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## THE STUDY OF SPATIAL ADAPTATION OF RESIDENTS TO RESIDENTIAL SPACES IN RUSUNAWA SERUWAI BELAWAN

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### ABSTRACT

This study examines the spatial adaptation of residents to residential spaces in the Rusunawa Seruwai Belawan. This study was made to observe spatial transformation, as mentioned by Russel and Moffat, namely flexibility, convertibility, and expandability that occur in residential spaces. This study intends to examine the spatial adaptation in residential areas in the Rusunawa Seruwai Belawan. This research uses qualitative research methods with a descriptive presentation. The research variables used in this study are flexibility, convertibility, and expandability. This research uses data obtained through observation, documentation, and informant interviews using purposive sampling. The results of the data collection are processed by means, namely making the mapping of the space in the Rusunawa Seruwai Belawan, making guidelines based on aspects of adaptation that occur in the Rusunawa Seruwai Belawan, and making a difference between the initial residential plan and the residential plan after being occupied by residents. Two study findings related to spatial adaptation in informants' residences in Rusunawa Seruwai Belawan: spatial transformation to narrow spatial planning and adaptation to private space. The study results found that residents occupied communal areas with corridors in front of the dwellings.

**KEYWORDS:** Adaptation, Flats, Residential, Rusunawa, Spatial.

### 1. INTRODUCTION

Flats are houses built vertically, used communally by the community, and can minimize land use, especially in big cities such as Medan, which experienced problems in housing for people whose needs continued to increase throughout the year. Flat residential units are housed in rows horizontally and vertically or are said to be accommodated. According to [1], home is a shelter from the weather and environmental conditions, uniting a family, increasing the growth and development of the life of

every human being, and being a division of the human lifestyle. As well as, the house must be able to accommodate the activities of its residents and be spacious enough for all users so that each occupant's space needs and activities can run well. The home environment should also be avoided from factors detrimental to health [2]. The process of living life in vertical settlements is very different from horizontal. Therefore, every resident who lives in a flat or vertical residence must be able to adapt or adjust to the living environment [3].

One of the rental flats (rusunawa) built in Medan City is the Rusunawa Seruwai Belawan which began to be occupied in 2008. Rusunawa Seruwai Belawan is located in Sei Mati Village, one of Medan City's areas. This building was developed as an alternative solution for community housing, especially for low-income communities (MBR) [4]. According to data from the UPTD Medan City Flats, the Seruwai Belawan Flats stand on land owned by the Medan City Government, covering an area of 89,000 m<sup>2</sup>. Rusunawa Seruwai Belawan consists of 3 twin blocks, namely twin block A, twin block B, and twin block C. Rusunawa Seruwai Belawan provides 288 units of type 21 livable housing for low-income people.

According to UPT Rusunawa Seruwai Belawan, the residents of the rusunawa for type 21 m<sup>2</sup> are a maximum of 4 family members. This does not follow the regulation of the decree of the Minister of Settlements and Regional Infrastructure number 403/KPTS/ M/2002 about technical guidelines for the construction of healthy simple houses [5], that the threshold for a person's space to move in a dwelling is a minimum of 7.2 m<sup>2</sup> / person so that the 21 m<sup>2</sup> type of residence should be occupied by a maximum of 3 people with the condition that the child's age is still young. Four people inhabit the residence unit of Rusunawa Seruwai Belawan with 21 m<sup>2</sup>, then the space for one person's movement is 5.24 m<sup>2</sup> / person. The space for movement is reduced if there is a lot of furniture in the dwelling, so the narrow residence will cause discomfort in occupying the place. So there are problems related to regulating the occupancy of simple rental flats in Medan city, especially those found in the Rusunawa Seruwai Belawan . The specific planning criteria for the occupancy of state houses according to the Regulation of the Minister of Public Works of 2007 can be detailed as follows [6]: (1) consisting of one living room; (2) consists of two sleeping rooms; (3) consists of one bathroom/WC; (4) consists of one dining/family room; (5) consists of kitchen and washing space, with the total area of the unit as a whole is 36 m<sup>2</sup>. If the severity is compared to the conditions in the field, then there is a difference in the number of rooms/bedrooms in the Rusunawa Seruwai Belawan. The adaptation process of people living in rusunawa is also influenced by the area of the occupied room. If the space is limited, a room will be used with dual functions. So that it can cause discomfort when carrying out activities [3].

Human spatial adaptation is a response to the influence of the physical milieu. The interaction process of people living in rusunawa with their new milieu results in positive and negative spatial adaptations [7]. The number of studies that have been carried out on the spatial adaptation of residents in flats shows the presence of negative spatial adaptation. This encourages researchers to study human spatial

adaptation to residential units in apartments and develop new formulations regarding the proper behavior setting patterns to minimize the impact of negative spatial adaptation on the construction of flats in a sustainable manner.

Starting from seeing the conditions in the Rusunawa Seruwai Belawan, the author was interested in researching the "Study of Spatial Adaptation of Residents to Residential Spaces in The Rusunawa Seruwai Belawan" to find the spatial adaptation form of the residents of the Rusunawa Seruwai Belawan from the concept of horizontal to vertical residences as well as to find out what changes have been made so that the spatial conditions of the flats provide comfort for residents to live in.

## **2. THEORY AND RESEARCH METHOD**

### **2.1. Theory**

According to [8], there are three strategies for spatial adaptability carried out by residents to residential spaces. This strategy can be achieved through design changes and alternative materials and technologies. The three aspects of spatial adaptation are as follows [8]: (1) Flexibility, that is, allows making small changes in space planning to add comfort to occupying residential space. For example, reducing or replacing the size of household furniture and changing the layout from the previous dwelling (horizontal) to the rusunawa home (vertical); (2) Convertibility, that is, residents make changes in use or change functions in space. For example, the room for drying that the rusunawa manager has provided is used as a place to store used goods/warehouses by residents. At the same time, clothes take advantage of the area in front of the room corridor for drying; and (3) Expandability is adding a new space as an alternative to the rigidity of the area experienced, such as adding partitions in one room so that it becomes several different rooms.

The discussion of spatial adaptation strategies is still exploratory, and it is hoped that it can be formulated through further research. So that it is expected to be able to recognize the various needs and functions of the space that are appropriate or on target with the community that it will occupy. The same is expected for urban planners to be able to design settlements, especially for low-income people (MBR) who have economic limitations. The role of the city planner is expected through the construction of residential housing that follows the socio-cultural of the residents later. There are 6 (six) things that affect the spatial adaptation strategy of rusunawa residents, namely as follows [8] : (1) Location; things of concern are the number of floors and blocks, environmental health conditions, types of residential spaces, and the number of beds and public facilities provided; (2) Requirements for occupying a flat; (3) Rules and regulations provided; (4) Rights and obligations obtained and performed by the occupants; (5) The atmosphere of the surrounding environment and daily activities; (6) Social relations of society.

According to [9], the factors that influence individuals to carry out spatial adaptation in the environment consist of three aspects as follows: (1) Environmental perception is an action taken by

the human senses to understand the physical environment of space, whether it has a good or bad perception of the domain; (2) Environmental cognition is an action carried out to store, organize and restore the memory of the imagination about ecological conditions that have been experienced; (3) Environmental attitudes are actions that describe or express the physical characteristics of the environment in the form of feelings of like or dislike for the environment.

Spatial adaptation is influenced by the interaction between man and his environment. The processes that take place while carrying out spatial transformations can lead to changes in the behavior of individuals. When making spatial adaptations, previously, the individual stressed the environment because there was a gap between the existing conditions and the individual's expectations. The most common environmental stressors are living requirements that do not meet expectations, such as poor environmental quality and feel that the living environment is too dense, causing noise. Chronic noise produces physiological stress and can significantly increase adult blood pressure [10].

The purpose of spatial adaptation behavior is to meet requirements when there is an unsatisfactory need or environmental situation [11]. The action taken by individuals or residents of rusunawa in achieving the value of satisfaction in the residential environment is changing the form of existing residential features. Indeed, this change is made in a space that has become the individual's right when in the lease period.

## 2.2. Research Method

This study uses qualitative descriptive research methods with a deductive-phenomenological approach. The qualitative descriptive research in this study aims to describe the spatial adaptation efforts carried out by the residents of Rusunawa Seruwai Belawan in adjusting to the limitations of the dwelling space and the social environment in the vertical building of the rusunawa. Researchers will gather information from resource persons about general matters regarding the spatial adaptation of residents in the Rusunawa Seruwai Belawan. The results of the spatial adaptation pattern of the occupants will be described using the plans of each dwelling. In this study, we will discuss the understanding of spatial adaptation carried out by the residents of the Rusunawa Seruwai Belawan by applying the phenomenology approach. Researchers will interpret the forms of spatial adaptation carried out by informants through interviews and observations of the use of space in the dwelling. The research variables used in this study are in Table 1.

**Table 1. Research Variables**

<b>Problems</b>	<b>Theoretical Foundations</b>	<b>Variable</b>
The spatial adaptation	Russell and Muffat's Theory of Adaptation	1. Flexibility 2.


In determining the number of samples in this study, the researcher will use the purposive sampling technique, a representative selected based on the criteria set by the researcher. The requirements are residents living in the Rusunawa Seruwai Belawan for a minimum of 5 years. From the data collection results, it is known that out of 288 residential units, 15 residential units live at least five years, assuming one residential unit is one informant.





The data analysis technique used in this study consists of three stages. First, identify the occupants to describe the selected informants briefly. The identification method uses a table containing the informant's name, gender, age, length of stay, number of residents, and occupancy location. Second, identifying residential units to describe the furniture layout in the residential space. The way to remember it is to compare the space plan before and after the furniture layout changes. The comparison is carried out to analyze the forms of spatial adaptation of the inhabitants to the environment in which they live. The last stage is identifying activities in the residential unit space to describe the activities carried out by residents in the residential area. Behavioral analysis is carried out on all members of the informant's family in the residential space. The results of the study of the daily activities of the residents of the Rusunawa Seruwai Belawan in the existing area are displayed in the form of an activity table.







### 3. OVERVIEW AND RESEARCH RESULTS




The study results are divided into four parts: the results of the analysis of flexibility, the results of the analysis of convertibility, the results of the analysis of expandability, and spatial adaptation in residential units. The following is a table of the results of the flexibility analysis in Table 2.

**Table 2. Flexibility Analysis Results**


<b>Informant</b>	<b>Shape Flexibility</b>	<b>Model</b>	<b>Analysis Results</b>
1. AL	<ol style="list-style-type: none"><li>1. Cooking utensils such as pots and pans are hung on the kitchen wall</li><li>2. On the kitchen wall, there is a shelf for placing items</li><li>3. There are items arranged on top of the cabinet</li><li>4. There is a dish rack above the sink</li></ol>		Flexibility is made to the change in the layout of the furniture. Many changes were made in the kitchen space by increasing the space vertically to get space to place items.

Informant	Shape Flexibility	Model	Analysis Results
2. NA	<ol style="list-style-type: none"> <li>1. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>2. On the kitchen wall, there is a shelf for placing items</li> <li>3. There are items arranged on top of the cabinet</li> <li>4. There is a lesehan mattress in the bedroom</li> </ol>		<p>Flexibility is carried out on changes in the layout of furniture, the majority of which are in the kitchen space. In addition, in the main room, changes to the layout of the cabinets were made to get additional space to sleep. Flexibility also lies in the main room, which appears in placing things on top of cabinets.</p>
3. AF	<ol style="list-style-type: none"> <li>1. There is a mattress in the bedroom</li> <li>2. On the kitchen wall, there is a shelf for placing items</li> </ol>		<p>Flexibility is done on the walls of the kitchen space to get space to put kitchen furniture.</p>
4. FA	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. There are items and piles of clothes arranged on top of the closet</li> <li>3. There is a dish rack above the sink</li> </ol>		<p>Flexibility is carried out on the walls of the kitchen space to get space for laying kitchen furniture. In addition, flexibility lies in the main room that appears in the placement of things on top of the cabinet. Flexibility also lies in the main room, which appears in placing things on top of cabinets.</p>
5. DF	<ol style="list-style-type: none"> <li>1. On the kitchen wall, there is a shelf for placing items</li> <li>2. There are gallons of water in the sink</li> </ol>		<p>Flexibility is done on the walls of the kitchen space to get space to put kitchen furniture.</p>

Informant	Shape Flexibility	Model	Analysis Results
6. ID	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. On the kitchen wall, there is a shelf for placing items</li> <li>3. There is a dish rack above the sink</li> </ol>		<p>Flexibility occurs in the walls of the kitchen space, which is used as a place to put kitchen furniture. In addition, flexibility also lies in placing cabinets to increase space to sleep.</p>
7.DE	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>3. On the kitchen wall, there is a shelf for placing items</li> <li>4. There is a dish rack beside the sink</li> </ol>		<p>Flexibility occurs in the kitchen space; the kitchen wall is used as a place to put kitchen furniture. In addition, flexibility occurs in placing cabinets used for personal space.</p>
8. WA	<ol style="list-style-type: none"> <li>1. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>2. It can be seen that the sink is used to put the stove</li> </ol>		<p>Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture.</p>
9. SU	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. Cooking utensils such as pots and pans are hung on the kitchen wall</li> </ol>		<p>Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture.</p>
10. RE	<ol style="list-style-type: none"> <li>1. On the kitchen wall, there is a shelf for placing items</li> <li>2. On the kitchen wall, there is a shelf for placing food</li> </ol>		<p>Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture.</p>
11. LI	<ol style="list-style-type: none"> <li>1. There is a two-level bed in the bedroom</li> <li>2. On the kitchen wall, there is a shelf for placing items</li> </ol>		<p>Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture. In addition, flexibility also</p>

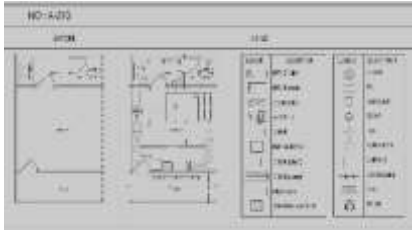
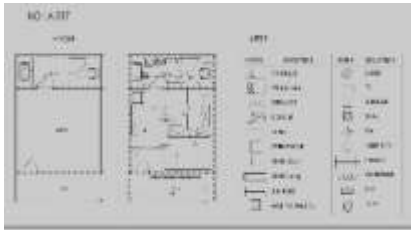
<b>Informant</b>	<b>Shape Flexibility</b>	<b>Model</b>	<b>Analysis Results</b>
	<ol style="list-style-type: none"> <li>3. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>4. There is a stove on the sink, and gallons</li> </ol>		occurs in the use of multi-story beds
12. NH	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. On the kitchen wall, there is a shelf for placing items</li> <li>3. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>4. It can be seen that the sink is used to put the stove</li> </ol>		Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture. In addition, flexibility also lies in placing cabinets to increase space to sleep.
13. MS	<ol style="list-style-type: none"> <li>1. There are items arranged on top of the cabinet</li> <li>2. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>3. There is a rice cooker and gallons above the sink</li> <li>4. On the kitchen wall, there is a shelf for placing items</li> </ol>		Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture. In addition, flexibility also lies in placing cabinets to increase space to sleep. Flexibility also lies in the main room, which appears in placing things on top of cabinets.
14. MY	<ol style="list-style-type: none"> <li>1. There are items arranged on top of the cabinet</li> <li>2. Cooking utensils such as pots and pans are hung on the kitchen wall</li> <li>3. There is a gas stove above the sink and a gallon</li> <li>4. On the kitchen wall, there is a shelf for placing items</li> <li>5. On the kitchen wall, there is a shelf for placing a shelf of dishes</li> </ol>		Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture. Flexibility also lies in the main room, which appears in placing things on top of cabinets.

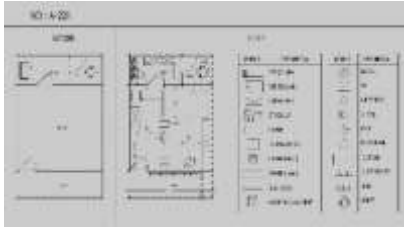
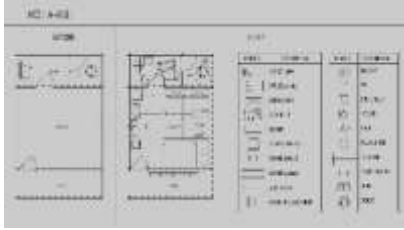
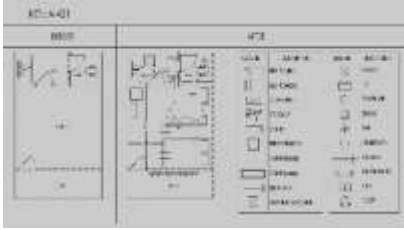


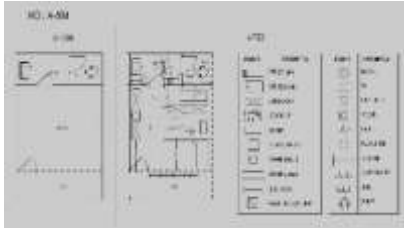
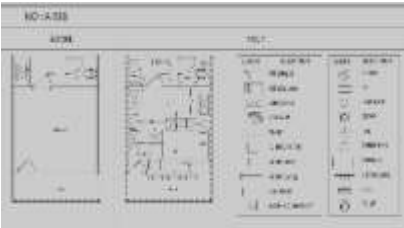
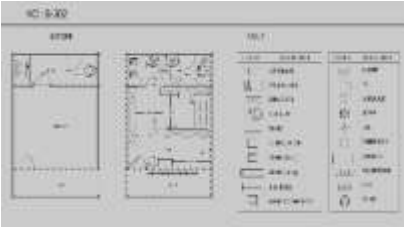
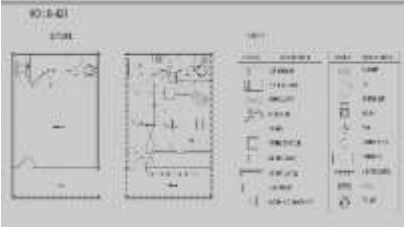
Informant	Shape Flexibility	Model	Analysis Results
15. NB	<ol style="list-style-type: none"> <li>1. There is a lesehan mattress in the bedroom</li> <li>2. There is a two-level bed in the bedroom</li> <li>3. On the kitchen wall, there is a shelf for placing items</li> </ol>		Flexibility occurs in the kitchen space, namely on the kitchen wall that is used as a place to put kitchen furniture. In addition, flexibility also occurs in the use of multi-story beds

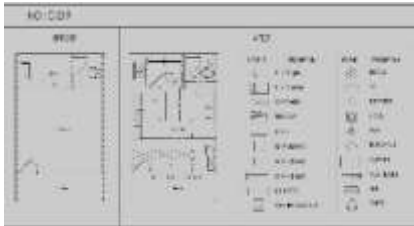
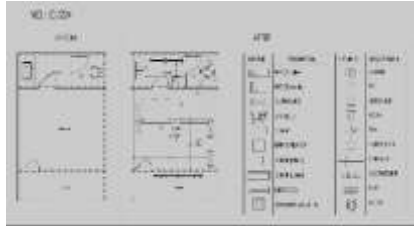
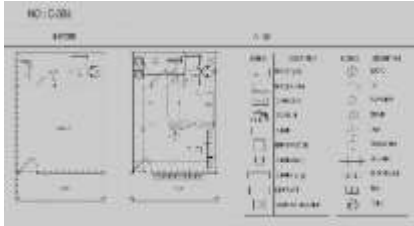
The following is a table of the results of the analysis of convertibility in Table 3.

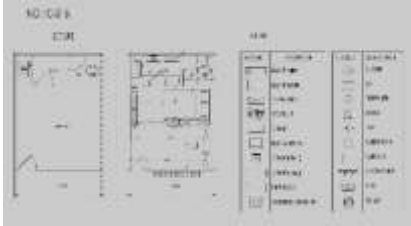
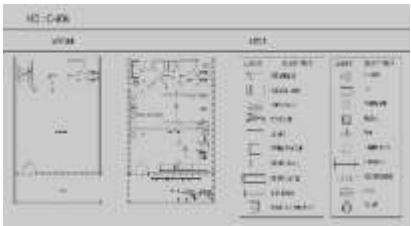

**Table 3. Convertibility Analysis Results**

Informant	Floor Plan	Shape Convertibility	Analysis Results
1. AL		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. In the kitchen, it is also used as a drying room</li> </ol>	Convertibility occurs in the main room, which is also functioned as a room for sleeping and in the kitchen, which is also used as a drying room
2. NA		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. The kitchen is also used as a laundry room</li> </ol>	Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a laundry room.

Informant	Floor Plan	Shape Convertibility	Analysis Results
3. AF		<ol style="list-style-type: none"> <li>The main room is used to carry out various activities such as beds and other household activities</li> <li>In the kitchen, it is also used as a laundry and drying room</li> <li>It can be seen that the sink is used to put things</li> </ol>	<p>Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a laundry room and drying room.</p>
4. FA		<ol style="list-style-type: none"> <li>The main room is used to carry out various activities such as beds and other household activities</li> <li>In the kitchen, it is also used as a laundry and drying room</li> </ol>	<p>Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a laundry room and drying room.</p>
5. DF		<p>The main room is used to carry out various activities such as beds and other household activities</p>	<p>Convertibility occurs in the main room, which also functions as a space for sleep.</p>








Informant	Floor Plan	Shape Convertibility	Analysis Results
6. ID		<p>The main room is used to carry out various activities such as beds and other household activities</p>	<p>Convertibility occurs in the main room, which also functions as a space for sleep.</p>
7.DE		<p>The main room is used to carry out various activities such as beds and other household activities</p>	<p>Convertibility occurs in the main room, which also functions as a space for sleep.</p>
8. WA		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. In the kitchen, it is also used as a drying room</li> </ol>	<p>Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a drying room.</p>
9. SU		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. In the kitchen, it is also used as</li> </ol>	<p>Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a drying room.</p>








Informant	Floor Plan	Shape Convertibility	Analysis Results
		a laundry and drying room	
10. RE		The main room is used to carry out various activities such as beds and other household activities	Convertibility occurs in the main room, which also functions as a space for sleep.
11. LI		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. The kitchen is also used as a laundry room</li> </ol>	Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a laundry room.
12. NH		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. In the kitchen, it is also used as a drying room</li> </ol>	Convertibility occurs in the main room, which also functions as a room for sleeping, and in the kitchen, which is also used as a drying room.


Informant	Floor Plan	Shape Convertibility	Analysis Results
13. MS		<p>The main room is used to carry out various activities such as beds and other household activities</p>	<p>Convertibility occurs in the main room, which also functions as a space for sleep</p>
14. MY		<ol style="list-style-type: none"> <li>1. The main room is used to carry out various activities such as beds and other household activities</li> <li>2. In the kitchen, it is also used as a laundry and drying room</li> </ol>	<p>Convertibility occurs in the main room, which also functions as a space for sleep</p>
15. NB		<p>The main room is used to carry out various activities such as beds and other household activities</p>	<p>Convertibility occurs in the main room, which also functions as a space for sleep</p>

The following is a table of the results of the analysis of expandability in Table 4.

**Table 4. Expandability Analysis Results**

Informant	Observation	Model Shape
1. NA	There is a closet in the middle of the room to cover the bed	
	There is a curtain in the middle of the room to cover the bed	
2. AF	There is a curtain in the middle of the room to cover the main room	
3. DF	There is a closet in the middle of the room to cover the bed	
	There is a curtain in the middle of the room to cover the bed	
4. ID	There is a closet in the middle of the room to cover the boys' bed	
	There is a curtain in the middle of the room to cover the bed	

Informant	Observation	Model Shape
5.DE	There is a closet in the middle of the room to cover the bed	
6. WA	There is a closet in the middle of the room to cover the bed	
7. SU	There is a closet in the middle of the room to cover the bed	
	There is a curtain in the middle of the room to cover the bed	
8. RE	There is a closet in the middle of the room to cover the bed	
9. LI	There are curtains to cover the bed	
10. NH	There is a closet in the middle of the room to cover the bed	

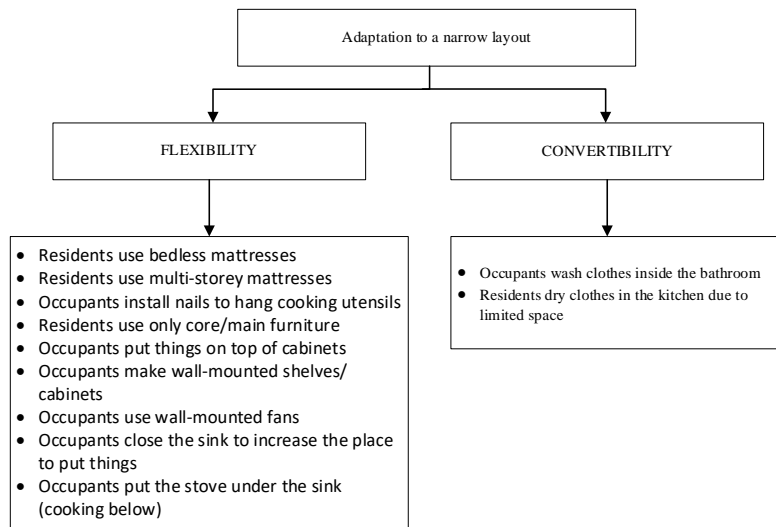
Informant	Observation	Model Shape
11. MS	There is a closet in the middle of the room to cover the bed	

The results of spatial adaptation in residential units are divided into two parts: adaptation to narrow spatial layouts and adaptation to space limitations. The narrow space area will undoubtedly be disturbing if the residence is occupied beyond the number of people's capacity. In addition, as the child grows older, it will increase the number of daily necessities needed, such as wanting to have game tools, standard equipment, to school supplies. Then the number of items contained in the dwelling will also increase. Based on the results of interviews and observations by researchers, two aspects of spatial adaptation were obtained according to the theory applied by 15 informants in a narrow spatial layout. Such aspects of spatial transformation are flexibility and convertibility.

In the flexibility aspect, several theme codes were found during the analysis of interview transcripts, namely Adjustment of the Number of Furniture, Regulating the Position of Furniture, Refraining adding furniture, Innovation in residential, and Adjustment of Furniture Size. According to [7], the aspect of flexibility is in the form of attitudes or actions owned by individuals in planning space so that the area can provide comfort for its occupants without changing the original shape of the existing space.

In the aspect of convertibility, a theme code is found during the analysis of interview transcripts, namely Changing the Function of Space and carrying out various activities in one room or Multi-Function Room. According to [8], the contingency aspect is to carry out changes in use in the building, be it changes made temporarily or fixedly. The following explains each aspect of spatial adaptation in the residents of the Rusunawa Seruwai Belawan, which is arranged in the form of a chart in Figure 1.





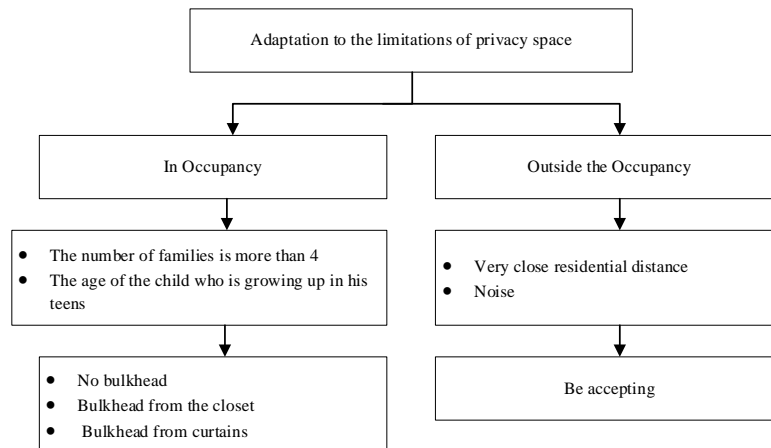
**Figure 1: Forms of spatial adaptation to narrow spaces**

The privacy space problem felt by informants is found in the main room and bedroom. Privacy concerns can come from 2 sources, namely from within the family and neighbors of the dwelling. Privacy that comes from family members is due to the number of family members who are more than four people, the age of the residents' children who are growing up and adults, so they want to have their own space/room. In addition, privacy problems that come from neighbors are caused by the location of residences that are close to each other, so they are disturbed by noise or gossip circulating between neighbors. Other forms of privacy issues that are considered disturbing are such as when there are residents who are watching tv, eating, napping, and doing other activities. Still, some guests visit to meet other family members.

The cause of the lack of private space is that the meeting room is used as a multifunctional space that can carry out various kinds of activities. The form of spatial adaptation to the limitations of private space is that informants make partitions in the dwelling or conduct social interactions in the corridor in front of the residence; in fact, this is not allowed because it can interfere with the circulation of other residents who will pass through the passage of the road.

Furthermore, related to the space in the residence that lacks privacy, the object of research makes a partition of the room that is used as a sleeping space. The addition of the bedroom is done so that residents are private and if there are guests or neighbors of the residents who come to visit. However, different privacy problems were also experienced by other informants, namely, being disturbed by the limited sleeping space in the dwelling. This is felt because of the growth of children who are increasingly teenagers or adults, so they want to provide their own sleeping space (privacy space) so that parents and children do not use the same sleeping space.

Regarding various issues related to the private space in the Rusunawa Seruwai Belawan residence, informants who understand these obstacles can only accept and adjust to the limited residential area. More details regarding spatial adaptation to the private space can be seen in the chart below in Figure 2.



**Figure 2: Forms of spatial adaptation to the space of privacy**

Based on each informant's spatial adaptation form chart, a general grouping of spatial adaptation forms can be made based on what the informant has done while occupying the Rusunawa Seruwai Belawan. The collection of spatial adaptation forms of residents to the Rusunawa Seruwai Belawan is divided into two. The grouping consists of four points, which are as follows: (1) informants make arrangements for the position of the furniture; (2) informants make changes to the function of the space; (3) informants do not increase the number of spaces; and (4) informants increase the number of spaces.

While analyzing existing data in the field, researchers found new findings beyond the theory of spatial adaptation proposed by Russell & Moffat. These findings lead to the occupation of communal space in the Rusunawa Seruwai Belawan building. Previously, the definition of occupation, according to the online KBBI, was the occupation, use, or control of space by someone who did not have rights to the area. This was found in a closed communal room in the Rusunawa Seruwai Belawan building. The form of occupational action against collaborative space carried out by the residents of Rusunawa Seruwai Belawan is the corridor in front of the residence. The occupational record of the corridor space in front of the dwelling consists of several actions, namely:

- a) Residents use the corridor space in front of the residence to receive guests. Here is a picture that shows residents taking advantage of the corridor in the home's front area to welcome guests who are carried out sedentary (still putting chairs even though they are not receiving guests) (Figure 3).



**Figure 3: Residents use the corridor as a living room**

- b) Residents take advantage of the corridor space to dry clothes. The following is a picture that shows the occupation of the front area of the residence carried out by residents by utilizing residential corridors as a place to dry clothes (Figure 4).



**Figure 4: Residents use corridors to dry clothes**

- c) They are laying flower pots in the front area of the dwelling and above the fence of the street corridor. The following is a picture of the occupation carried out by residents by placing flower pots on the corridor floor and wall. Flower pots placed on the fence without restraint can worry other residents below if the flowerpot accidentally falls out of place (Figure 5).



**Figure 5: Residents take advantage of the corridor to put flower pots**

#### 4. CONCLUSION

Based on the analysis of residents' activities and comparing residence forms from before and after being occupied, two spatial adaptations were found in the Rusunawa Seruwai Belawan. The research results on adaptation to narrow spatial planning found that there were two spatial adaptation actions carried out by the Rusunawa Seruwai Belawan residents: flexibility and convertibility. The flexibility measures implemented to overcome narrow residential spaces include creating additional storage areas such as shelves and cabinets mounted on the wall, using appropriate furniture sizes, adjusting the position of furniture handles, and making bunk beds. The contingency measures carried out to overcome the narrow space is that residents change the activity of washing and drying clothes in the kitchen and utilizing the main room and a sleeping area.

Problems with private space can be caused by two sources: family members and neighbors. Privacy that comes from family members is due to the number of family members who are more than four people and the age of the residents' children, who are teenagers or adults, so they want to have their own space/room. So that the form of spatial adaptation carried out is by the act of expandability or making partitions in the dwelling, both using cabinets and curtains. In addition, privacy problems that come from neighbors are caused by the location of the houses that are close to each other, so that they are disturbed by sounds or gossip circulating between neighbors, but residents cannot adapt spatially.

While analyzing data in the field, researchers found new findings beyond the theory of spatial adaptation proposed by Russel and Moffatt. These findings lead to the occupation of communal space in the Rusunawa Seruwai Belawan building. The form of occupational action against collaborative spaces is carried out by the residents of the Rusunawa Seruwai Belawan in the corridor in front of the residence.

While collecting and analyzing data in the field, researchers can group into two groups in general, namely residents who have successfully applied spatial adaptation and residents who have not successfully used spatial transformation. The criteria for residents who have successfully adapted spaces are to carry out adaptation flexibility, convertibility, and expandability in private rooms and communal spaces according to their respective functions, namely, not to carry out occupational areas that are not following their procedures.

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