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## Conversion of Old Buildings into Reuse in Historic Quarters

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### Abstract

Conversion of old buildings by renovation and remodeling into new uses is an effective way not only for revitalization of the old buildings but for preservation and revitalization of the historic quarter in which they stand.

The purpose of this report is to study the possibility of revitalization of old buildings in the "West Historic Quarter" of Hakodate through conversion into other uses, and the means to promote conversion and maintain the converted buildings.

The results may be summarized as follows :

- 1) Converted buildings amount to thirty in the "West Historic Quarter". The new uses, structures and styles of converted buildings are various. In particular, the new uses are for tourism and for the neighborhood and inhabitants. These converted buildings were renovated and remodeled according to the new uses, but their historical characteristics are preserved.
- 2) The converted buildings had some effect on revitalization of the Quarter by creating original and diverse spaces, putting the building in use for the public and conserving the characteristics of the historic townscape.
- 3) On the other hand, there are some old buildings which are to be demolished, besides it is not easy to maintain the converted buildings.
- 4) We think it necessary to answer the purpose of urban design such as improvement of surroundings around the converted buildings, and to make a communication system for various informations regarding the conversion.

## 1. Introduction

Conservation of historic quarters has been widely understood among people for the last two decades in Japan. Regarding conservation of historic quarters, the important problems are how to keep physical characteristics and how to renew their social and economic functions. In particular, how to preserve and revitalize valuable old buildings is a major subject.

We have various ways to preserve valuable old buildings – restoration, rehabilitation, renovation and so on.

Listed buildings as cultural properties, which are generally historic monuments, have been preserved rigorously by restoration. The rigorous restoration is not always the way of revitalizing old buildings. On the contrary, renovating and remodeling of old buildings for reuse can be vital for them. The conversion of old buildings into a new use is an effective way for revitalization of old buildings and their surroundings.

We can see many examples of conversion in the “West Historic Quarter” of Hakodate. In this Quarter of about 326ha, many old buildings remain, and many old buildings have

**Table 1** Outline of survey old buildings

Age of building	Number of the buildings	Area of the total floor	Number of the buildings
Meiji era (1868–1912)	44	Under 100m <sup>2</sup>	10
Taisho era (1912–1926)	90	100–199m <sup>2</sup>	32
Showa era, before the Second World War (1926–1945)	42	200–299m <sup>2</sup>	29
Showa era, after the Second World War (1945–)	1	300–499m <sup>2</sup>	32
Unknown	3	500–999m <sup>2</sup>	18
		Over 1,000m <sup>2</sup>	23
		Unknown	36
	Total	Total	180

Use (classified category)	Number of the buildings	Structure	Number of the buildings
Government and municipal office	4	Timber	62
Office	32	Reinforced concrete	67
Shop	41	Brick	25
Apartment house and dwelling house with shop	32	“Dozo”	6
Dwelling house	23	Stone	2
Educational facility	28	Reinforced concrete block	16
Public health facility	2	Steel	1
Factory	3	Unknown	1
Warehouse	6		
Unknown	9	Total	180
	Total		

been converted for new uses since 1965.

The townscape maintains the historical characteristics which are very unique compared with other historic quarters in Japan. The "West Historic Quarter" is now in decline like most of the other historic quarters.

This Quarter offers an interesting problem as to how to revitalize the urban activities, maintaining the historical characteristics of the old buildings and its townscape.

The purpose of this report is to study the possibility of revitalization of old buildings in this Quarter through conversion of them into other uses, and how to promote conversion and maintain the converted buildings.

The survey is as follows: 1) A questionnaire and a question and answer survey on the process of the conversion for the owners and the tenants of the converted buildings, and a recording survey of a few of the buildings' plan and photographing, in 1985.

2) A survey of the present states and the changes for recent 10 years of 180 old buildings, whose existence is already secured by the past investigation, in 1986 (Table.1).

3) A questionnaire survey on the intention of conservation for the owners and the tenants of old buildings except the listed buildings, public facilities, religious facilities and the converted buildings which will be preserved in the future, in 1986.

## 2. Change of Old Buildings

During the past 10 years from 1976 to 1986, 13 old buildings out of 180 were demolished. 8 of them were not rebuilt and the sites have been used as parking lots (Table.2).

2 other buildings have remained vacant. The demolitions of old buildings are in progress, and rebuilding after that is making little progress. On the other hand, it is noticeable that 26 old buildings were converted into new uses. But almost all of the old buildings are still in use as before only after repairs. In many cases, although roofs, windows or walls are often repaired and more or less the exterior of buildings are changed (Table.3),

The historic buildings and the townscape keep their original characteristics. But in general, the exterior of the old buildings are not well maintained (Table.4).

In particular, warehouses and shops are in bad conditions ( Fig.1). It shows that there are financial problems, which the decline of activities in the Quarter has brought about.

As for the intention of the owners and the tenants regarding the conservation of old buildings, 13 persons out of 84 propose to improve them by repairing, enlarging and remodeling, 3 persons to convert them into another use to increase profit and 12 persons are, on the contrary, propose to rebuild, demolish or sell (Table.5). Considering these data and the change of old buildings for the last decade, we can estimate that in the future three types of work for old buildings — namely improvement, conversion and demolition — will appear at a certain ratio.

Since the latter type may have detrimental influences on the historical characteristics of the Quarter, an important problem is the mode of preservation.

**Table 2** Change of old buildings during the last decade(1976-1986)

Category of change	Number of the buildings
Conversion into reuse	26
Demolition	
-- Rebuilt after	5
-- Installation of parking lot	8
Vacancy	2
Repair	
-- Exterior only	19
-- Interior only	8
-- Both exterior and interior	46
No change	8
Others (including listed buildings, public facilities, religious facilities)	30
No answer	3
Unknown	25
Total	180

**Table 4** Present condition of maintenance on the exterior of old buildings

Category of condition	Number of the buildings(%)
Very good	30 (18.4)
Good	69 (42.3)
Bad	49 (30.1)
Very bad	15 ( 9.2)
Total	163 (100%)

**Table 3** Repaired part

Repaired part at the exterior	Number of the buildings(%)
Roof	45 (69.2)
Window	39 (60.0)
Wall	38 (58.5)
Entrance	30 (46.2)
Garden, site	6 ( 9.2)
Others	4 ( 6.2)
Total	65 (100%)

Repaired part at the interior	Number of the buildings (%)
Toilet, kitchen	30 (55.6)
Floor	28 (51.9)
Plan, partition	27 (50.0)
Ceiling	25 (46.3)
Heating system	21 (38.9)
Insulation	11 (20.4)
Others	6 (11.1)
Total	54 (100%)

### 3. Characteristics of Conversion

#### 3-1) Social Characteristics

We confirmed that 30 old buildings had been converted since 1965, including 21 examples of conversion which we surveyed in this study.

Table.6 shows an outline of the 21 examples of conversion. Most of the buildings were converted into tourist facilities from dwelling houses and storehouses; for instance, coffee shops from dwelling houses, shops and coffee shops from storehouses, and hostels from dwelling houses. These conversions are related to the changes of urban activities in the Quarter, i.e. the decrease of population, the decline of the port and commercial functions and the growth of tourism. On the other side, a part of them was converted into on

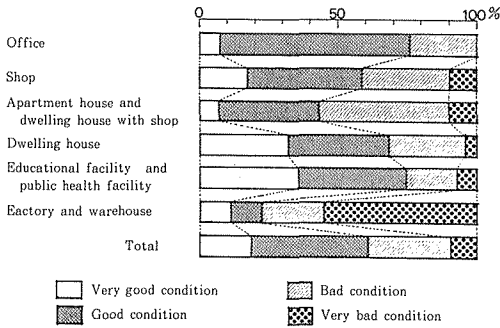


Fig. 1 Present condition of maintenance on the exterior of old buildings.

Table 5 Intention of the owners and the tenants regarding the conservation of old buildings

Category of intention	Number of the owners and the tenants
Repairing	10
Enlarging and remodeling	3
Conversion into reuse	3
Rebuilding	2
Demolition	6
Selling	4
Others	7
Maintaining the status quo	49
<b>Total</b>	<b>84</b>

apartment house, an art gallery, an electric appliance shop and an office which serves the surrounding neighborhood. Moreover we can find examples of conversion, the new use of which is surprisingly different from the former use. They are as follows ; a coffee shop from a church, a bar from a post office, an antique furniture store from a rice store, a hotel from a bank, a complex of studios, restaurants, shops and offices from a post office.

Thus, examples of conversion are full of variety.

The persons who made plans and carried out the conversion work can be classified into three types ; individual type, corporation type and group type. The number of the individual type which appeared since 1975 and has been increasing is largest among the three types. The corporation type has appeared earlier in 1965 than other types, so it may have been the pioneer of the conversion in this Quarter. As for the group type, several persons organize a group for the conversion work. We have only one example of this type of conversion, but it is an interesting and noticeable type. The age of them varies from the twenties to the fifties. Usually persons in their twenties and thirties are leaseholders and tenants, and persons in their forties and fifties are owners.

Their motivations for conversion are mainly pride and attachment for the old buildings and the historic Quarter.

### 3-2) Architectural Characteristics

The structure and the style of the buildings are various. The structure is generally of timber, "Dozo" (traditional timber structure covered with thick fireproof clay and plaster), brick and reinforced concrete. Regarding the style of the building we have some different styles ; the semi-western style town house (the facade of the first floor is of traditional style and that of the second floor is of western style, the interior is traditional), Japanese traditional mansion, "Dozo" style, classical style and modernism style. Most of them were built in the Meiji era (1868-1912) and the Taisho era (1912-1926). As to the floor area, each of 25 examples is less than 200m<sup>2</sup>, which include 13 examples of less than 100m<sup>2</sup>. There are 3 large buildings, each of which has more than 500m<sup>2</sup> and their owners or tenants belong to the corporation type and group type.

The manners of remodeling of buildings are various (Fig.2) ; installation of openings,

Table 6 Outline of the 21 examples of converted buildings

Structure of the building	No.	Use after conversion-(former use)	Persons who made a plan and carried out the conversion-age	User's ownership to the land and the building	Style of the building	Age of the building - Age of conversion	Area of the total floor(m <sup>2</sup> )	Cost (YEN/m <sup>2</sup> )	Rent (YEN/m <sup>2</sup> )
Timber	1	hostel - (dwelling house with shop)	individual - 50s	owner	Japanese traditional town house	1909 - 1983	430	16,000	
	2	hostel - (dwelling house)	individual - 20s	owner	Japanese traditional mansion	1912 - 1981	456	-	
	3	hostel - (dwelling house)	individual - 30s	leaseholder and owner (by purchase)	semi-western style town house	1897 - 1974 - 1906 ?	456	88,000	-
	4	atelier and - (medical office and coffee shop dwelling house)	individual -	owner (by purchase)	western style	1922 - 1983	220	70,000	
	5	coffee shop - (church)	individual - 30s	leaseholder and tenant	church	1934 - 1980	132	91,000	700
	6	shop - (office)	individual - 40s	owner (by purchase)	western style	1907 - 1984	168	107,000	
	7	restaurant - (post office) and bar	individual - 20s	leaseholder and tenant	western style	1917 - 1977	59	127,000	1,500
	8	shop - (?)	individual - 30s	leaseholder and tenant	western style	? - 1983	30	47,000	300
"Dozo"	9	coffee shop - (storehouse)	individual - 30s	-	"Dozo" style	1908 - 1976	66	76,000	
	10	coffee shop - (storehouse)	individual - 20s	owner	"Dozo" style	1909 - 1981	80	150,000	
	11	shop - (dwelling house with shop)	individual - 30s	leaseholder and tenant	"Dozo" style	1912 - 1981 - 1926 ?	142	2,000	500
	12	coffee shop - (storehouse)	individual - 40s	owner	"Dozo" style	1921 - 1982	76	171,000	
	13	coffee shop - (dwelling house with shop)	individual - 50s	owner	western style town house	1882 - 1982 - 1883	112	178,000	
Brick	14	shop - (shop)	individual - 40s	owner	"Dozo" style town house	1901 - 1983	39	-	
	15	shop - (storehouse)	individual - 30s	owner	-	1923 - 1983 - 1924	158	44,000	
	16	art gallery - (storehouse)	individual - 30s	leaseholder and tenant	-	1915 - 1985	225	58,000	700
	17	complex of studios, restaurants, shops and offices - (post office)	group - 30s	leaseholder and tenant	western style building	1910 - 1983	2,715	52,000	-
Reinforced concrete	18	office - (bank)	corporation -	owner (by purchase)	classical style	1921 - 1965	743	5,000	
	19	hotel - (bank)	corporation -	owner (by purchase)	classical style	1932 - 1969	670	127,000	
	20	coffee shop and bar - (bank)	individual - 20s	owner (by purchase)	classical style	1926 - 1975	302	83,000	
	21	apartment house and shop - (dormitory)	individual - 20s	owner (by purchase)	modernism style	1920 - 1985	-	-	

a lavatory and a kitchen, change of the plan, and renewal of floors. The owners and the tenants renovated and remodeled the old buildings for reuse, but in many cases they have retained the historical characteristics of the buildings. The exterior was often improved with paint and so on, in particular the facade is carefully maintained because the owners considered that the remodeling design must be in harmony with the historic characteristics of the townscape.

These buildings do not offer much protection against the cold climate because they are old, and the owners complain of the lack of comfort. Therefore, the problem as to how to improve the old buildings against cold is critical, i.e. how to add thermal insulation materials effectively.

**3-3) Cost**

The cost of conversion work depends on the degree of decrepitude and the remodeling of the building. In case of slight remodeling, where the former use is similar to the latter one such as a conversion into a hostel from a dwelling house, a office from a bank, the cost is less expensive. The cost is within a range of 60,000–180,000 YEN/m<sup>2</sup> and 89,000 YEN/m<sup>2</sup> on an average in case of own land and building, within the range of 2,000–130,000 YEN/m<sup>2</sup> and 63,000 YEN/m<sup>2</sup> on an average in case of rented land and building. The latter is less expensive.

In any event, each of these costs is much cheaper than that for a new building. In case of rented land and building, the rent is less than 1,500 YEN/m<sup>2</sup> per month.

The owners are worried about the cost of maintenance in future and are asking for

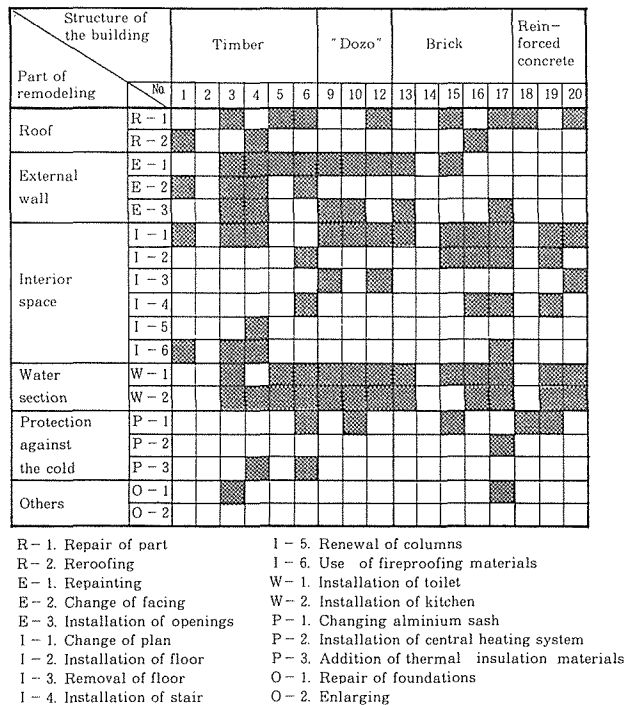


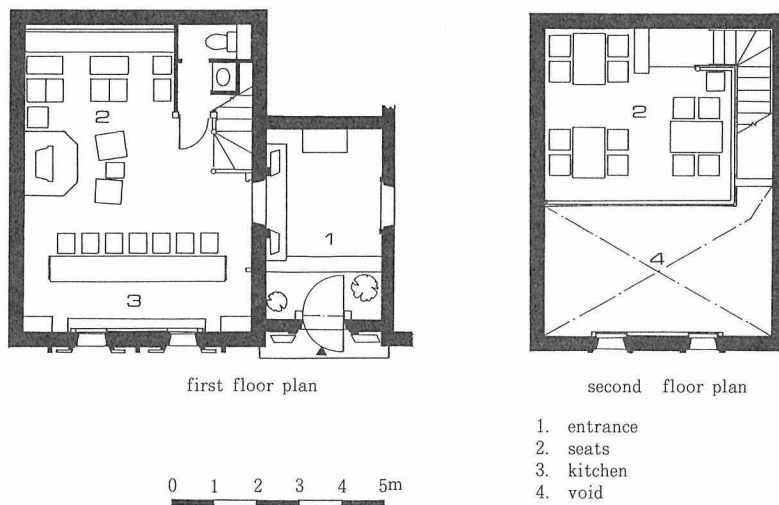
Fig. 2 Details of rehabilitation and remodeling on the converted buildings.

reduction and exemption of the tax for fixed properties.

#### 4. Some Examples of the Conversion

##### 4-1) Coffee Shop (Formerly a Storehouse, 1921)

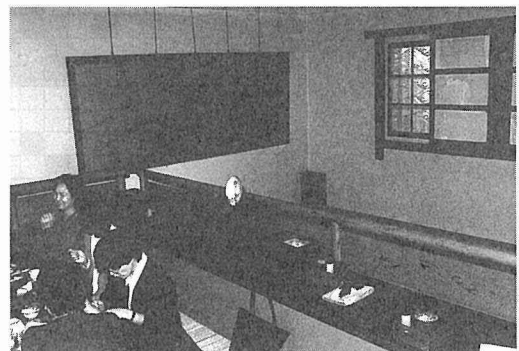
This is a typical example of conversion from a traditional storehouse of “Dozo style” into a tourist facility. In 1982, this was converted into a coffee shop from a pawnshop storehouse, a two-story building; the first floor area is 53m<sup>2</sup>, the total floor area is 93m<sup>2</sup>. The exterior has been rigorously preserved by the repair of the roof and the repainting of the



**Fig. 3** Coffee shop (formerly a storehouse of “Dozo” style, 1921)



Facade of “Dozo” style



Interior of the second floor with void space

**Photo 1** Coffee shop (formerly a storehouse of “Dozo” style)

wall. As for the interior, half of the floor has been removed on the second floor, and has been remodeled into a void. The wooden roof truss and large beams have been exposed to emphasize the solid and strong characteristics of the storehouse. The void space emphasizes the impression of the large volume in the interior space (Fig.3, Photo.1).

The owner is a female person and very proud of this building as it has remained despite the sufferings of disastrous fires twice. The concept of renovation was to conserve the characteristics of the storehouse. She is complaining about the problem that the painting of the exterior wall often takes delamination, and the cost of its maintenance is very expensive.

#### 4-2) Atelier and Coffee Shop (Formerly a medical Office and a Dwelling House, 1922)

This is an example of a typical western style house with the wood-siding, and double-hung windows. This was converted into a coffee shop on the first floor and an atelier on the second floor from a medical office and dwelling was built in 1922. The total area is 220m<sup>2</sup>. The interior was renovated to give the building a new life ; on the first floor, large space for a coffee shop was installed by reinforcing with two columns and removing other columns. A porch and the parking lot were provided ; on the second floor, the partition wall was changed and all rooms were renewed. A part of the exterior was remodeled, the balcony restored, and a fence was added. The characteristic of the typical western style house is maintained, though both the interior and the exterior were remodeled (Fig.4, Photo. 2).

The producer of conversion and the user is an architect in Hakodate. His motivation for this conversion is to make use of various values of the old wooden building, which has the easiness of rehabilitation, the durability, the texture of the paint on the siding board. He desired to utilize it for his atelier.

#### 4-3) Complex for Commercial and Cultural Uses (Formerly a Post Office, 1910)

This two-storied brick building, built in 1910 and used as the post office, is of a large-scale with the total area of 2,715m<sup>2</sup>. This building was used as a warehouse of a stationery store and that of the food warehouse since 1961. In 1983, it was converted into a



Facade of western style. A porch was provided



Coffee shop in the first floor. Large space was installed by reinforcing with two columns and removing other columns

**Photo 2** Atelier and coffee shop (formerly a medical office and a dwelling house)

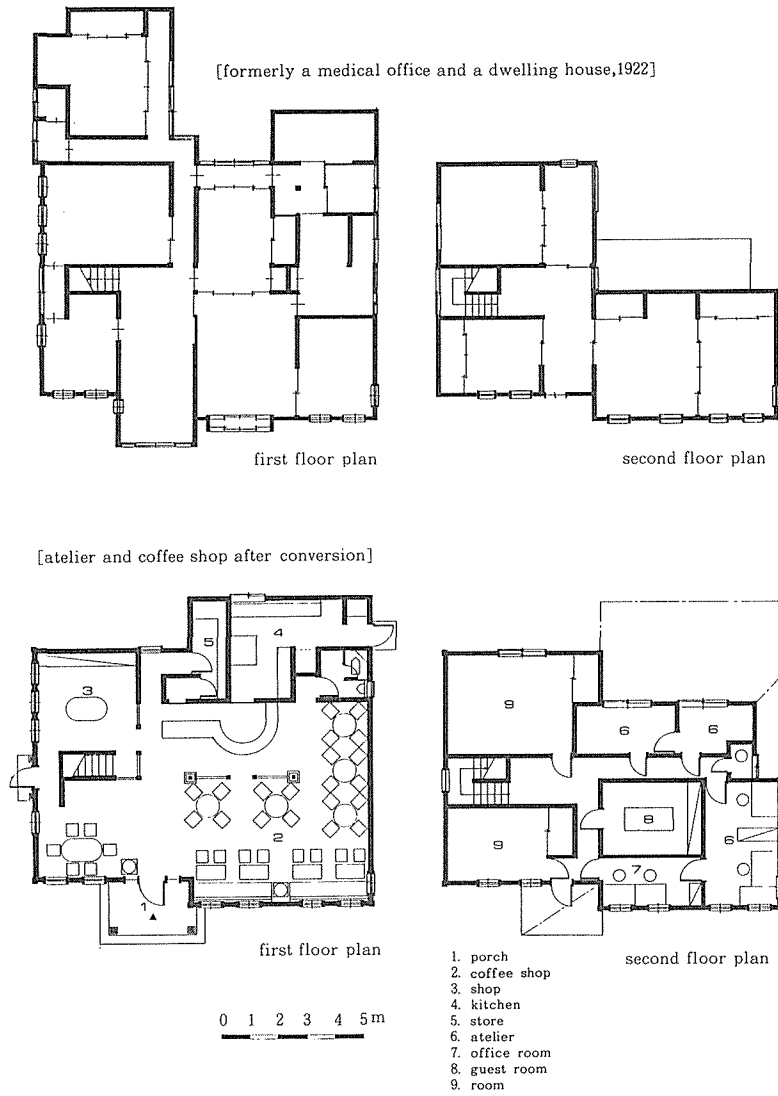


Fig. 4 Atelier and coffee shop  
(formerly a medical office and a dwelling house, 1922)

complex of studios, restaurants, shops and offices by a group of eight young craftsmen. The interior was renovated and remodeled for reuse. Partition walls were rearranged, the second floor deck around the central square was installed, a new roof truss at the top of the void on the square was constructed. This square with a glazed roof is literally designed as the central space of the building. The exterior, though the openings were installed and the approach was changed, retains the historical characteristics (Fig.5, Photo.3).

The producers estimated that it would cost a large sum of money to repair this building, so they established a joint-stock corporation and started a business. The intent of the business was to culturally and economically contribute to the Quarter. This manner of conversion is very interesting.

This played an important role in the development of the waterfront of Hakodate Bay.

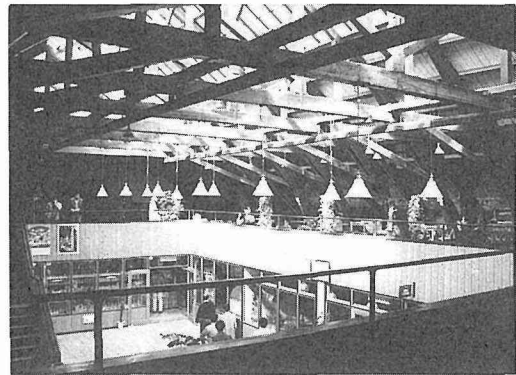
### 5. Role of Conversion in the "West Historic Quarter"

We have observed what influence has been given to the Quarter by conversion of old buildings into new uses and what role they have played there. They are as follows :

- 1) Creating original and diverse spaces ; Large columns and beams, large volume in the interior space, etc. ; these materials and space structure in new buildings (Photo.4) are hard to obtain. In an example of the conversion into an art gallery from a storehouse with solid and strong characteristics, a tearoom was constructed with slender steel columns and beams, and transparent glass. These had a strong effect by contrast between solid and light, old and new (Photo.5). The unexpected and surprising conversion, is a hotel from a bank, a "secular" coffee shop from a "holy" church (Photo.6). In all case the original and diverse spaces were created.
- 2) Putting the building to a public use ; The conversion into tourist facilities of hostels, coffee shops and shops from dwelling houses and storehouses may mean in a sense a change



Facade on boulevard



A deck around the central square, a new roof truss at the top of the void space

**Photo 3** Complex of studios, restaurants, shops and offices (formerly a post office)

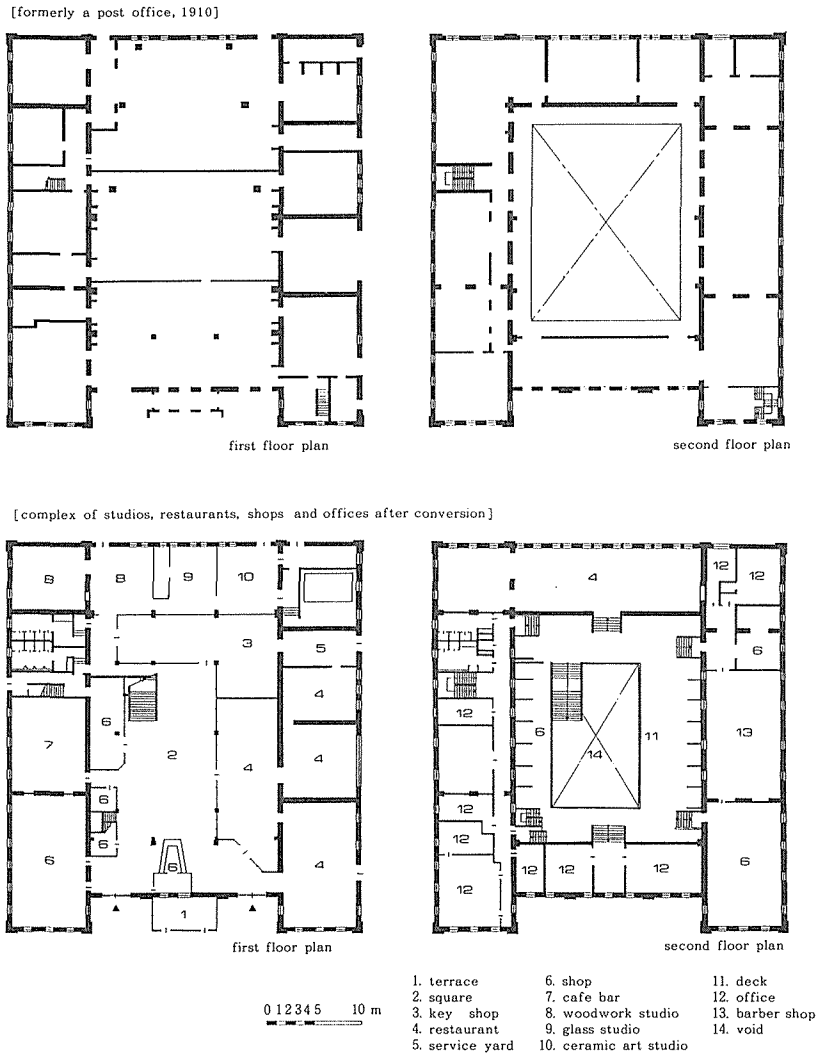


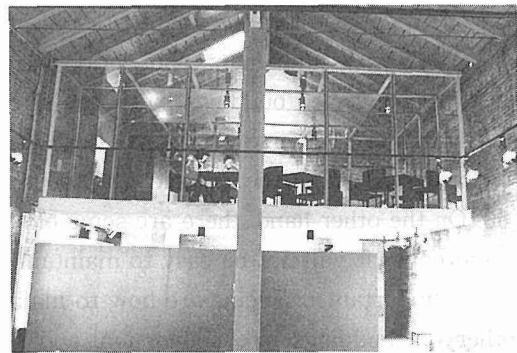
Fig. 5 Complex of studios, restaurants, shops and offices (formerly a post office, 1910)

of utility of the building from individual use to public use. As an example, an inner large space was remodeled to serve as a square space, and a place for meeting of persons was created (Photo.7). These offer richness to life space, especially to the surroundings.

- 3) Retaining the characteristics of the historic townscape ; When the facades of converted buildings are conserved, the sequence of the townscape and special atmosphere in the historic quarter are emphasized (Photo.8).
- 4) Revitalizing the Quarter ; This Quarter has been in urban decline. An example of conversion has played a role of a model, and influenced other old buildings, then many examples of the conversion have come into existence. These have provided various places of new life for citizens and tourists. The Quarter is undergoing a reversion and revitalization.



**Photo 4** Exposed large beams.  
It is difficult to obtain these materials and space structure in new buildings.



**Photo 5** Conversion into an art gallery from a storehouse with solid and strong characteristics. A tearoom was constructed with slender steel columns and beams, and transparent glass. Contrast between solid and light, old and new



**Photo 6** Unexpected and surprising conversion into a "secular" coffee shop from a "holy" church



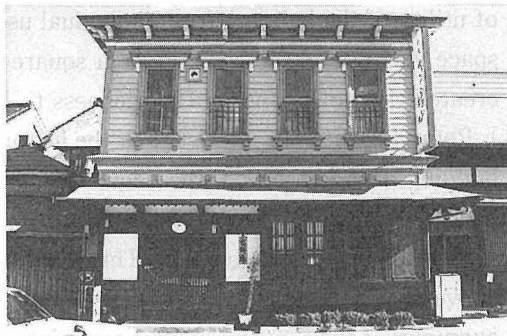
**Photo 7** An inner large space was remodeled into a square space, and a place for meeting was created

## 6. Conclusion

The actual conditions for conversion and the trends of change of old buildings in the "West Historic Quarter" of Hakodate have been described. The results may be summarized as follows :

- 1) Converted buildings amount to thirty in the "West Historic Quarter", including twenty six examples of conversion carried out in the recent ten years.
- 2) The new uses, structures and styles of converted buildings are various. In particular, the new uses are not only for tourists but for neighborhoods and citizens.
- 3) These converted buildings were renovated and remodeled according to the new uses, while their historical characteristics are retained.
- 4) The owners and tenants show pride and attachment for the old buildings and the Quarter.
- 5) The converted buildings had some effect on revitalization of the Quarter by creating original and diverse spaces, putting the building to public use and conserving the characteristics of the historic townscape.
- 6) On the other hand, there are some old buildings which are scheduled to be demolished, moreover it will not be easy to maintain the converted buildings.

Important problems are how to maintain these converted buildings, how to promote other old buildings into conversion, and how to preserve old buildings which are to be demolished. Solution of the problem will be, firstly, to fulfill the means of urban design such as improvement of surroundings around the converted buildings, and secondly, to make a system for communication of the various information regarding conversion.



**Photo 8** Facade of semi-western style is conserved. The sequence of the historic townscape is emphasized.