

# Designing a Resting Facilities on Employee's Workstations

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## ABSTRACT

Currently, having enough rest during busy work is an obstacle for office workers. This is because the activities and demands of the existing work make office workers not have enough time to rest. Normally, adults need about 7 hours of sleep in a day. Lack of sleep is associated with an increased risk of disease, from obesity, type 2 diabetes to cognitive decline and heart disease, it should not be underestimated. This is the background of the author to design multifunctional furniture for office employees to facilitate rest facilities for office employees to be able to have time to rest during busy office work. Recommended resting facilities for office workers will be designed by prioritizing user comfort so that workers can have a better and more comfortable rest quality. Based on the results of data collection, the resulting design result is a multifunctional workstation that will allow workers to work and rest in the same area on these workstations. This workstation recommendation is designed in order that Traveloka office workers can have a good and comfortable rest time, and will streamline the time of workers because workers do not need to change places to rest, but can rest in the same area.

**Keywords:** *Comfort; Furniture Design; Multifunction; Workstations*

## 1. INTRODUCTION

Having enough rest time is something that we need, especially after a day full of activities. Normally, adults need about 7 hours of sleep in a day. Lack of sleep is associated with an increased risk of diseases, ranging from obesity, type 2 diabetes to decreased cognitive function and heart disease. Having rest time is a way to help restore our body energy to be able to return to our activities. Adults should rest at night for at least 7-9 hours in one day. Unfortunately, not a few people have a sleep time of fewer than 7 hours, and that should not be underestimated at all (dr. Rizal Fadli, 2020) [4]. According to the results of research by Indiana's Ball State University, shows that the sleep duration of 150,000 people found the number of respondents who managed to sleep seven hours or less at night increased to 35.6% in 2018 from 30.9% in 2010 (BBC News Indonesia, 2019) [1]. Adults tend to have a lack of sleep/rest, this is because they have to work long periods or because their rest time at night is disturbed. Because of this condition, adults need time to rest during the day to recruit for the lack of rest at night (dr. Kevin Adrian, 2021) [12]. In addition to increasing the risk of diseases, ranging from obesity, type 2 diabetes, lack of rest can also create disturbances in the immune system. People who are used to sleeping less than 7 hours usually have problems with the immune system (dr. Rizal Fadli, 2020) [4]. Rest is also one way to improve brain performance. Even some of the world's successful people have a habit of taking a nap

during the day. In addition to relieving stress, warding off heart disease, and increasing energy, taking a nap during the day also makes bright ideas come to mind (Nabila Inaya, 2015) [13]. Taking a nap during busy work can provide various benefits for the body. Sleeping during the day is often faced with the stigma of being lazy or less enthusiastic about work, but that's not entirely true. Precisely taking a nap during the day can increase one's productivity (dr. Kevin Adrian, 2021) [12]. Psychiatrist and founder of Menlo Park Psychiatry & Sleep Medicine, Alex Dimitriu said that a 20 to 30-minute nap during the day is the best duration for a healthy body. Sleep Science Specialist at the Stanford Center for Sleep Sciences and Medicine, Rafael Pelayo also orders it. According to him, the most refreshing part of taking a nap during the day is in the transition phase from waking up to deep sleep or "intermediate sleep". If calculated, the duration is about 20 to 40 minutes and no more than an hour (Nora Azizah, 2021) [14]. Some countries also began to recognize that having enough rest is important and very needed. Therefore, some existing companies began to allow their workers to sleep in the office. Adapted from Reader's Digest, some countries impose longer hours of break time. Most companies in Spain provide a three-hour break starting at two in the afternoon (R1, 2019) [9]. In Indonesia, the break time is not made too long. The duration is set by company policy, usually ranging from 30 minutes to an hour. Indonesia includes having a short break. If we calculate, the duration of lunch may only be 20-30 minutes. Because one hour has

not been cut with the length of time to go to a place to eat and pray for Muslims. Every worker has the right to rest between working hours in a day, at least 30 minutes after working for four hours continuously. The break time does not include working hours (Article 79 of Law 13/2003) [9]. In addition, employers are required to provide sufficient time for workers to perform worship (Article 80 of Law 13/2003) [9].

Generally, work breaks are filled with “ishoma” – rest, prayer, and lunch. However, taking a break for 30 minutes will certainly not be enough for Ishoma. Therefore, generally, the break time is one hour. However, one hour of work breaks will also not be enough to take a nap during the day. Therefore, currently in Indonesia, many offices allow their employees to take a nap during the day (R1, 2019) [9]. According to research from the Virgin Pulse Institute, at least 40% of the 1140 respondents admitted to falling asleep at work once a month. 1 in 6 workers clearly says they sleep at their desk once a week. In addition to taking a nap time during the day provided by the company, the company also needs to provide facilities for employees to be able to have a comfortable quality rest as well. Therefore, it is necessary to have recommendations and innovations in providing resting furniture facilities in the office for efforts to improve the quality of rest for office workers by providing rest facilities that are following user anthropometry and ergonomics.

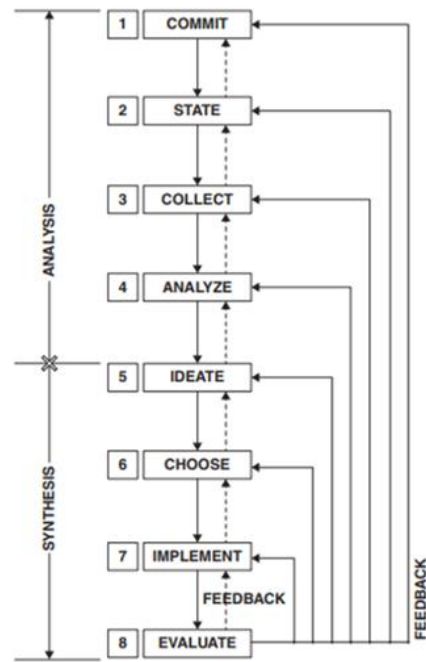
## 2. METHOD

### 2.1. Study Case

In this research, researchers chose Traveloka, which is a leading online travel company in Southeast Asia that provides various travel needs in one platform, ranging from airline tickets, hotels, trains, flight and hotel packages, attractions & activities, connectivity products, airport transportation, bus, and car rental. The Traveloka company was built in 2012 by Ferry Unardi and his two colleagues, Derianto Kusuma, Albert Zhang, and is still growing today. The Traveloka company has an office based in Jakarta, Indonesia. The Traveloka office selected in this research is located at Wisma 77 Tower 2, 21st Floor Jl. S. Parman Kav. 77, Jakarta [15].

### 2.2. Design Method

This design method uses the 8-step design method by Kilmer. The 8 steps consist of, commit, state, collect, analyze, ideate, choose, implement and evaluate (Kilmer, Rosemary, W. Otie Kilmer. *Designing Interior Second Edition*. New Jersey: John Wiley & Sons. 2014) [11].



**Figure 1** Design Method According to Rosemary Kilmer (Source: *Designing Interiors*, Rosemary Kilmer, 1992, p.178)

The first phase, the commit is to recognize the problem and are committed to complete the design. In the second phase, a state that is a problem or project must be confirmed before a designer can solve it. The third phase, collect, this phase involves data collection or commonly called programming. The fourth phase, analyze is analyzing by looking at all the information collected about the problem and organizing it into related categories. The fifth phase, ideate, ideas must be generated only after gaining a thorough understanding of the problem, involves the drawing phase and concept statement. The sixth phase, choose, is choosing the right option to see how the chosen concept fits your budget, needs, and desires. The seventh phase, implement, refers to executing or taking action on the chosen idea and giving it a physical form. The eighth phase, evaluating is assessing and critically reviewing or what has been achieved to see if it solves the original problem [11].

The formulation of the problem that will be discussed is what the recommendations for the design of resting facilities are for Traveloka Office employees so that they can have a good and comfortable rest quality. Then produce a design goal in the form of a recommendation for the design of resting facilities for Traveloka Office employees so that they can have a good and comfortable rest quality. The object to be observed is the capacity of the workstations that affect the body position that is created based on the anthropometry and ergonomics of the workers, so that the workers can have space to rest at the workstations comfortably. Data will be collected into information through observation and literature study. Observations in the form of factual data about the field. Observations were

made to find out the needs and activities of Traveloka office workers on worker workstations. Then a literature study is carried out which is data collection with a literature review, collection of books, written materials, and references that are relevant to the research activity being carried out to obtain information about the parameters needed to meet the predetermined workstation design objectives.

Then in the design phase, it is expected to produce recommendations for the design of resting facilities for

office employees so that they can have a good and comfortable rest quality in the work area of each worker. From the data collection and analysis process, several parameters were found that can be used in the design of this workstation so that it can produce recommendations for better and more comfortable resting facilities at the workstation. These parameters are as follows:

**Table 1** The parameters used to create a good and comfortable resting facility for Traveloka office workers' workstations

<b>Parameter</b>	<b>Description</b>
<i>Quality Construction</i>	Must be made strong for use in daily activities. Spilled coffee, books, large computers, or other office supplies.
<i>Comfort</i>	<ul style="list-style-type: none"> <li>- Paying attention to ergonomics is very important. To create a work area that prioritizes comfort and convenience.</li> <li>- A desk with a wide rectangular shape and large area for feet is more ideal for the human body.</li> </ul>
<i>Strong Surface</i>	<ul style="list-style-type: none"> <li>- Do not choose furniture that is made from <i>particle board</i>.</li> <li>- Choose furniture that is made from a strong and sturdy structure and construction.</li> </ul>
<i>Professionalism</i>	Professional workstation look will inspire more productivity.
Have a position space that can relax the body on your back.	According to a professor at Albert Einstein College of Medicine, Shelby Harris, the best position to relax the body is on your back. Therefore, to fulfil the design of resting facilities on office employee's workstations so that they can rest well and comfortably, it is necessary to consider the body position created based on the anthropometry and ergonomics of the workers while resting at the worker's workstations.

Source: (Artic Office, 2020), (Yoseph Edwin, 2018).

### 3. DISCUSSION

Based on data collected from observations, it was found that there were several needs that Traveloka office workers needed on their workstations, namely, requiring adequate rest facilities after a day of work with tiring demands and full of fatigue, requiring a workspace that can support comfort, health, flexibility for employees. Also, a sufficient space for the needs of work activities and sufficient space to rest in the same personal workstations, so that work and rest do not need to move to another area. After data collection, the level of compatibility of good and comfortable resting facilities for Traveloka office employees can be measured based on the following parameters:

**Table 2** Analysis of the compatibility of resting facilities design recommendations with the parameters used

<b>Parameter</b>	<b>Compatibility with Parameters</b>	<b>Descriptions</b>
<i>Quality Construction</i>	✓	To create strong and sturdy workstations, the workstations are designed by using grade A plywood.
<i>Comfort</i>	✓	The dimensions of the workstations refer to anthropometric standards to create workstations that are comfortable and good for users. Then, the table is designed with a wide rectangular shape and has a large area for feet room so that it will be more ideal for the human body.
<i>Strong Surface</i>	✓	<i>The workstation is designed by using grade A plywood, and uses screw construction to make it strong and sturdy.</i>
<i>Professionalism</i>	✓	<i>The workstation is designed with a design that creates a professional look through a symmetrical shape of the workstation that creates a professional impression.</i>
Have a position space that can relax the body on your back.	✓	The dimensions of the workstation are designed based on references from human anthropometry so that the space of the workstation can be ideal, safe and comfortable for users to use.

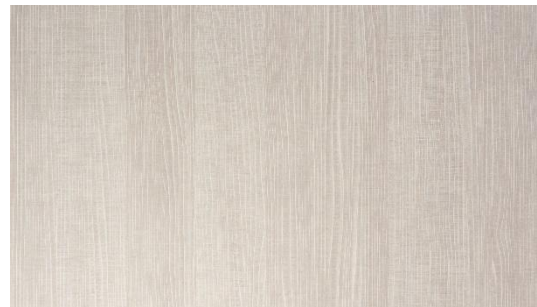
Source: (Artic Office, 2020), (Yoseph Edwin, 2018).

After knowing the reference and the compatibility of the parameters needed, the design phase is continued with the selection of material, size, structure and construction concepts that will be used in this design.

**3.1. Material Concept**

Based on the parameters to create a good and comfortable workstation, a sturdy and strong workstation is needed to support activities, the needs of the workers, and this is also related to the resting facilities that become an integral part of the workstations. To create a strong and sturdy resting facility on the workstations it is necessary to choose good quality material. The selection of materials to be used is as follows:

- On the table using grade A plywood fin. HPL TH 134 GL – Dawn Concord Gloss from Taco. The reason for choosing plywood is because plywood has characteristics that are not easy to crack, expand, and can hold screws better so that it will become stronger and last longer;



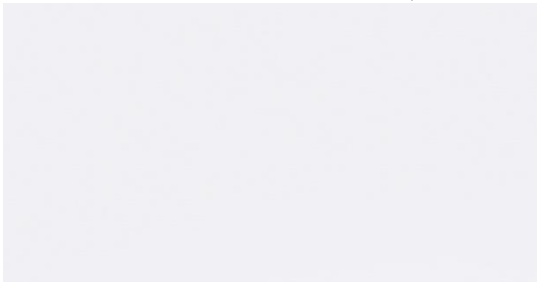
**Figure 2** HPL TH 134 GL – Dawn Concord Gloss from Taco (Source: taco.co.id)

- Acoustic wall in pods of workstations using 12mm soft board fin. embossed wooden wallpaper and print and pattern wallpaper;



**Figure 3** Print and Pattern Wallpaper (Source: Personal document)

- Bench seat using cushions fin. Linen. Bench seat is a means of rest at workstations so to create a resting facility that has good quality and comfort, the material used is a cushion covered with linen. Linen is a fabric made from flax fibre which has a smooth texture;
  - The floor of the pods is covered with carpet;
  - Storage bench using grade A plywood fin. HPL Pearl White Gloss TH 002 G from Taco;

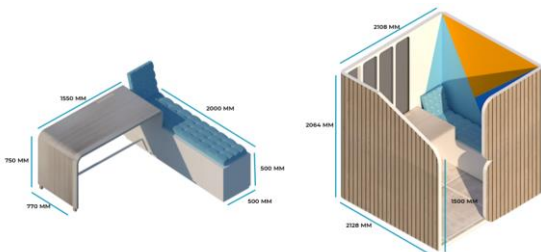


**Figure 4** TH 134 GL – Dawn Concord Gloss from Taco (Source: taco.co.id)

- Window pods using 12 mm tempered glass.

### 3.2. Dimension

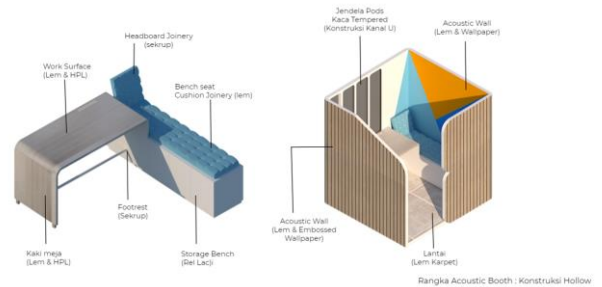
Based on data collection through a literature study through the collection of written materials and books that discuss the size of human anthropometry, it was found that a good and appropriate size for Traveloka office workers' workstations which also supports the workers' resting facilities are as follows:



**Figure 5** Size of workstations. The size of the workstations follows the reference from the human dimension book & interior space (Source: Personal document)

### 3.3. Structure and Constructions

The design phase is then continued with the determination of the structure and construction that will be used for resting facilities and worker workstations, the structures and constructions are as follows:



**Figure 6** Workstations Structure and Construction (Source: Personal document)

## 4. CONCLUSION

Based on the results of analysis and data collection, this research produces a recommendation for the design of workstations that are expected to support work and rest activities for workers in the same area and furniture. These workstations will overcome the problem of workers who do not have enough time to rest, because workers can rest comfortably on their workstations when they feel tired from work. In this study, there are weaknesses in the data collection process due to the current pandemic situation and conditions which do not allow researchers to conduct field observations so that the data obtained is not optimal.

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