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THE DESIGN PLANNING TO THE URBAN COMPLEX FOR CITIZEN ACTIVITIES TOWARD THE COMPACT CITY THE CASE STUDY ON THE SHIMIZUSAWA URBAN CORE IN YUBARI CITY

Abstract. I was engaged in the basic design of public facilities formed in the urban core of Yubari city which is carrying out compact city due to the declining population. I studied to create the Urban Complex that combines citizen activities.

Keywords: compact city, depopulation, urban complex, design planning.

1. Background and Purpose of This Study

In order to promote intensive compact city formation in local small cities, centralization of decentralized urban areas and public facilities are required. One of the purposes of consolidating public facilities is to reduce fiscal burden. In order to integrate and make efficient functional configuration and operation, it is necessary to consider the possibility of compounding from citizen's actual activity situation and use intention, and reflect the intention of the citizen in the plan. Furthermore, it is necessary to construct the facility planning method while feeding back to the citizen's intention to use from the plan. From the above, we present the design planning to the urban complex for citizen activities toward the Compact City by evaluating the complexity of activities in this paper.

It is targeted at urban complex in Minami-Shimizusawa area planned by intensive compact city plan in Yubari city master plan [1]. We extracted the use intention from the function necessary for the facility discussed at the citizen workshop [2][3][Note 1], and our laboratory along with design office repeatedly examined citizen's use intention and effect of the complex of activities from the design stage.

2. Methods

- 1) Based on the plan conditions presented by the city, we held a workshop and drew 196 intentions of use.
- 2) We made groups using furniture and functions necessary to realize intention to use.
- 3) We formed a diagram using space quality.
- 4) Showed the possibility of the combined effect of activities.
- 5) Made a design plan using 3) and 4).
- 6) We examined the intention of utilization and the possibility of complex adopted in it.
- 7) Fed back the result of 6) to the plan. By repeating this, it was further improved.
- 8) I explained an improved plan to the residents in the workshop.
- 9) I fed back the use intention of citizen to the plan.
- 10) It organized the main points of the process in 1) to 9) and showed the design planning for the urban core facilities toward the integrating Compact city.

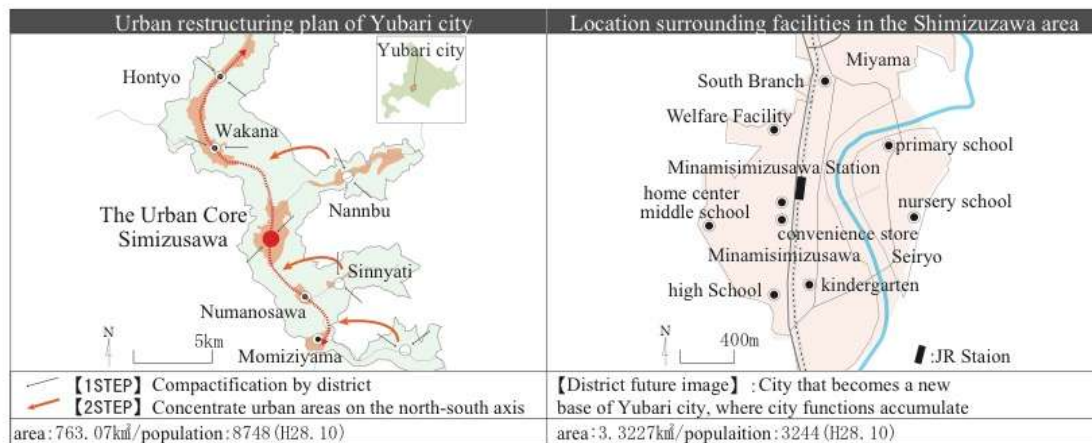


Fig. 1. Urban reconstruction plan of Yubari city and location around Shimizusa-wa area

3. Process for reviewing basic design of Urban Complex (Figure.2)

1) In order to combine activities in the facility, we selected 185 activities out of the use intention 196, and derived necessary furniture and functions.

2) In order to realize as many activities as possible with minimum furniture and functions and to compound activities in one room, we made groups of activities that required the same furniture and maintenance.

3) We divided the various rooms using the environmental factors of the space which is the constraint in space arrangement. (e.g. The space that can be dark, Open space)

4) We created a diagram based on arrows that shows the compounding by adjoining rooms and the street of the gaze between the rooms and showed the 35 possibilities of combining the activities.

5)-7) Based on the diagram we created, we examined in two plans, A and B. In the center, the plan A has a multipurpose hall and the plan B has the book corner. In plan A, 16 of the 35 effects of the combination of activities was realized (e.g. By adjoining ① and ②⑤, you can choose where you are when concentrate on work or take a rest.) and 18 was realized in scheme B. (e.g. By adjoining ⑬ and ⑳, elementary school students can choose various ways to play.)

Based on this analysis, two compromise plans were made. In this plan, both multipurpose halls and book corners were placed at the center of the facility. By summarizing both plans, the combined effect of compounding activities increased to 23 pieces since it was incorporated. (Ex: By adjoining ⑯ and ⑳, With the forest terrace penetrating the facility, it will be possible to host large-scale events using both inside and outside.)

In the plan completed on 21 November, the effect of the combination of activities increased to 27 pieces. (e.g. By adjoining ⑯ and ⑳, since eliminating the height difference between place to waiting for the bus or civic exchanging and the multipurpose hall, it is possible to hold a large event.)

8) Yubari city and our laboratory held a workshop [Note 2]. In order to share the image of effects of the combination of activities on the premise that use intention is incorporated, we explained the basic design plan [Note 3] to the citizen, and discussed the plan. We grasped the use intention (e.g. Some mothers said. " I want children to go out directly from the kids space because they are very active. ")

9) With reference to 8, we reorganized the combined effect of activities that should be incorporated into the facility. It was fed back to the plan and reflected in the final plan.

4. Key points of the process

1. Composite type by placement

There are four ways of arranging furniture and function. The determining factor of the arrangement of the rooms is the combined effect of activities by adjacencies or line of sight through. In the final design plan, 28 items out of the composite effect of all 35 items of activities were realized.

Each of four ways of arranging furniture and function gave different effects.

By line of sight through: To improve the (mother's) sense of security. Awareness of other activities is born.

By adjacent rooms: The range of activities widens, or synergistic effects are born.

In the room: User interaction increases.

In the facility: Facility utilization rate and staying time increase.

2. Arrangement how to realize complex

It is necessary to center mainly the room with many effects and related to high-priority use intention in order to incorporate many of the effects of complexity of activities by adjoining.

In the diagram created by our laboratory, we arranged so that ㊟ the table for hanging out was the center.

3. Reflecting the use intention of residents

In the workshop, we shared the use intention reflected in the plan with citizens. Citizens themselves understood the effect of complexing activities, which led to the promotion of the use of facilities. This is effective for reorganizing public facilities on the premise of a declining population.

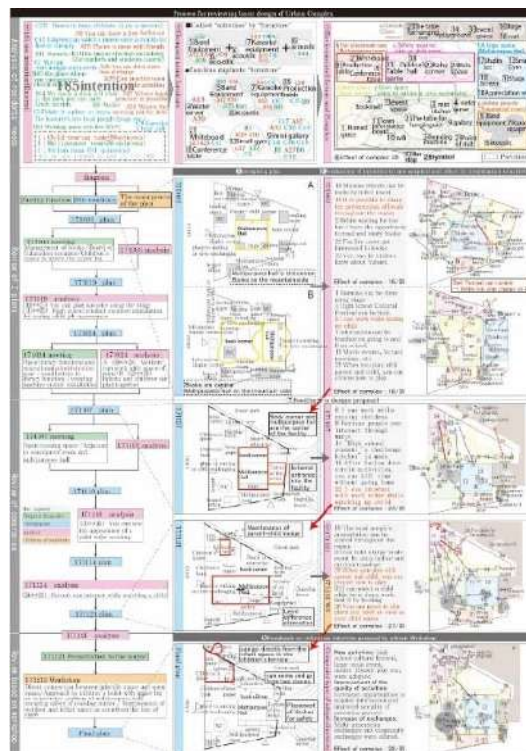


Fig. 2. Process for reviewing basic design of Urban Complex

Reference

- [1] Yubari City Town Planning Master Plan / Yubari City
[2] The Design Planning for the Urban Core Facilities toward the Integrating Compact City / Hiroki Miyamoto (2016 graduation thesis)
[3] Yubari city regional population vision and regional comprehensive strategy / Yubari

Note

[Note 1] WS members (divided into 3 teams of atrium, parenting, multipurpose) WS schedule (H 28.9 / 16.10 / 6.10 / 20) Toward the basic concept of urban base complex facilities
0 What the station did. 1st WS "How do people get to-gether at the site complex (STEP 1) (software aspect) attractiveness" 2nd WS "linking software aspects with functions (hard) (STEP 2)" Third WS "Tell Consultation, Think about Facility Image ①" Fourth WS "Report on Each Team (Post Team Questionnaire on Each Team)"

[Note 2] WS members 7 people (atrium, parenting, multipurpose team representatives) WS dates (H.29.12 / 13)

[Note 3] Atelier Bunk Design. The first time (H29.10.3) / the second time (H29.10.19) / the third time (H29.10.24) / the fourth time (H29.11.7) / the fifth time (H29.11.10) / the sixth time (H29.11.14) / the 7th (H29.11.21) the Final (announced at H30.1.19 Basic design meeting)

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**ПРОЕКТИРОВАНИЕ ГРАЖДАНСКОГО КОМПЛЕКСА
В КОМПАКТНОМ ГОРОДЕ
НА ПРИМЕРЕ АГЛОМЕРАЦИИ ШИМИЗУ САВА ГОРОДА ЮБАРИ**

Абстракт. В статье рассматривается базовое проектирование общественных объектов, созданных в агломерации города Юбари, который становится компактным городом из-за сокращения населения. Так же рассмотрен процесс создания городского комплекса, объединяющего деятельность граждан.

Ключевые слова: компактный город, депопуляция, городской комплекс, проектирование.