdam & Its Culture

Amsterdam has been one popular city for tourist destination due to its particular attractions and landscape. The city is occupied by 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).

### 6.2.3. 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 decisions to terminate contracts with some of their employees to enhance the organization financial performance. The company itself used to hire also international talents. However, now they only have Dutch employees, with a combination of 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, such as 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. 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-rent 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 14 - 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 53 - Various workspaces in Ogilvy Amsterdam

## 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 (Pliijter, 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.

Below is the list of the available workspaces in Microsoft Amsterdam office:

Table 15 - Available workspaces 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 54 – Various workspaces in Microsoft Amsterdam

### 6.3. Case Comparison

Based on the seven cases from Indonesia and the reference cases in the Netherlands, the difference between the physical characteristics could be seen more clearly from the case of MedcoEnergi. The working culture in MedcoEnergi could be categorized in the family oriented organization scheme, where the structure is more person-oriented than task-oriented. The hierarchical structure, culture and working process, which resemble the characteristics of the Indonesian culture by Hofstede (2010) could be directly seen in the organization process and the physical characteristics of the workplace. 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, and certainly with the perspective of the MedcoEnergi's employees. The company also has guidelines on the size and furniture of each room. The higher the level of the management is, the bigger the size, the better the furniture and the IT support tools are.

PTI Architects 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. However, the typical Indonesian culture characteristics are not shown in the working culture. PTI Architects also has a mix of family oriented type of organization and the guided missile type of organization. This phenomenon could be explained by how the organization was initially founded by an Australian firm, and then was localized by an Indonesian. Thus, the mix between the task and person oriented type of organization could be clearly seen. Hierarchy was shown in the working process, but not in the physical workplace itself. 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.

On the other hand, Egis Indonesia did also shows a high level of hierarchy in the physical workplace. The organization itself could be seen as a combination of person-oriented and task-oriented structure. The process towards the decision making of the workplace management could be considered as top-down, since the management level decided in advance on the layout arrangement. Transparency is also very low in the layout, and they also use a high partition cubicle (of more than 50cm).

The last two case studies in Jakarta did show significant differences with the other three. Both have corporate guidelines on office design. However, the companies showed different type of corporate autonomy and working process. Both are due to the organization structure and industry background. Thus, local culture is not the only factor for certain.



**ORGANIZATION**

<b>MEDCOENERGI</b> Local company Oil & Gas	<b>EGIS INDONESIA</b> Local company Construction	<b>PT-ARCHITECTS</b> Local company Architecture firm	<b>P&amp;G</b> Multinational FMCG Producer	<b>Ogilvy &amp;K</b> Multinational Communication & Ad	<b>Ogilvy &amp;M</b> Multinational Communication & Ad	<b>MICROSOFT AMS</b> Multinational Software Company
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**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 All staff work at the office 5 days a week.

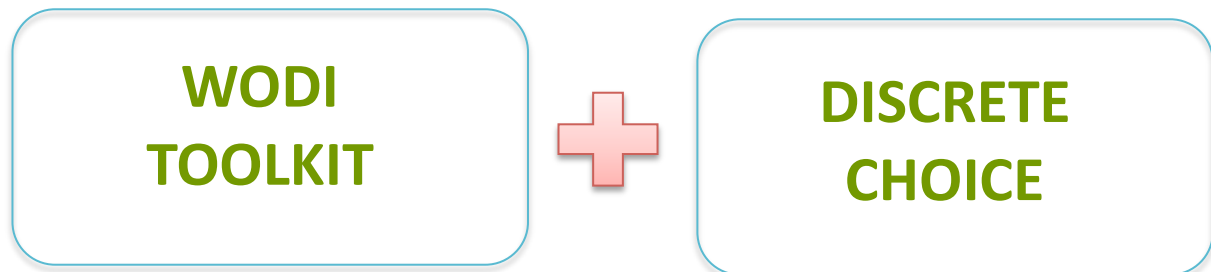
**USE & DESIGN OF SPACE**

Mix of cellular office & open space All staff work with an entitled desktop, and manager level and above have cellular office.	Mix of cellular office & 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 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 space.	Mix of rooms & open office Staff could choose different table everyday and also activity-based workspace. Only some use desktops.

Table 16 - Case comparison (van Meel, 2012)

## 6.3. 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 sorted from the WODI-light toolkit, and the questions concerning discrete choice method, where employees are required to choose one of the two possible ambiances shows in each question.



### 6.3.1. 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.

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).

### 6.3.2. Discrete Choice Experiment for Preference Measurement

After having the understanding about 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. This means all users of the workplace, not depending on their function in the organizations' structures.

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 found to be better in estimating ones' stated preference (van Oel & van den Berkhof, 2013). Furthermore, user or the employees in this sense are more sensitive to pictures compared to text.

To acquire these preferences, the last part of the survey will contribute to this issue. The idea is to develop this part of the survey with discrete choice experiment, based on the different attributes of the physical characteristics (R. S. Batenburg & D. J. M. van der Voordt, 2008; Hua, et al., 2010; Schatz & Bowers, 2005; Vischer, 2007; Wang & Boukberi, 2010) also mentioned in table 2. 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.



Figure 56 - Sample of how different attributes were shown on discrete choice method

The following table 1 is the example of a possible attribute and its levels. The combination, however, will be acquired through a set of statistical research. The subsequent list is the physical attributes, which are selected from the literature study.

- 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.
- Climate  
Climate could be one of the factors towards control and comfort.
- 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.
- 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 (walls & partitions)  
Partition is one of the ways to create 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.

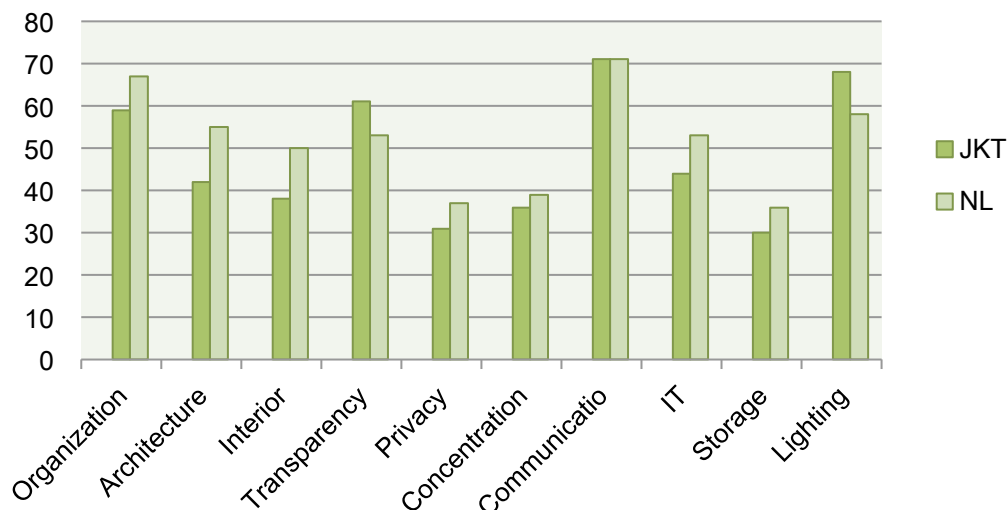
Below is the proposed attribute level for vignette design:

Table 17 – Attribute levels

Attribute	Attribute level 1	Attribute level 2
Furniture	Upper furniture quality & design	Mediocre furniture quality & design
Color	Neutral	Expressive
Artificial lighting	Warm artificial lighting	Bright artificial lighting
Table partition's height	20cm	50cm
Table partition's material	Semi-translucent	Non-translucent
Cubicles	With cubicle	Without cubicle
Room partition's material	Semi-translucent	Non-translucent
Floors material	Carpet (warm ambience, highest noise reduction)	Wooden floor (warm ambience, mid-level of noise reduction)
Blinds (Natural lighting)	Non translucent	Translucent
Plants	With plants	No plants
Outside view	Parking/ road	Neighbourhoods & greenery

### 6.3.3. Survey Result

In general, the satisfaction level if the participants in Jakarta, based on the WODI questions, are above 50%.



Graphic 1 - Average WODI result of the overall sample

Based on the SAS 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 parameter estimate presents the ranking of importance of each variable, as listed below:

1. Table height division
2. Room partition material
3. View & window
4. Furniture
5. Room partitioning type (cubicles/ walls)

6. Colour scheme
7. Lighting
8. Table division material
9. Blinds material
10. Plants
11. Floor material

**Testing Global Null Hypothesis: BETA=0**

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	64.9903	12	<.0001
Score	62.4090	12	<.0001
Wald	57.3117	12	<.0001

**Analysis of Maximum Likelihood Estimates**

Parameter	DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq
FurnitureLower_qual_	1	0.37037	0.13917	7.0825	0.0078
ColorNeutral	1	0.28784	0.14123	4.1539	0.0415
LightingBright	1	0.16436	0.15900	1.0686	0.3013
TableDivHeight50cm	1	0.60970	0.16204	14.1569	0.0002
TableDivMatDivider_s	1	0.15550	0.16162	0.9256	0.3360
RoomPartRoom_partiti	1	0.33131	0.13707	5.8418	0.0157
RoomPMatRP_non_trans	1	0.58121	0.16380	12.5909	0.0004
FloorCarpet	1	0.00907	0.14665	0.0038	0.9507
BlindsBlinds_translu	1	0.11985	0.14373	0.6953	0.4044
GreeneryNo_plants	1	0.01124	0.13031	0.0074	0.9313
WindowView_to_neighb	1	0.50258	0.14258	12.4250	0.0004
WindowView_to_parkin	1	0.53831	0.15133	12.6544	0.0004

Graphic 2 - SAS result of the discrete choice questions

**The PHREG Procedure**

**Analysis of Maximum Likelihood Estimates**

Parameter	Hazard Ratio	Label
FurnitureLower_qual_	1.448	Furniture Lower qual furniture
ColorNeutral	1.334	Color Neutral
LightingBright	1.179	Lighting Bright
TableDivHeight50cm	1.840	TableDivHeight 50cm
TableDivMatDivider_s	1.168	TableDivMat Divider semi translucent
RoomPartRoom_partiti	1.393	RoomPart Room partitioning cubicle
RoomPMatRP_non_trans	1.788	RoomPMat RP non translucent
FloorCarpet	1.009	Floor Carpet
BlindsBlinds_translu	1.127	Blinds Blinds translucent
GreeneryNo_plants	1.011	Greenery No plants
WindowView_to_neighb	1.653	Window View to neighbourhood & green
WindowView_to_parkin	1.713	Window View to parking/road

Graphic 3 - Hazard ratio of the discrete choice result

Through the hazard ratio, one can see the ranking of importance rated by the participants:

1. Height of the table partition, preferably 50cm
2. Room partition material, preferably non translucent
3. View & window, preferably to neighbourhood & green
4. View & window, preferably to parking/ road
5. Furniture, preferably the lower quality ones
6. Cubicle type of partitioning
7. Neutral colours
8. Bright lighting
9. Table partition material, preferably semi translucent
10. Blinds, preferably translucent
11. Greenery, almost in 1:1 ratio for with or without plants, although no plant is more preferred.
12. Floor, also almost 1:1 ratio between carpet and wood (parquetted).

Table 18 - List of attributes' preferences

No	Attributes	Attributes Level Preferred	Indicator	Notes
1	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.
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	View & window	With view to greenery	Arousal	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 desk.
4	Furniture	Lower quality furniture	Comfort	More participants opted for the lower quality furniture, due to its more comfortable look. Thus, comfort goes beyond prestige in this case.
5	Room partitioning type	Cubicle	Privacy & territoriality	
6	Colours	Neutral colours	Arousal	
7	Lighting	Bright lighting	Comfort	
8	Table partition material	Semi translucent	Privacy & territoriality	
9	Blinds	Translucent	Comfort	
10	Plants	No plant	Arousal	
11	Floor material	Carpet	Privacy & territoriality	

## CHAPTER 7

## 7. CONCLUSION

Before answering the main research question, the three first hypotheses will be discussed:

- *“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 high satisfaction level on their workplace, due to their high result on the indulgence vs. restraint index.”*

This hypothesis could be rejected based on the results of the WODI part of the questionnaire. Based on the results, the graphs of both Indonesian and Dutch results showed the same pattern,

As a conclusion, 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:

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



- During the process of a workplace change, all case studies in Indonesia did not show signs of **direct user involvement**.
- **Location** is a one critical issue, which was proven from the case studies in Jakarta. Prestige is also taken into account, which proves the importance of **status** in their culture. However, this might bias with the corporate culture in general.
- Only one case study use un-entitled desktop system, which is P&G. The **conventional office** is still more common in Indonesian organizations.
- With the high traffic congestion & lack of public transport in Jakarta, a well-designed office is considered as one important element in reducing employees' **stress level**.
- Based on the comments from the survey result, also complemented from the findings in the observations, users are considerably aware of the benefits of a better workplace management

## CHAPTER 8

## 8. 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?”*

- Research beforehand for planning a new workplace is important. However, several issues and constraints would not be visible until the use phase of the physical workplace. Hence, post-occupation evaluation is important to measure whether the goals are achieved already.

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

- The preferences of the employees of the physical characteristics based on the discrete choice part of the survey results, could not be taken for granted.
- The list that given through the survey is only one example of general analyses on workplace design cases in Jakarta. Furthermore, customized research for each organization’s needs and demands will give more handfull insights as proven in the case of Microsoft Netherlands and MedcoEnergi Jakarta.

## CHAPTER 9

## 9. REFLECTION & RECOMMENDATION

### 9.1. Workplace Management in Jakarta

- With the growing economy in Asia, and Indonesia in particular, research concerning the best practice of workplace management could be used by multinationals willing to expand their business in Indonesia or local companies will to expand their business locally and internationally.
- The main driver of changing or improving the workplace quality in Indonesia or other Asian countries could be different. The added value of driving down the occupancy costs, which is more tangible by nature, could be the main driver to change.

### 9.2. Management of the Research

- Comparing the physical workplace characteristic based on the local cultures tend to bias with the culture of the industry and the organization in particular. Different theories of organization characteristics could be used to explain the phenomenon of the distinctive characteristics of corporates based on the founder influence, or the industry culture (Schein, 1992; Trompenaars & Hampden-Turner, 1997).
- The discrete choice analysis could also be tested to get the best layout combination within an office design. However, it will work best when the combinations are tailor made according to the demands & objectives of the client.
- The neutral choice in the WODI is creating some bias in the answers, since more than 50% answered neutral in some questions.
- It is considerably important to determine the purpose of the research and executive summary in the beginning of the process. 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.

## APPENDIX 1 – ENGLISH QUESTIONNAIRE FORM

### Workplace Satisfaction & Preferences questionnaire

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**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%.*
- Inside the building ... %
  - En route, travelling ...%
  - At home ...%
  - 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.*
- General desk work ...%
  - Desk work where you are not to be disturbed ...%
  - Desk work where interaction with colleagues is necessary / required ...%
  - Planned meetings / interaction ...%
  - Unplanned meetings / interaction ...%
  - Telephone ...%
  - Reading (longer than 30 minutes in one stretch) ...%
  - Document management (archiving, copying, reference work, drawings, etc.) ...%
  - 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



## APPENDIX 2 – QUESTIONNAIRE RESULTS

Table 19 - Gender of the whole participants

Gender	No.	Percentage
Male	70	45.2
Female	85	54.8
Total	155	100

Table 20 - Education level of the whole participants

Education	No.	Percentage
Primary education	9	5.8
Secondary education	8	5.2
Vocational Secondary Education	82	52.9
Undergraduate (University Bachelor Level)	35	22.6
Postgraduate (University Master or PHd)	21	13.5
Total	155	100.0

Table 21 - Age category of the whole participants

Age category	No.	Percentage
< 31 years	94	61.0
31 - 40 years	39	25.3
41 -50 years	15	9.7
>60 years	6	3.9
Total	154	100.0

Table 22 - Working length of the whole participants

Working period	No	Percentage
<2 years	29	19.2
2-5 years	77	51
6-10 years	26	17.2
> 10 years	19	12.6
Total	151	100

Table 23 - Workplace type of the whole participants

Workplace Type	No.	Percentage
Open plan layout	42	31.1
Individual workplace	29	21.5
Individual with meeting area	9	6.7
2person setting	5	3.7
2 person setting with meeting area	3	2.2
3 person setting	9	6.7
3 person setting with meeting area	2	1.5
4 person setting	7	5.2
4 person setting with meeting area	4	3

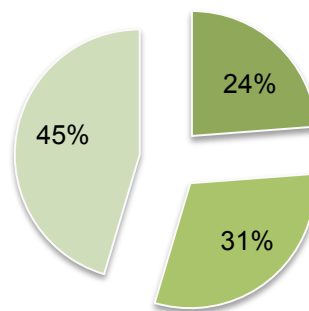


5-6 person setting	7	5.2
7-8 person setting	2	1.5
>8 people layout	10	7.4
No dedicated individual workplace	6	4.4
Total	135	100

## WODI RESULTS

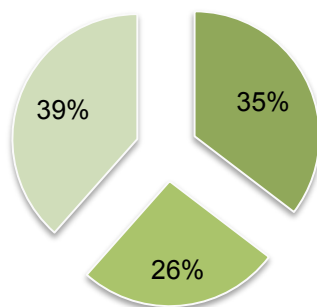
### Organization

■ Dissatisfied ■ Neutral ■ Satisfied



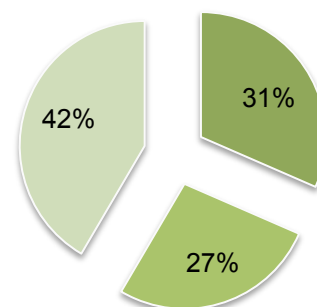
### Interior

■ Dissatisfied ■ Neutral ■ Satisfied



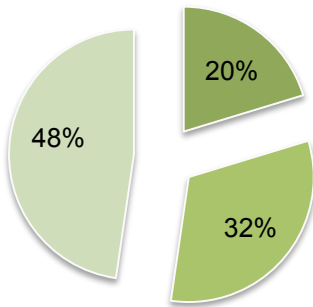
### Architecture

■ Dissatisfied ■ Neutral ■ Satisfied



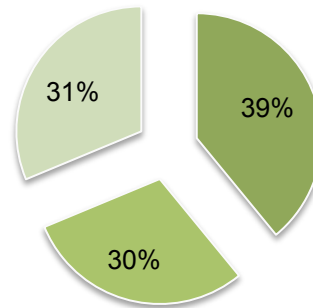
### Transparency

■ Dissatisfied ■ Neutral ■ Satisfied



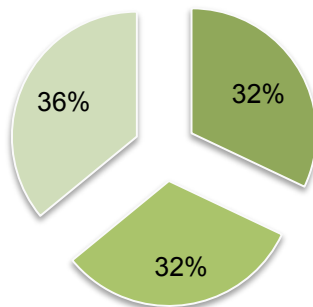
### Privacy

■ Dissatisfied ■ Neutral ■ Satisfied



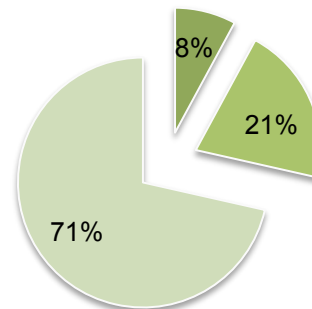
### Concentration

■ Dissatisfied ■ Neutral ■ Satisfied



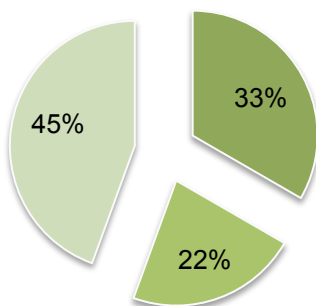
### Communication

■ Dissatisfied ■ Neutral ■ Satisfied



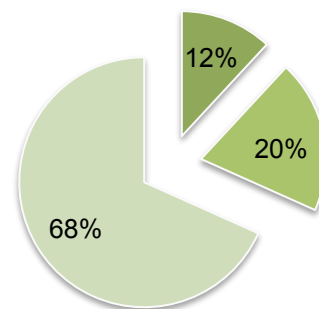
### IT

■ Dissatisfied ■ Neutral ■ Satisfied



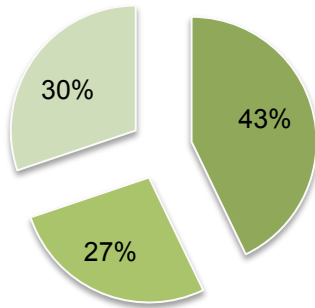
### Lighting

■ Dissatisfied ■ Neutral ■ Satisfied



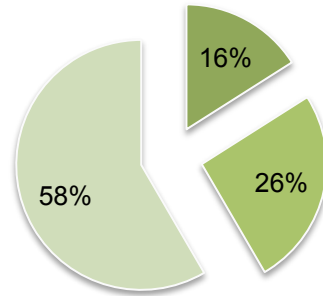
### Storage

■ Dissatisfied ■ Neutral ■ Satisfied



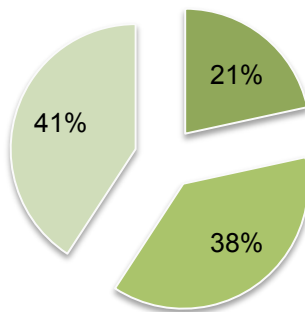
### Productivity

■ Dissatisfied ■ Neutral ■ Satisfied



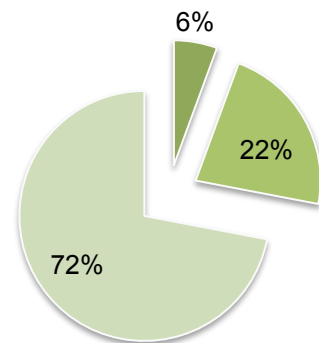
### Creativity

■ Dissatisfied ■ Neutral ■ Satisfied



### Information Exchange

■ 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

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