

Assembling the Past and the Future of the City through Designing Coworking Facilities

Y A Lukman, A S Ekomadyo, A S Wibowo

Architecture Department, School of Architecture, Planning, and Policy Development,
Institut Teknologi Bandung, Indonesia

Corresponding Author: lukman.yaldi@gmail.com

Abstract. Bandung is known as a creative city in Indonesia, which can be seen from the large number of communities in Bandung that work in the creative industry. A creative city can be further developed by a good understanding of its local identity. One of the characteristic features of Bandung are the numerous old buildings across the city. Unfortunately, these buildings are no longer utilized optimally due to a mismatch between their function and typology. Housing new functions in old buildings to meet present space needs can increase their value. One kind of new function that fits well in old buildings, especially in Bandung, is the coworking space, a new type of workspace that has emerged as a result of the needs of today's society. Mutually beneficial relations can be formed when the old building is well suited to carry out its function as a coworking space for the creative class. The idea is to assemble the past (using an old building as a workplace) and the future (developing the creative economy) through designing coworking facilities. The design simulation conducted in this study used the 'third place' theory by Ray Oldenburg as well as the approach of adaptive building reuse. By changing old buildings in Bandung into new workplaces for the creative class – coworking spaces – Bandung can maintain the city's identity and provide new workplaces or public spaces for communities to develop their creativity and increase city income.

1. Introduction

Bandung is known as a creative city in Indonesia, which actively supports the development of the creative economy. The forms of creativity in Bandung are reflected in some unique characteristics of the city, such as using old buildings and the old part of the city as attractions. Unfortunately, because of rapid developments in economy and technology in recent years, some older parts of the city have started to experience degradation. If this continues, an important characteristic of Bandung will be lost.

One of the developments that certainly cannot be stopped, is the growing importance of the internet. Because of the improvement of internet connectivity, some people no longer need to go to an office to work; they can work anywhere by using only a laptop and an internet connection. These people are referred to as belonging to the creative class [1] (Florida 2002). Trends such as remote working are making work more flexible. On the other hand, this potentially makes people from the creative class more isolated, because they tend to meet less other people. Therefore, there a need has emerged for a new type of workspace that suits the work behaviour of people from the creative class and allows them to work flexibly and still be able to interact with others and not feel lonely/isolated.



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

One such kind of new workspace is the coworking space. Unfortunately, many so-called coworking spaces – which are growing rapidly in Bandung (quantitatively) – do not possess the essence of a coworking space (qualitatively), which is the formation of a community among the people using it. Therefore, this study focused on how to create a coworking space in Bandung in accordance with this value using Oldenburg's 'third place' theory through a design simulation.

The characteristics of Bandung and the development of coworking spaces in Bandung can have a mutually beneficial relationship, where an old building requires a relatively large amount of capital for rejuvenation and maintenance, while a coworking space needs a strategic location and low initial costs.

2. Method

This study was conducted by using a design method to answer the question of how to assemble the past and the future of Bandung through coworking spaces as a third place. This method reveals the reflections of the author during the design process.

The first stage was a review of the literature on coworking spaces, the third place, and the millennial generation in support of designing a coworking space as a third place for the millennial generation in Bandung. As the design process took place in Bandung, the identity of Bandung connected to its architectural history was identified in the form of the old buildings that are spread throughout the city. Then, a review of the literature on these old buildings was conducted. Several characteristics of the location for the design were identified and this stage was closed with a survey to find a suitable location for the design.

During the second stage, the users of the coworking space were determined based on a literature review and a market trend survey. The users that fit the criteria are mostly in the information and technology sector. After fixing the users and the design location, the next stage was data collection done by expert interviews of information and technology start-up company founders to find out criteria for a coworking space that meets their specific needs. Besides that, primary data on the old buildings in Bandung were collected through a site survey.

The third stage was an analysis of the values of coworking spaces and the criteria for the third place, which generated design criteria that were used to produce a design concept. The design concept was based on the idea of assembling the past and the future of Bandung and furthermore became the basis for the design simulation.

3. Literature Review

3.1. Coworking Space

A coworking space is a workspace for a community, a place where people come together to collaborate with each other. It also is an affordable and accessible workspace – a place to share knowledge from different business backgrounds that can contribute to each other [2].

The rise of the coworking space is caused by the emergence of a knowledge economy that simultaneously develops into a digital economy [3]. In the concurrent development of the knowledge economy and the digital economy, there are professionals that follow this economical transformation, called the creative class. According to [1], this is not limited to people who have artistic abilities, such as architects, artists, or musicians, but also includes consultants, lawyers, and programmers.

According to [4], coworking spaces have five main values that are open to individual interpretation. They can be used by coworking space owners to attract people dedicated towards these same values as the foundation for building a strong coworking space community. These values are:

- Collaboration. A willingness to work together and share knowledge.
- Openness. Freedom to share ideas, information, and people.
- Community. A group that aims to share knowledge through coworking.

- Sustainability. The use of a common space that is ecologically and economically sustainable.
- Accessibility. A coworking space as a place that is accessible both economically and socially by people from various backgrounds.

Moriset states that coworking spaces can be a third place for living and working because the main values of coworking spaces are in line with the third-place characteristics as defined by [5].

3.2. *Third Place Approach by Oldenburg*

The ‘third place’ is a term coined by the American psychologist Ray Oldenburg to refer to a place between residence and workplace, where people can informally interact. According to Oldenburg, the first place refers to the residence (home), the second place refers to the workplace (office), and the third place refers to a community space. Some typical places that can be a third place are barbershops, cafes, hotels, lounges, etc.

There are eight criteria for a third place according to Oldenburg, namely:

- Neutral Ground. A place where individuals can come and go freely without being attached to some activity.
- Leveler. A place that is not concerned with an individual’s status in society.
- Conversation. A place where conversation is the main activity and the topics of discussion are fun without being heavy.
- Accessibility and accommodation. A place with a high level of convenience in accessibility, which provides accommodation that meets the needs of its users.
- The Regulars. A place with a fixed client-base, which provides a distinctive spatial atmosphere. The regular customers invite new customers and make them feel welcome and comfortable.
- Low Profile. A place that is neutral – not pretentious or expensive-looking – but comfortable to use. It should also be agreeable to various types of individuals.
- A Playful Mood. A place that is not tense, where social interaction happens naturally and in a fun way.
- A Home Away From Home. Although physically a third place is different from a home, psychologically it has the comfortable atmosphere of home, so users feel part of the place.

3.3. *Heritage Building Design Proceeding*

There are five ways to design infill buildings in a cultural heritage area [6], namely:

- Mimicry
This method changes traditional forms in an abstract way and turns this symbolic form into a modern urban design so that people still recognize and receive historical information and traces.
- United complementary
By using this method, the design fully follows the traditional/old layout and provides a certain modern element in the design through materials, etc. It intends to maintain the traditional patterns and values of the building. The basic elements of traditional architecture that can be implanted into contemporary architecture, such as scale, environmental climate, organic morphology and place ownership, for example through materials and construction techniques [7].

- **United diversity**
A building that is different from other buildings tends to be more prominent and valuable as exhibition venue. These characteristics can be achieved through adaptation to historical peculiarities in a street pattern and to neighbouring buildings. For example, providing overhangs on the upper floors can make the building stand out, even though its ground floor matches neighbouring buildings [8]. Using this method, the architect commonly maintains the scale of the building while uses colours, materials and textures as the distinguishing elements.
- **Refurbishment and conversion**
This method provides an area with a sense of ownership and reflects the past in a clear way. Repairing means anything from the installation of new elevators to total demolition behind a maintained facade. Putting new functions into an old building can help renew an area within the city and provide accommodation in a strategic location [8]. This method prioritizes the authenticity of the building facade in order to create a sense of ownership and recreate the character of the area from the past in a real way and then provide new functions in the building to improve the economy of the local community.
- **Contrast**
This method focuses on a free way of thinking and a form of rebellious expression of the past [7]. An infill strategy for urban design with this method is channeled with aspects that have a specific design that highlights modern characteristics and ignore cultural and contextual factors [9].

4. Description and Analysis

4.1. Location

Not all old buildings scattered throughout Bandung are suitable for functioning as a coworking space. Therefore, the selection of appropriate old buildings must consider some aspects that are essential for the function of a coworking space, such as land use in accordance with RTRW Bandung, economic conditions of the land, proximity to public facilities, and existence of other old buildings in the area.

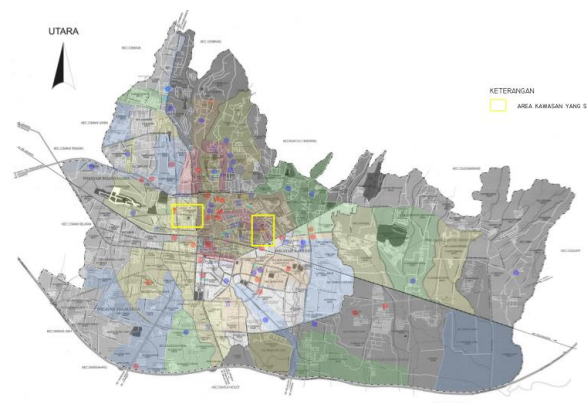


Figure 1. Superimposed Map of Essential Location Aspects.

Source: (processed from

<https://ppdbkotabandung.wordpress.com/pustaka/peta-kota-bandung/>)

Two potential locations in Bandung that match the success criteria for a coworking space are: (1) the area around Pajajaran Street and (2) the area around Baranangsiang Street. Comparing these two areas regarding the target characteristics of a coworking space for users in Bandung, we see that:

- the area around Pajajaran Street is closer to various millennial community gathering places, such as shopping centers, cafes, restaurants, and more.
- the area around Baranangsiang Street is a centre for Sundanese culture and more dominated by generation X communities.
- the area around Baranangsiang Street is more dominated by public facilities such as a traditional market. Besides that, public transportation around Baranangsiang Street is relatively less available compared to the area of Pajajaran Street. This indicates that Baranangsiang Street area is less likely to be visited by the coworking space target groups.
- the old buildings in Baranangsiang are more suitable for coworking spaces because their scale is not too large nor too small.
- Based on the above analysis, the area that will be used for the conceptual design is the area of Pajajaran Street. The site is located at Pajajaran Street No. 49. The design contains two parts: the first part is the old building on the east of the site (red rectangle) and the second part is a new building on the west of the site, which will be redesigned in the context of the heritage area. The total area of the site is 1.476 m².

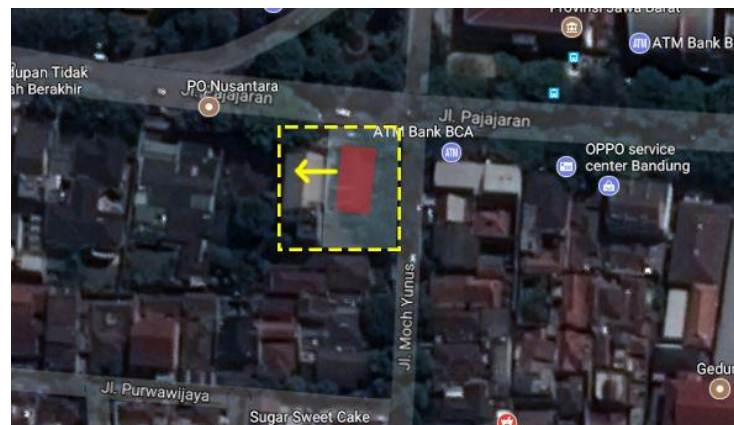


Figure 2. Old Building (Red) Inside Location of Design (Yellow).

Source: (processed from maps.google.com)

In general, the structure of the old building is still in good condition. There are no reinforcements or additions that go against building regulations. The authenticity of the old building has been maintained well by the owner. The new building located on the west side of the building is used by the owner for commercial purposes, that is selling and servicing car tires. The rectangular structure with a steel frame is 4 stories high and the design is completely different from the buildings around it.

The location at Pajajaran Street is close to two public transportation hubs: Bandung railway station (1.4 km) and Husein Sastranegara Airport (2.7 km). This makes it easier for clients or coworkers from outside the city to reach the location and meet with coworkers in Bandung. In addition, the location of the site is close to shopping centres Istana Plaza and Living Plaza (450 meters from the location) and Paskal Hypersquare (2 km from the location). Besides that, the location is also close to restaurants and cafes on Pasirkaliki Street and Pajajaran Street.

Mohammad Yunus Street, located to the east of the site, creates a shortcut from Pajajaran Street to Pasirkaliki Street and Kebon Kaung Street, which gives the site high accessibility. In addition, the location is also near universities such as Binus University and Bandung Law School, students from which could be prospective members of the coworking space.

In economical terms, the design of the old building is maintained in a relatively good condition so the cost of adaptation of the building is not too high. In addition, the architectural style of the old building is different from other historic buildings in Pajajaran Street, so the design of the building with the new function can be more 'eye-catching'.

4.2. Design Analysis

4.2.1. User Analysis. Based on the analysis related to changes in the current economic system, which is moving towards a digital economy, and the requirements of new spaces in Bandung, the main target group for the coworking space are workers in the informatics sector and also students and various freelancers. According to Budi Raharjo, the informatics sector in Bandung is particularly growing in the field of programming and animation [10].

In the early stages of a project, informatics workers and informatics companies tend not to collaborate with other parties, among others due to concerns related to plagiarism of work and ideas. Collaboration can occur at the stage of system development with other fields. Up until now, coworking spaces have not been a major alternative workplace for informatics workers due to considerations (beyond economic aspects) concerning security as well as privacy.

4.2.2. Activities Analysis. The main activity in a coworking space is flexible working flexibly. In addition, the determination of other activities that can be done in a coworking space will be determined based on the needs of its users and the basic idea of designing the coworking space design. In particular, to accommodate the needs of the main users of a coworking space which is, in this case informatics workers, so the preparation of activities in the coworking space is also influenced by the system work systems of its users. According to Budi Raharjo, in the informatics work process of informatics works, there are two types of work system, such as: systems, i.e [10].:

- Workgroup discussions, where this group needs a space that can provide the privacy and freedom to work within their styles, own work style and that is comfortable, and safe for private discussions;
- Individual work, where an individual needs a open space that can accommodate working alone, such that the activity needs of each individual in relation to their work alone in open space, so the style can meet the need of work style of each be met.

4.2.3. Coworking in third-place analysis. Based on the third place theory by Oldenburg and coworking space development as a movement for using workspaces outside the home to avoid isolation. The criteria for a third place and the values of a coworking space are interrelated, so the coworking space has potential to become a third place.

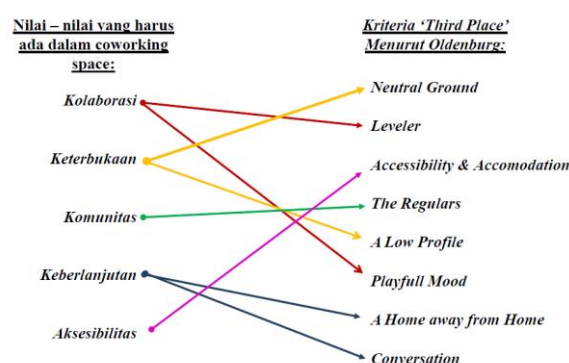


Figure 3. Relations between Values in Coworking Space and Criteria of Third Place.

The value of openness in a coworking space reflects the freedom of coworkers in sharing ideas, information, and welcoming other coworkers from different backgrounds. This value corresponds to the third-place characteristics Neutral Ground and Low Profile. Both of these characteristics require a simple building that is still comfortable to use by people from any part of society without being bound by certain restrictions.

The value of collaboration in a coworking space reflects the coworker's desire to work together and share knowledge. This value corresponds to the third-place characteristics Leveler and A Playful Mood, where the coworking space does not distinguish its users in interacting and collaborating according to social status or economic status.

The value of a coworking space community is that it is a group of coworkers that has the common goal of sharing knowledge through coworking. This value corresponds to the third-place characteristic The Regulars. A community in a coworking space is a collection of routine members who come and work there so they have the opportunity to have discussions and get to know each other. The intense interaction between these members forms a solid community in the coworking space.

The value of accessibility in a coworking space corresponds to the third-place characteristic Accessibility and Accommodation, where the coworking space must be accessible to everyone, both economically and socially.

Meanwhile, the value of sustainability in a coworking space is not only sustainability in terms of energy and resources but also the sustainability of the community formed within it. In maintaining the sustainability of the coworking space community, this value corresponds to the third-place characteristics Conversation and A Home Away From Home. A community in a coworking space can be sustainable if communication between the members occurs in every activity. Community sustainability in a coworking space makes the coworking space comfortable for its members as they are surrounded by people they know, like in a home environment.

5. Design Concept

The main idea of this study was to create a design that connects a part of Bandung's past with the development of present and future trends. Old buildings in a cultural heritage area as part of Bandung's past can incorporate a new function – as a coworking space – to maintain the old building and increase its value while at the same time providing a solution for the spatial needs of the community. The adaptive reuse building approach was used in adapting the old building to its new function as a coworking space. Meanwhile, to meet the present and future needs of society, the idea was to design the coworking space not only as a working space but also as a place to interact socially, so that the third-place approach by Oldenburg was implemented in the designing process.

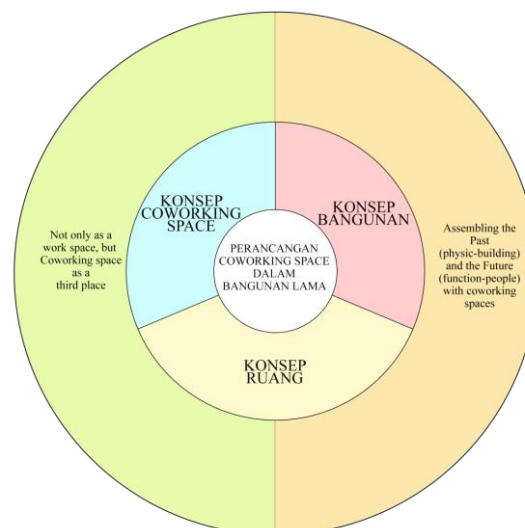


Figure 4. General Concept of Designing Coworking Space.

5.1. New Building Design Proceeding

The old building at the site is not listed as a heritage building. However, it is located in one of the cultural reserve areas in Bandung, which underscores the need to maintain the old building and prevent degradation. Therefore, the design concept for the old building uses the refurbishment and conversion method [6]. Based on this method, the exterior of the building is kept in order to maintain the atmosphere of the cultural heritage area. However, the interior of the old building is changed according to the needs of the new function.



Figure 5. The Exterior of the Old Building is Kept.

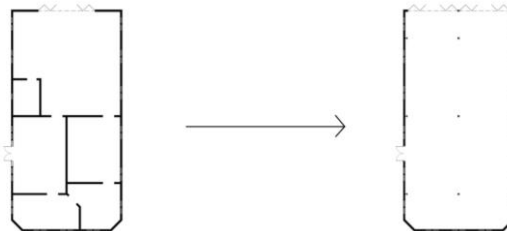


Figure 6. The Interior Design of the Old Building Changes Completely

5.2. New Building Design Proceeding

Meanwhile, the design of the new infill building is based on the united complementary concept [6], where the new building does not reduce the value of existing of old building, which becomes a complementary building that still has its own identity.

Architectural elements of the old building that are adapted to the design of the new building are proportions, scale, and morphology of the building facade. Proportions from the old building are used in the new building, namely the ratio between the width of the front-looking part of the building and the middle height of the building, which is 1:1.04. Meanwhile, the scale element from the old building that is adopted is the distance from floor to ceiling of the old building. The floor-to-ceiling proportion of the new building is almost the same as that of the old building, i.e. 3.75 meters in the old building and 3.74 meters in the new building.

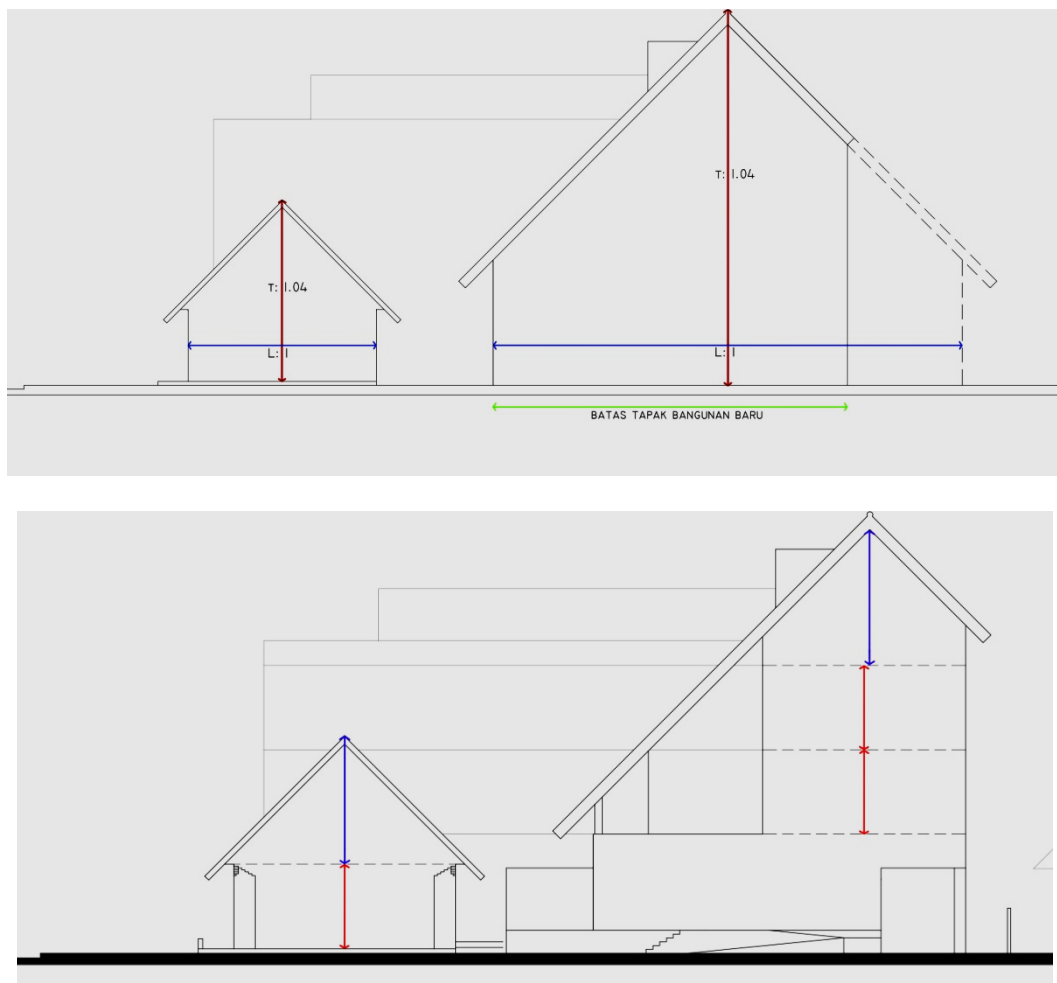


Figure 7. (Above) Comparison of Proportion in Old and New Building | (Below) Comparison of Scale in Old and New Building

Morphological elements from the old building facades that were adapted for the facade design of the new building are the forms of the openings in the old building, the canopy design at the top of the windows and doors, and the slope and shape of the roof of the old building. Among these various aspects, the dominant aspect adopted for the design of new the building is the shape and slope of the roof.

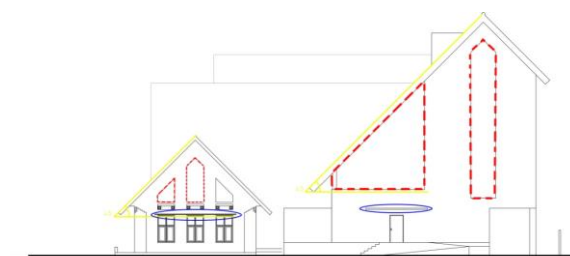


Figure 8. Comparison of Morphological Elements in Old and New Building

In addition to adopting form elements from the old building, modern elements are also incorporated the new building by designing some contrasting architectural elements, so that although the new

building is adapted to the old building, the styles of both buildings are different. The contrast in architecture mainly comes from the selection of building materials. The old building is dominated by bricks and white paintwork, while the new building is dominated by unfinished concrete, steel and glass to create a modern industrial impression.

5.3. Coworking Space Design Concept

To meet the design criteria of a coworking space that suits its purpose not only as a workplace but also as a third place, the coworking space was designed with consideration of five aspects, i.e. collaboration, adaptability, accessibility, sustainability, and community.

The key points in creating a third place are social interaction and communication between coworkers. In connection with the coworking space, the social interaction is expected to result in collaboration between coworkers. The layout of the space plays an important role in enabling collaboration, among others by:

- making sure that the total space is dominated by shared workspaces;
- making sure there is sufficient variation in model and size of the workspaces to accommodate the needs for many different activities;
- using a big group of tables in order to make coworkers feel comfortable to work together;
- providing supporting facilities that allow the coworkers to have social interaction, e.g. the kitchen and an open break area that are multifunctional.

Besides being supporting collaborative work, a coworking space is a workplace that has a high rate of change, both in types of coworkers and in activities inside the space. Therefore, the workspaces in a coworking space must be designed to be highly adaptable, so every workspace can be used effectively. This can be achieved by:

- using modular workspaces so they can be merged or separated easily according to the needs of co-workers or activities;
- leaving spaces open in the workspace layout so that the furniture can be changed according to need;
- having more than one function for every zone in the coworking space to maximize the saleable area that can be used by coworkers;
- designing different workspace layouts to meet the preferences of different coworkers so they can choose a coworking area that suits them.

In order to create a harmonious and complementary relationship between both buildings in this study, the new building and the old building must have an equivalent role or functionality so they are inseparable. Therefore the two buildings need to be connected so they have a dependency on each other. This can be achieved by (1) designing a connecting bridge from the old building to the second floor of the new building to connect the coworking space functions of the old building and the new building; (2) the ground floor of the old building and that of the new building are linked to a green space that can be used as a public area and for social interaction activities.

5.4. Concept of Building Zoning

New for the old building are public functions such as café-coworking. This café function is incorporated in the old building in order to attract visitors. There are some considerations regarding this new function, namely:

- Cafés in old buildings have distinctive features and identities that can attract the interest of informatics workers and millennials that work in a mobile and flexible way.
- The entrance fee for the cafe can be used for the maintenance of the old building.
- The cafe in the old building can act as a transition zone between a cozy cafe to ‘hang out’ in and a place that is comfortable to work in before the user switches a coworking space.

Apart from functioning as a café, the interior of the old building was designed with a mezzanine for use as a coworking space area in order to create equality between both buildings and maximize space use. By adding this function, the historical character of Bandung as well as the uniqueness of the design of the coworking space in this study are maintained.

Meanwhile, the new building functions as the main coworking space. The spatial concept used in relation to the architectural design is the concept of a ‘pyramid’, where the zoning of the new building is divided vertically according to the proximity/depth of collaboration that occurs between coworkers. The proximity/depth of collaboration on a higher floor is higher to have better quality of collaboration than on the floor below it. This makes the number of users who use the higher floors lower than those using the lower floors, so the rooms are increasingly smaller at the higher levels. In addition, the pyramid concept is also intended to support the concept of a coworking space as a third place. By applying pyramid zoning, the areas that allow interaction and collaboration are at a more accessible level and have a larger area of space. With this division, there is more space available that can become a third place.

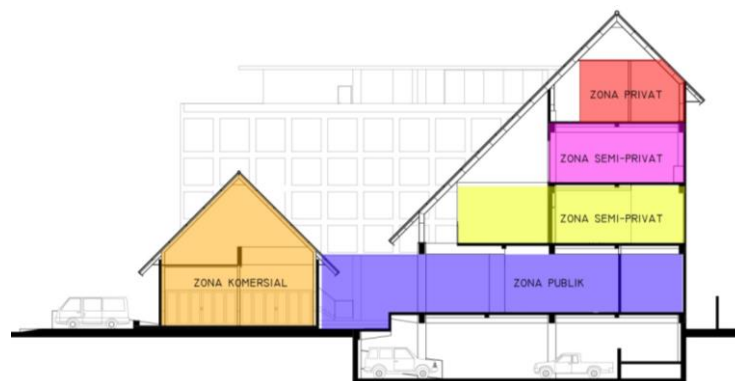


Figure 9. The Concept of Zoning Vertically.

The first-floor area is a public zone aimed at attracting people to the location. ‘Public’ means that the space on this floor is not only used by coworker members but also by others (people who visit the cafe). Therefore, the ground floor consists of spaces for people to gather and to get to know each other, encouraging the formation of a community.



Figure 10. The Atmosphere of Coworking-Cafe in Old Building

The first-floor area is a semi-public zone used by newcomers to work in and get to know each other by communicating informally at points for communication that are provided, or to work together with

a nearby coworker. The second floor has a concept that enables collaboration, so the workspace layout on this floor consists of various kinds of workstations and also has a hot-desk system, thus increasing the chance of people meeting different people every day and getting to know these persons in a more intense interaction in several settings defined by different space layouts.



Figure 11. (Left) Atmosphere of Smoking Zone | (Center) Atmosphere of Coworking Space Zone | (Right) Atmosphere of Break Room in Second Floor

The third-floor area is semi-public zone used by coworkers who collaborate on the second floor and need a quieter place to focus on collaborating in groups for a short period of time (groups created on a project basis). The space on the third floor uses a dedicated desk system with a variety of workspaces that is less diverse, i.e. standard workspaces and a lounge workspace to relax and interact with other coworkers.



Figure 12. (Left) Atmosphere of Pantry | (Right) Atmosphere of Break Room on the Third Floor

The fourth-floor area is a private zone consisting of a cubical space that functions as an office. This zone is used by a coworker who has already built sufficient trust with another coworker and decides to work with that coworker for a longer time in a start-up company. In order to meet the needs specific to this situation, the fourth space provides a highly private office with a standard workplace to focus working in an enterprise. Besides that, this floor also provides a lobby, a pantry, and a brainstorming room for interacting and relaxing with other coworkers.



Figure 13. (Left) Atmosphere of Private Office | (Right) Atmosphere of Rooftop Garden on the Fourth Floor

Based on the vertical zone division, the ground floor is a public area where a coworker community can interact with other communities from the city. The second and the third floor are a semi-public

areas where a third place can be created. Zoning on these floors refers to the characteristics of a third place in accordance with the values of a coworking space. Lastly, the fourth floor is a private area where a coworker who has already built sufficient trust with other coworkers can run a start-up company.

6. Conclusion

Based on the analysis and design in this study, it was found that to maintain the values and historical character of Bandung can be done by reusing old buildings in the city and redesigning them to be representative of the past but with a new function that is suitable for the younger generations in Bandung, while at the same time being representative of the future by designing a coworking space to function as a third place. Making a coworking space into a third place can be done by creating a space with four zones that support four stages of interaction, namely (1) a public area as a hangout place for young people, (2) a semi-public area for interaction and getting acquainted, (3) a semi-public area for group collaboration over a short period, (4) a private area for long-term collaboration in a company or a group.

The existence of coworking spaces in old buildings can be an attraction, distinguishing coworking spaces in Bandung from coworking spaces elsewhere. In addition, the utilization of an old building with a new function, such as a coworking space, can contribute to a revitalized image and contribute to the development of the old city area in Bandung.

References

- [1] Florida R 2011 *The Rise of the Creative Class-Revisited: Revised and Expanded* (Philadelphia: Basic Books)
- [2] Spinuzzi C 2012 Working alone together: Coworking as emergent collaborative activity *J. Business and Tech Com*, 29(4), 399-441
- [3] Moriset B 2013 Building new places of the creative economy. The rise of coworking spaces. *Proc off the 2nd Geography of Innovation International Conference 2013*, Utrecht University
- [4] Kwiatkowski A and Buczynski 2011 *B Coworking: Building Community as a Space Catalyst* (New York: Cohere LLC)
- [5] Oldenburg R 1989 *The great good place: Cafés, coffee shops, bookstores, bars, hair salons and the other hangouts at the heart of a community* (Massachusetts, USA: Cambridge)
- [6] Al Ani M Q A G 2014 Creative Infill Projects in Urban Environment and Effect on Livable City Life *Int. J. Eng. Science & research technology*. Iraq
- [7] Al Talib TH 1995 The Means and Ways of Dealing with Architectural Heritage *Assoiation of arab univiersities journal* 2
- [8] Tugnut A and Robertson M 1987 *Making Townscape: A Contextual Approach to Building in an Urban Setting* (London: Mitchell)
- [9] Zhu J 2011 Urban Waterfront Landscape Cultural Design Studies Institute of Urban Design Wuhan University Wuhan China p 6564 – 67 IVSL
- [10] Raharjo B 2017 *Kumpulan Solusi Pemograman Ruby* (Bandung: Informatika)