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## CARE OF THE TERRITORY AND SEISMIC EVENTS: SEARCHING FOR *PLACE IDENTITY* RESILIENCE IN POST-EARTHQUAKE RECONSTRUCTION

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**Key words:** place identity, post seismic reconstruction, dynamic software tool

### Abstract

The devastation wreaked by earthquakes, floods and other natural catastrophes occurs on a time scale which is inversely proportional to that involved in reconstructing and readapting the places, their values and sense of identity. At the same time, the latter activities bring about a rapid transformation in the movements of people and objects and in ways of thinking. There are three main factors in safeguarding the cultural and identity resources of a place subject to natural disasters: to establish a culture of risk in the population in relation to the historical identity of places; to provide for a conservation plan before a disaster; to adopt a multidisciplinary approach to damage and assessment. Starting from these premises, the case study of post seismic reconstruction of Kitano-cho in Kobe, Japan, affected by an earthquake in 1995, is presented. The neighbourhood of Kitano-Cho is one of the historical centres of Kobe. Foreign businessmen settled here in the late nineteenth century, when the port of Kobe was opened up to international trade. The businessmen's houses today have become museum houses showcasing the culture of the countries their dwellers came from. The catastrophic earthquake that struck Kobe in 1995 also impacted the Kitano-Cho area. Efforts were mainly devoted to the reconstruction of tourist areas, neglecting the reconstruction of traditional residences and public spaces.

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The case study - carried out in the framework of Div@ter digital platform project which include different kinds of surveys, questionnaires and analysis of identity problems and potentials (PlaceMaker method) - involved recognition of the identity of the place following reconstruction, an assessment of the extent to which the earthquake still affects current reality, and the review of possible interventions for harmonising sustainable rebuilding with the place identity and becoming more resilient to possible future natural disasters.

## Introduction

The devastation wreaked by earthquakes, floods and other natural catastrophes occurs on a time scale which is inversely proportional to that involved in reconstructing and readapting the places, their values and sense of identity. At the same time, the latter activities bring about a rapid transformation in the movements of people and objects and in ways of thinking.

There are three main factors in safeguarding the cultural and identity resources of a place subject to natural disasters: to establish a culture of risk in the population in relation to the historical identity of places; to provide for a conservation plan before a disaster; to adopt a multidisciplinary approach to damage and assessment. As Pantelic affirms "Urban ambience, historical heritage and traditional architectural values are frequently victims of earthquake destruction, but very often reconstruction programs sacrifice these values, thus intentionally or unintentionally disrupting the social fabric of the community". "Refusing to accept development simply as economic growth, Weitz (1986) states that a "major reason for the recurrent failures of past development efforts is the neglect to involve values systems in development planning and implementation. The analysis of recovery programs after earthquakes and other disasters too link the many reconstruction programs to the lack of respect for the social and cultural values of the affected community. Two most significant objectives of reconstruction in this domain can be defined as strengthening the local community through active employment of its resources and incorporating the cultural values of the community into the reconstruction process" .

In this respect the Guiding Principles for Cultural Heritage Conservation issued by the World Bank (2010) identified some key issues: "Cultural heritage conservation helps a community not only protect economically valuable physical assets, but also preserve its practices, history, and environment, and a sense of continuity and identity; Cultural property may be more at risk from the secondary effects of a disaster than from the disaster itself, therefore quick action will be needed; Communities should prioritize which cultural assets to preserve, considering both cultural meaning and livelihood implications, although reaching a consensus may be difficult; Cultural heritage conservation plans are best designed before a disaster, but, in their absence, heritage authorities can and should collaborate to develop effective post-disaster heritage conservation strategies".

Starting from these premises, the case study of post seismic reconstruction of Kitano-cho in Kobe, Japan, affected by an earthquake in 1995 is presented.

The neighbourhood of Kitano-Cho is one of the historical centres of Kobe. Foreign businessmen settled here in the late nineteenth century, when the port of Kobe was opened up to international trade. The businessmen's houses today have become museum houses showcasing the culture of the countries their dwellers came from.

The catastrophic earthquake that struck Kobe in 1995 also impacted the Kitano-Cho area. If on the one hand most of the large-scale project reconstruction was completed by 2005, on the

other, as Edgington (2010) asserts, this achievement did not always led to new development opportunities. "The Japanese planning system has the advantage of certainty, as in most cases it guarantees funding for infrastructure repair and replacement. Major disadvantages are its lack of flexibility and its lack of autonomy for local governments. Local urban planners eager to improve Kobe after the quake found themselves in collision with a rigid approach to post-disaster redevelopment at the national level that contributed to the frustrations experienced by residents and small business owners, who felt especially vulnerable and disempowered". Indeed, in Kitano-cho, efforts were mainly devoted to the reconstruction of tourist areas, neglecting the reconstruction of traditional residences and public spaces. This has resulted in a non authentic place, which only lives in function of the Japanese touristic flux.

The case study - carried out using a specific method and the Div@ter digital platform ([www.lynxlab.com/it/divater.html](http://www.lynxlab.com/it/divater.html)) which include different kinds of surveys, questionnaires and analysis of identity problems and potentials - involved recognition of the identity of the place following reconstruction, an assessment of the extent to which the earthquake still affects current reality, and the review of possible interventions for harmonising sustainable rebuilding with the place identity and becoming more resilient to possible future natural disasters (Eraydin, Taşan-Kok, 2013; Sepe, 2013).

#### **Div @ter platform and PlaceMaker method**

Div@ter is a dynamic and interactive platform for the complex.sensitive managment of the qualitative data of a territory. The project is financed by POR FESR Lazio Region 2007/2013 Axis 1- Activity 1.1.

The Open Source platform in course of development allows to import tangible and intangible spatial data from different sources, integrate them with information provided by the users, calculate indicators and represent the information in interactive and immediately understandable maps. It collects the main data using the PlaceMaker method (see tab. 1; Sepe, 2013), already experimented in many contexts - including Europe, Usa, China and Japan - and for different objectives, integrating them with structured data and enabling the development of new services based on them. Div@ter is a Geographical Business Intelligence tool devoted to the re-design of the territory, which is conceived as a unique platform with different entry points, both private and public: for local authorities, professionals and citizens. PlaceMaker, through a both rigid and flexible protocol constituted by surveys - nominal, perceptual, graphic, photographic, video -, questionnaires administered to place users, analysis of traditional maps, allows the identification of the identity resources of places and of appropriate project interventions for their protection and sustainable enhancement. The result consists in two "complex" maps - one of analysis and one of design - with the identification of cultural resources and enhancement measures. Places are represented by inserting symbols and elements into the maps connected to multimedia schedules that can be continuously updated.

In the case study which will be shown in this paper, the historic Kitano-Cho area of Kobe, the platform is particularly useful because the questions related to the place identity reconstruction are complex and require the identification of different kinds of identity resources from many point of view. The main objectives of the Kobe case study include the identification of: current identity resources and policies carried out for the adaptation of this place to the problems of environmental risk; project interventions for the completion of the reconstruction in harmony with the identity of the place also in view of possible future catastrophic events.

In the following the case study will be summarized with particular attention to the tree phases of design carried out with PlaceMaker method.

**Table 1 - PlaceMaker scheme**

PHASE	OBJECTIVES	ACTIONS	PRODUCTS
0	Construction of the analysis grid	Choice of categories Choice of parameters Choice of significant days Choice of time slices	Database grid
1	Anticipatory analysis	Preliminary observations made prior to the first inspection of the place	Map of the preliminary ideas of the place
2	Perceptive and denominative description of the elements	Denominative survey Perceptive survey Graphical survey Photographic survey Video survey	Map visualizing the results obtained from the survey
3	Identification with traditional cartography of the elements required for area description	Analysis of traditional planimetry at urban scale Analysis of traditional planimetry at territorial scale	Map with the components of the site deduced from analysis of traditional maps
4	Identification of place elements perceived by users of places	Questionnaire for visitors to the place	Map visualizing the results of the questionnaire
5	Processing the collected information	Overlay of the maps with the different elements observed from the anticipatory and effective analysis  Check of the different elements observed from different analysis tools	Graphic system construction  Complex map of analysis
6	Identification of identity resources	identification of the identity potential identification of identity problems identification of identity qualities	Map of identity resources
7	Identification of identity resources by users of places	Questionnaire for visitors to the place	Map visualizing the results of the questionnaire
8	Identification of the project proposal	Overlay and elaboration of data collected	Graphic system construction

	Definition and localization of design intervention	Complex map of identity project
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### The Identity resources

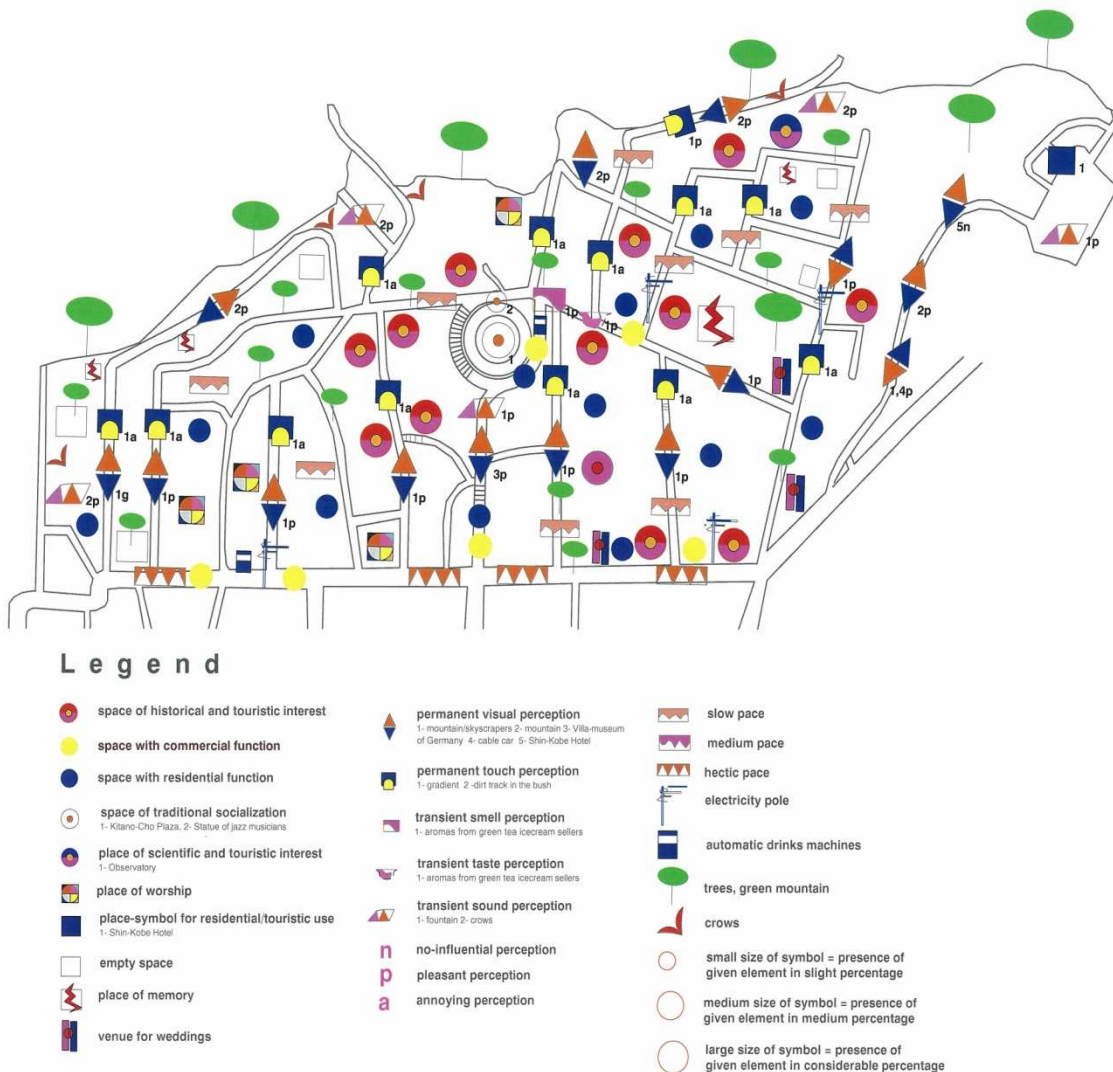
The observation of complex map of analysis carried out with PlaceMaker has singled out the following problems, potentialities and qualities concerning place identity (fig. 1).

As regard problematic aspects, Kitano-cho, like the whole city of Kobe, was impacted by the violent earthquake that destroyed whole parts of the city.

The reconstruction of the foreign residences – the ijinkan – in the eastern part of the area damaged or destroyed by the earthquake was carried out rapidly, since the livelihood of the Kitano-cho district is essentially based on tourism. The western part of the area and some places in the eastern part – such as the destroyed house below the park of the Dutch House – still show signs of earthquake damage.

One thus observes a lack of continuity between the western and the eastern part. Indeed, Kitano-cho appears to be divided into two parts (fig.2-3). One, although pleasant, is built only for the tourists and comes across as somewhat phony, as if crystallised in time. The western part of the district, instead, is mainly used for dwellings, but appears extraneous to the rest of the area and almost, as it were, “on hold”, due to the presence of several empty lots overgrown with weeds and buildings under construction.

**Fig. 1. Kitano- Cho, complex map of analysis**



Furthermore, this part lacks public spaces. The discontinuity of the neighbourhood's urban fabric, due to the gaps in it, is matched by a discontinuity in the architectural style and quality of its buildings.

**Fig. 2-3 Kitano-Cho, the touristy and the residential area**





The same discontinuity can be observed in urban furniture and street paving. The electric pylons found in the whole area – as in the rest of the city – have a strong visual impact on the natural and urban landscape.

Finally, the steepness of the streets, especially in the upper part of the district, and the lack of benches make the visit of the *ijinkan* strenuous in some stretches.

As regards the area's potential, its atmosphere is agreeable and it is much visited by tourists. The tourists, however, are mainly Japanese. Besides, the district has many cult places, and is hence also visited for reasons connected to people's religion.

The buildings under construction and the gaps in the urban fabric are as much an opportunity as they are a problem, as they could be used to restore the continuity of the two parts of Kitano-cho and, at the same time, create public spaces and interesting buildings for both the locals and foreign tourists.

Kitano also has a cableway station. Its narrow boundary with the Rokko mountain is an interesting factor, both from a natural and a perceptual standpoint. Its connection to the routes used to visit the foreigners' residences could be improved.

Kitano's connection with other places of interest, such as China Town and the port – the latter, while not actually near, is visible from many spots in the neighbourhood – is another element to be taken into account in a broad project for the improvement and thematisation of Kitano.

As to quality, the museum houses are one-of-a-kind attractions. They are complemented by several museums. The presence of worship places for many religions makes the area interesting for different kinds of visitors.

Kitano-cho square is a place for socialization for many tourists, who come to watch the performances staged there or have their picture taken next to the statue of the jazz musician.

Because of the narrowness of many streets and the small size of houses, the scale of the place is very human.

The peculiar qualities of Kitano-cho are also appreciated by the people who choose to get married here. Thus, the neighbourhood has several wedding dress boutiques and places for the celebration of marriages.

In the district one observes many treed and green spaces, as well as perceiving the strong presence of the adjoining Mount Rokko. There is also a playground.

Several spots in Kitano offer views of the whole city all the way to the sea, including some especially interesting ones.

The pace as a rule is calm. The eastern part, in particular, provides an agreeable atmosphere for a stroll.

### **The project questionnaire**

Phase 7 involved the administration of a questionnaire about possible actions to be undertaken to improve the neighbourhood.

- 1) What do you think of the quality of this place?
- 2) Why do you come to this place?
- 3) What do you think about the idea of implementing a plan for Kitano-cho that will also improve its western part?
- 4) What about creating public spaces for residents as well as tourists, partly exploiting the still not reconstructed areas?
- 5) What about creating a memorial of the earthquake in Kitano-cho?
- 6) What about improving the integration of Mount Rokko with Kitano-cho?
- 7) What about creating cultural spaces providing information about the history of Kitano as a means to draw more visitors from other countries?

We interviewed users of the place and people who work at the museum houses. It was mostly the people who work in the museum houses who answered the questions. The questionnaire includes seven questions based on considerations that had come up in the sixth phase, where we singled out Kitano's identity resources. The interviewees were aged 30 to 50 and all Japanese. The questionnaire was in English.

To the first question, about the quality of Kitano-cho, almost all the interviewees answered positively, mentioning both the museum houses and the presence of restaurants and cafes offering opportunities for a pleasant break. The few who did not answer positively did not express any judgment about the quality of Kitano.

To the question about their reason for coming to Kitano, most of the interviewees answered that they came here to work, being employed at the museum houses. The rest answered that they were tourists.

As to the third question, regarding the implementing of a project also taking account of the western part of Kitano, where the earthquake has left its most evident traces, the interviewees answered positively. Some mentioned that some traces of the earthquake are still to be seen in the eastern part, too.

As to the fourth question, about the creation of public spaces for residents rather than just for the tourists, half of the interviewees answered that they thought it would be a good idea, while the rest, had no answer to offer.

To the question about the building of a memorial in Kitano, most of the interviewees answered positively. Many mentioned the already existing monument at the port of Kobe.

As to the sixth question, about the integration of Mount Rokko with Kitano-cho, all the interviewees showed a strong interest in the mountain as a symbolic place in Kobe, and answered positively, since they consider Mount Rokko to be already strongly connected to Kitano-cho, not because it borders on it, but as a natural presence dominating the neighbourhood.

To the last question, about the creation of places that could make Kitano more attractive to non-Japanese visitors, the interviewees who work in the museum houses answered positively. The



rest had no answer to offer, but said they would have been interested in a museum about the history of Kitano and Mount Rokko.

### The complex project map

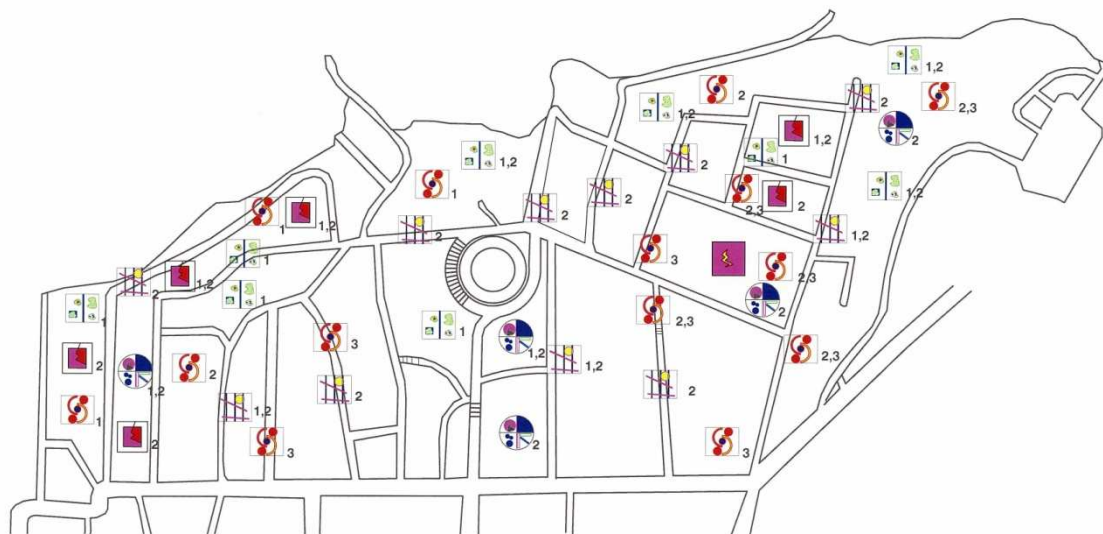
The recommendations for the completion of the reconstruction of Kitano-cho take into account the different requirements of users and the specific characteristics of the place (fig.4).

The first action to be undertaken is to realise urban continuity through a general improvement plan for the whole district of Kitano-cho.

One of the first things one notices about the neighbourhood of Kitano is that it is divided into two parts, a mainly residential one to the west and a mainly touristic one to the east, although the latter part does have some residential buildings. The two parts do not seem to interact. There is thus a discontinuity both in the use of the place and in its quality, which is inferior in the residential part. This results in a trend towards the creation of a crystallised place, as in the case of the zone where the museum houses are, which is mainly used by Japanese tourists.

The first step to be taken is *to introduce cultural activities* in the buildings under reconstruction that will draw tourists or non-resident locals to the western part of the neighbourhood. Some of the most interesting uses for these buildings would be as museums, university buildings, and libraries. Furthermore traditional street entertainments could be organized not only in the Kitano-cho Plaza but also in other less utilized places of the district, contributing to a social sustainability of Kitano-cho.

**Fig. 4. Kitano- Cho, complex map of design**



## LEGEND



### Realising urban continuity

- 1 - to introduce cultural activities and street entertainments
- 2 - to introduce a single street paving design



### Completing the reconstruction

- 1 - to reconstruct the buildings
- 2 - to create new spaces or buildings



### Improving urban attractiveness

- 1 - to create public spaces for residents and locals especially in the western area
- 2 - to create new spaces or buildings
- 3 - to build new electricity pylons



### Creating an Earthquake Memorial

- 1 - to create a monument for the earthquake victims



### Creating places of culture

- 1 - to create a museum illustrating the history of Kitano
- 2 - to set up spaces for exhibitions



### Improving urban green and natural resources

- 1 - to create or transform the existing green spaces
- 2 - to integrate Mount Rokko

The second step is *to introduce a single street paving design* for all of Kitano, and provide urban furniture and benches along the routes through the neighbourhood, especially in the western area. This would make the continuity of the place more visible to its users and would allow opportunities for stopping, resting - an important consideration when we think of the steepness of the north-south streets – and admiring the houses and the landscape.

The second action is to complete reconstruction, especially in the western zone. This action should go hand in hand with the first. The reconstruction should be carried out according to a master plan aimed at improving the whole district of Kitano-cho. The post-earthquake reconstruction completed the museum houses and other buildings of cultural and touristic interest. In the study area one can still observe traces of earthquake damage. One of the most emblematic lies below the Dutch House in the eastern part. There are several buildings under reconstruction and empty lots overgrown with weeds, especially in the western part.

The first step is thus *to reconstruct the buildings* to restore their original functions or create new ones. The second step is *to create new spaces or buildings* in the empty lots to make the western part of the Kitano district more attractive.

The third action is to improve Urban Attractivity. The square in Kitano that is best known to tourists is Kitano-cho Plaza. There are few public spaces in the neighbourhood. Besides Kitano-cho plaza, there is a playground near the Dutch House. The first step is *to create public spaces* for residents, especially in the western part. Residents do not use Kitano much, since the place is mainly designed for tourism. The second step is *to create public spaces in the eastern area*, especially around the earthquake memorial – to be created as our fourth action – so as to obtain a space that is not only pleasing to the eye but also usable. Both interventions could contribute to the creation of a resilient place.

The third step is *to build new electricity pylons* with less visual impact on the landscape than the current ones. In consideration of the fact that this is a historic neighbourhood, a plan for electricity pylons and street lighting harmonising with the prevalent style of the museum houses would improve the appearance of the whole district.

The fourth action is to create an Earthquake Memorial in Kitano-cho. There are other memorials elsewhere in Kobe, but a new one here would be something the neighbourhood residents could

share with the rest of Kobe, improving their sense of belonging. The museum-house area, and especially its eastern limit, where one sees an empty lot and further on the collapsed house, could be a suitable place for this memorial, which would help to make the eastern area less “crystallised”.

The fifth action is to create places of culture capable of attracting visitors from other countries as well as Japanese ones. As we have repeatedly observed, not only is Kitano-cho only visited by tourists, but these tourists are mainly Japanese, with the exception of visitors to the worship places.

To make this special place also attractive to tourists from other nations, the first step is *to create a museum illustrating the history of Kitano* and its principal attractions, such as the museum houses and Mount Rokko.

The second step is *to set up spaces for exhibitions*, readings, and showing images and films about or by contemporary or past artists from the nations of the museum houses.

The sixth action to be undertaken is to improve urban green and natural resources. Although there is no scarcity of urban green in this district, several spots are overgrown with weeds. As we have observed above, these are found especially in the western part of the area. The first step is therefore *to create or transform the existing green spaces* into play parks, panoramic gardens, or gardens for meditation. The second step is *to integrate Mount Rokko* in the Kitano-cho itineraries. The Japanese see Mount Rokko as a symbolic place but, in spite of Kitano's nearness to the mountain, on which it borders, the neighbourhood is not regarded as being one with it. An improvement plan for Kitano taking account of its natural assets could establish a connection between the local mountain paths and the streets of Kitano through the setting up of panoramic points, spaces and urban furniture in a perspective of mutual enhancement.

## Conclusions

The case-study of Kitano-cho has examined an unusual area, a historic district in Kobe which, like the whole city, was struck by a violent earthquake in 1995 and subsequently reconstructed. The reconstruction focused especially on the more touristic part, that of the ijinkan, which were restored or completely rebuilt.

The first impression of this district was that here the reconstruction has striven to erase all signs of the earthquake. At a closer look, however, it becomes apparent that the reconstruction has consisted of individual reconstructive actions rather than being informed by an overall plan. Thus, in the western part of Kitano there still are several empty lots and buildings under reconstruction.

What we have proposed here is a unitary project for Kitano-cho aimed at promoting its heritage and identity resources, and especially the neighbourhood as a whole. And, at the same time creating an urban life beyond the ijinkan, contributing to its place identity resilience.

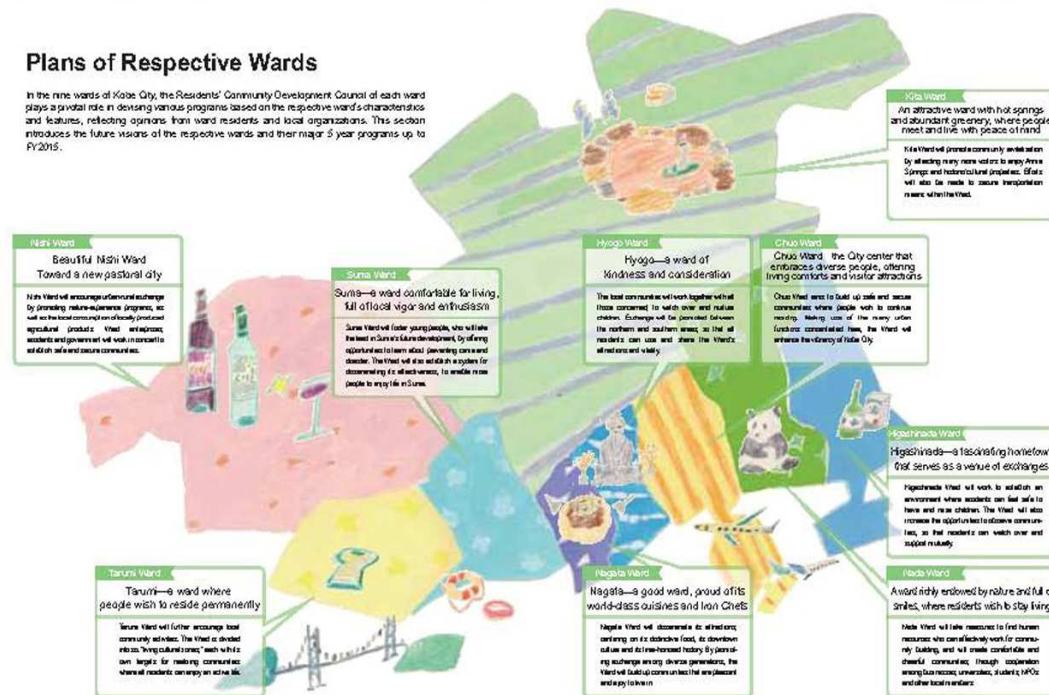
**Fig. 5 - Kobe 2015 vision, detail with Kitano-Cho**

#### Introduction to Each Ward's Plan

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### Plans of Respective Wards

In the nine wards of Kobe City, the Residents' Community Development Council of each ward plays a pivotal role in devising various programs based on the respective ward's characteristics and features, reflecting opinions from ward residents and local organizations. This section introduces the future visions of the respective wards and their major 5-year programs up to FY2015.



Source: Planning and coordination bureau, Kobe city, 2011

To realise urban continuity, to complete reconstruction, to improve Urban attractivity, to create an Earthquake Memorial in the district, to create further places of culture and to improve urban green and natural resources were the interventions which were identified. The use of a place for exclusively touristic purposes exposes its cultural heritage to the risk of losing its authenticity and identity value over time.

The lack of public spaces is another element that poses a similar risk. Without places offering residents opportunities for socialization, the difference between the two parts of Kitano-cho may further increase, to the detriment of its liveability.

Finally, according with these measures which were identified, new policies are in course of development for the adaptation of this place and its identity to the problems of environmental risk. As regards, the current ones concern the *Toward 2025* program (fig.5) which has as a objective to: "realize a city of collaborative creation, where residents are valued as "treasures" and work together to create new prosperity". In particular, for the Kitano-cho area and surrounding, the objective is to create: an attractive ward with hot springs and abundant greenery, where people meet and live with peace of mind. Kita Ward will promote community revitalization by attracting many more visitors to enjoy historic/cultural properties. Efforts will also be made to secure transportation means within the Ward" (Planning and Coordination Bureau, 2011).

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