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## **Hybrid Urban Planning: New Perspectives for Management of Specific Plan by the Integration of Urban Planning and Urbanization for Wat-Ket Area Chiang Mai City**

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### **Abstract**

This research problematized situations around the Wat-Ket an area in Chiang Mai city with social and historical uniqueness, has become more unlivable, partly because of mainstream urban planning. The third comprehensive plan designated the area as a commercial use zone, but from intensive contests from leaders they were able to change it to residential and conservation use. This research therefore, questioned the ineffectiveness of the existing urban planning approach and reviewed urban planning theories and concepts, especially new urbanism and urbanization. It argued that, they are necessary but not sufficient for such unique urban areas. The new approach of hybrid urban planning with three core elements, (a) integrating urban design and urbanization concepts, (b) socially mobilizing by the collaborative mechanism, and (c) using common visions as the guideline, was conceptualized. The focus of this study was to, experiment with this approach and evaluate its results and acceptance, and to analyze its flexibility and adaptability. The combination of participatory action research, mixed methods, and analysis of multiple factor causal relationships were employed before the conceptual and final designs of specific plan in sub zone at Chareonrat road and Ping riverside, was achieved. Mobilization through three core elements and process, aiming at fulfilling the common vision of making the place sustainable socially, economically and ecologically as a living museum, eventually resulted in a complete detailed Specific Plan with committed regulations and future supports. The plan was unanimously accepted by key stakeholders.

### **Keywords**

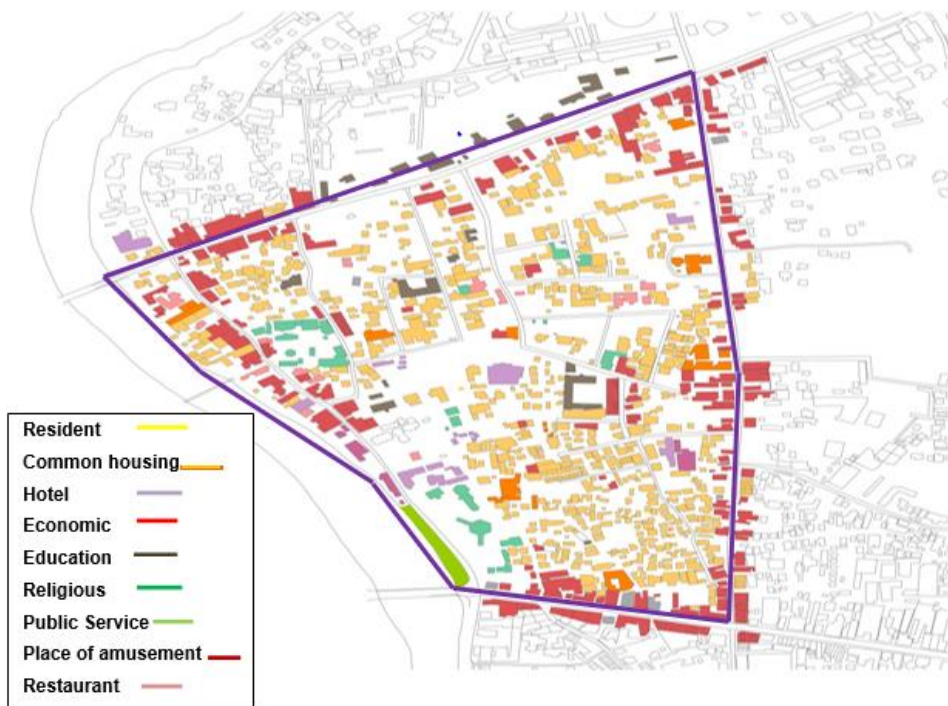
Urban Design, Urbanization, Specific Plan, Hybrid Urban Planning

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## Introduction

The Wat-Ket community is located in Wat-Ket sub-district, Mueang Chiang Mai district. It has an area of about 2.2 square kilometers, and is inhabited by 32,550 people. Wat-Ket has many old traditions and a lot of diversity. Wat-Ket has maintained its unique culture for a long time and is recognized for its rich cultural heritage, including its mixture of people from different ethnic groups, religions and cultures (Aphawatcharut, 2006). In terms of religion, there is a consolidation of Buddhism, Christianity, Singh, and Islam. In spite of having different backgrounds, these people have been living together in harmony and peace for generations and getting along well with leaders of the community (Aphawatcharut, 2006).



**Figure1** Wat-Ket Area

In 2013, academicians from Chiang Mai University and Wat-Ket residents decided to apply sustainable development by improving the Wat-Ket area by making the first living Lanna museum of Chiang Mai. To achieve this, the notability of the area on physical characteristics, environment, settlement and social capital was revived and conserved. This integrated urban management using the cooperation of local people provided more happiness and a better life and economy than using only urban planning.

This research was probably the first attempt to experiment the new approach of city planning in a special urban area. It reviewed strengths and weakness of contemporary urban planning theories and concepts, and reconstructed a new approach of hybrid urban planning. This approach was then experimented at Wat-Ket area, Chuangmai City. The goalsof this study were to firstly, test the core elements of the approach and evaluate its results as well as acceptance of the key stakeholders. Secondly, it intended to investigate the process of Hybrid Urban Planning, especially the flexible and adaptable methods and strategies conducted by the collaborative mechanism.

## **Urban Planning and Urban Problems**

History in term Urbanismis the study of the interaction of residents in an urban area with a built environment, and is a part of many disciplines, such as urban planning (physical design and structure management) and urban sociology (urban life and culture). Thus, urbanism is internationally similar to urban planning in some contexts (Lang, 2005). Urbanism includes various approaches to manage dense populations in urban areas and create place identity at a city-wide level. Urbanism originally emerged in the early 20<sup>th</sup> century and becomes the convergence of political, social and economic citizenship that relate to centralized manufacturing, mixed-use neighborhoods, social organizations and networks. Louis Wirth stated in 1938 that urbanism should not include only the physical entity of the city, but also look beyond the city confine by developing technology in transportation and communication (Wirth, 1938).

### **1.New Urbanism(Urban design)**

New urbanism originated in the United States in the early 1980s and tries to promote environment friendly habit, such as creating walkable neighborhoods, containing a wide range of housing and job types. Two concepts that relate to new urbanism are building a sense of community and development of ecological practice (Marshall, 1999).New urbanism tends to gradually influence many aspects of real estate development, municipal land use strategy and urban planning including urban design.Urban design is a method for designing and shaping a city, town and village in a urban area. Urban design works with groups of buildings, streets, public spaces, whole districts and entire cities to create functional, attractive and sustainable cities (Passel, 2013).

New urbanism contains ten basic principles, e.g. traditional neighborhood design (TND) and transit-oriented development (TOD).The congress for new urbanism supports diversity of land use and population for neighborhood, design for pedestrian and transit, shaping city with accessible public space and community institutions, and designing urban

space with architecture and landscape design that concern local history, climate, ecology and building practice (Marshall, 1999). In addition, new urbanism supports regional planning for open space, context-appropriate architecture and planning, sufficient provision of infrastructure (e.g. sport facilities, libraries, community center), and balanced development of job creation and housing development. The new urbanist believes that encouragement of population transport (e.g. drive, bike, walk and train) by urbanism approach can decrease traffic congestion and increase supply of affordable housing and control suburban sprawl (Soule, 1994).

In addition, new classical, postmodern and vernacular styles often accompany new urbanist development. In a political view, new urbanism is criticized as being a social engineering scheme, failure of social equity, being a deregulatory force in supporting private developers and restricting private enterprise. In addition, new urbanism is considered as ignoring consumer preference and the free market, but driving car-oriented development following people demand and inadequately promoting walking, cycling and public transport (Grant, 2006). Moreover, critics state that new urbanism focuses on large-scale development and universal principles instead of local need. New urbanism and neighborhood environmental design are combined to produce sustainable urbanism with walkable and transit-served urbanism with high performance buildings and infrastructure (Kunchon, 2002).

In the present, urban planning technocrats increase the relationship of people in a city by emphasizing a city environment. Which uses the existing urban ecology or creates new ecology to combine with an urban design. Urban design, urban planning and architectural design (in both vertical and horizontal directions) directly affect ecology and are used for creating parks, drainage systems, air circulation and pollution management to support people's health (Brugmann, 2009). Later, modern built environments are developed for a good city environments and to help reduce urban congestion and problems. This is an effort to use interdisciplinary approach to help improve life and health conditions of people in a city, including improving living conditions by designing and constructing aesthetics and diverse environments.

Interestingly, this concept are used for urban design or urban planning to connect between urban and physical design that can lead to sustainable economic growth by concerning the environmental relationship, which is not mentioned by the former urban design concept. Thus, modern urban planning adds the guideline on urban management for only urban planners.

The success of urbanism concept, however, is more applied for urban planning from more environmental and way-of-life concern, (Chareonwongsak, 2014) which are important factors from using new urbanism concept. Nevertheless, integration of urban design and new

urbanism concepts still cannot deal with special complex city, which new urbanism concept is not enough because the urban condition is excluded from urban planning. Therefore, new concepts that consists of mechanism and systematical management should be developed to get the result and be suitable for Thailand. The primary answer depends on understanding the way-of-life and problems as follow.

## **2. Urbanization**

Urbanization is a knowledge based on sociology-urban anthropology, urban geography, urban economics and public health. The main idea of the beginning phase of urbanization is mostly the explanation about the transformation from rural community to urban community with many factors. The explanation also covers the negative effects of urbanization to economic, society, culture, politic and environment, especially the change on the way of life. The new pattern of relationships that becomes more individualpart can increase conflict and effect disadvantaged people (Wirth, 1938).

Urbanization has received attention from academics since the urban phenomenon which resulted from industrial revolution. The Chicago School started to study and present the explanation systematically about the origin and expansion of cities. The correlation between the settlement of people, the physical location and urban ecology induces the specific function of a city. Urbanization is a consequence of a specific city or among cities that are located in the same ecology which was described in the theory of Growth Pole (Burgess, 1984).

The review of urbanization mostly found that there is an explanation of urban creation and the development of economic areas and colonization. Cities will attract resources and human activities. The more urbanization, the more problems occur, including socio-economic, environmental and other conflicts. However, there are no actual suggestions for balancing the urban development or other problems.

Urban planning tries to understand and includes the dimension of urbanization. It decreases the complication of urbanization in the group of new urbanism, especially the idea of modern urban, cultural city or sustainable city but does not include the complication of relationship between human social and city that is described by the idea of urbanization.

From the review of literature, it is possible that city planning has two main dimensions which are the city's physical geography and socio-cultural dimension. The two main dimensions need to be integrated for, gaining more results than modern city. The idea of modern urban is similar to the idea of Built Environment that is the operation of city planners working from outside-in and include a phenomenon in city planning. However, it

does not include geosocial and urban cultural domain. To make city planning complete and sustainable, it needs to integrate the factor of social and culture of area with the urban planning emphasized on the physical dimension (Michelson & van Villet, 2001).

### **The Hybrid Urban Planning as a New Approach to Sustainable City**

From the problem in old city areas and the incomplete of idea and city management, there are two main ideas that need to be integrated which are city designing and urbanization. The integration will deal with the multi-interrelationship among complex factors in perspective of geophysical and urban ecology. City development policy needs to consider the National Development Plan and the relationship between cities in the same region. The development needs to promote the potential of infrastructure, public assistance and transportation. Every factor is important for determining the roles and functions of city. However, City planners cannot consider all factors that cause the problems.

This type of urban planning may be successful in new areas but not in existing areas. The solution to this problem is to deal with those factors that have diversity. The growth and expansion of a city will have problems of mixed land use, land tenures from old owner to new owner, local people who have less capital cannot compete with new capitalists. Local people become a disadvantaged group and lose their opportunities in doing business. They are forced to use the land, improperly such as invading the public area for living. Problems lead to air pollution, wastewater, waste and crime.

The idea of urbanization emphasizes the maintenance of ecosystem, socio-cultural and identity, including the right demand from people in the area. The urbanization explains that urban planning is not only land use and the development of infrastructure but also sustaining a better life. The idea of urbanization claims that a city is not bare land but it is the area with local people who has strong socialization to help each other. The city also contains culture and structure with its own identity. Urban planning and development must maintain an area's identity along with the growth of a city (Kunchon, 2002).

To build the city with planned development and without any problems with local people is a challenge. But there is no idea and practice to create that kind of city although there may be a trial to increase the socio-cultural dimension and ecosystem in city planning.

Logically, the integration of two main ideas between urban planning from outside-in by city planners and urbanization from inside-out by local people seems rationality. However, there is a need to rethink city design and city planning.

Although logical and rational processes are reasonable, practical processes may not be able to operate because using the idea of a modern city and urbanization only describes the city's problems and does not address a solution. Integration of the socio-cultural with

urban planning and including mechanism or people involving as an actor may lead to the success which must be under the following conditions;

1) Urban planning and land use planning operate in a specific area, especially in an old town that has its own identity which may be a part of big city and has to be done with specific plan.

2) The area is not bare land but it has long term colonization and contains heritage and culture. Nowadays, the city has the problem of city expansion and newcomer from the outside community.

3) The relationship in the area is still attached with history heritage and culture. There is association and leader as well as effort to change city as the need of public to make balance between development and conservation.

From those conditions as mentioned above, a city planner must cooperate with local people by emphasizing the physical landscape and ecological setting. The operation is from outside government sector with top-down operation. This may be the advantage to the operation with clearly task and function. However, there are problem in dealing with people in the area. Meanwhile, urbanization has the advantage in well explanation but disadvantage in operation to make city sustainability.

How to use Hybrid Urban Planning idea in both concept and operation is the important question. The best answer is the common vision operated by local people or the demand of local people to picture the future of their city for a better life. If the common vision complies with the direction and policy from government and city planners, it will become the domain for data consideration and analysis. As a result, it will lead to the determination of specific plan containing important details both plan and determination.

The concepts of Hybrid Urban Planning will not complete if the operation is exclude, operator and the relationship among stakeholders. This concept must have actors or mechanism in operation.

From the successful city, the main factor depends on leadership of city leader which rarely occur. In case of making every city success, the factors consist of three mechanisms: (1) academic support from researchers and local universities as well as local scholars, (2) policy support and budget from government which refers to planning according to task, (3) the local operation which are local network or leaders and local people.

The operation of three mechanisms in the first phase is the local operator determines the common vision in the area and operated by local people or cooperates with two other mechanisms. The common vision can start from the problem in the area. When the first and second mechanisms are included in this operation, the common vision can be

developed and successful. The complete operation will lead to win-win situation, which totally different from the current urban planning.

After the common vision is set up, the next step is to determine domain from two main ideas, physical and socio-cultural city planning. There will be data collection and analysis to design the land-use and regulations of specific plan, which contain pattern, plan and regulation for collecting fact data, empirical data, local people demand and direction of development influenced from other cities in the region. A common vision will be analyzed to find the final goal. This will be used for making guidelines of area development that can be applied to create activities of real operation. The land use designs that contain the regulations must be agreed from public opinions of local people. This will be effective for city management and be the new idea for old town development for sustainability and balance (The composition of Hybrid Urban Planning as shown in figure 2).

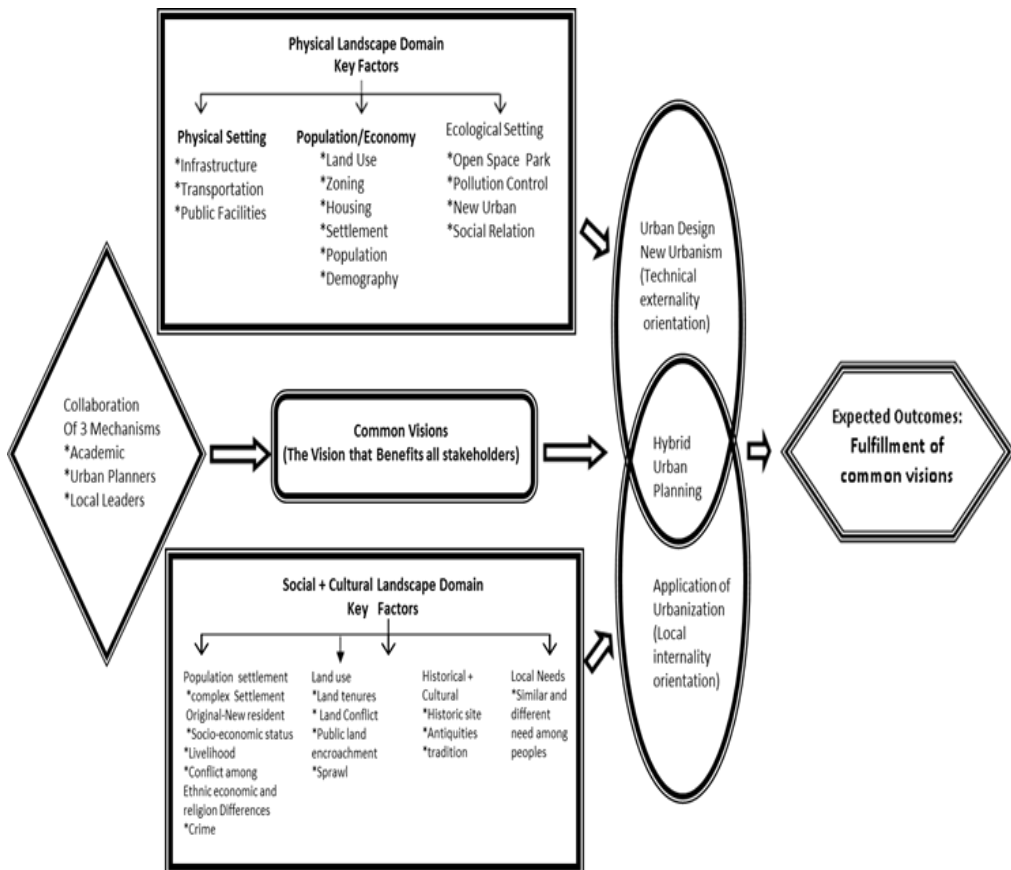


Figure 2 'Hybrid Urban Planning' Configuration of Two Approaches



## **Results of the Hybrid Urban Planning at Wat-Ket Area**

A hybrid Urban Planning concept was applied at Wat-Ket area by integrating urban design and urbanization concepts. It began by the collaboration team following a common vision 'The Only Living Lanna in the City' that derived from a common crisis and a community demand to design and specify land use development of their own land in order to be the main leaders for operating all activities. Several meetings and additional information were organized in order to improve Chareonrat Road and the public area on the Ping Riverside. An adaptive and flexible process was employed as follows.

1) Collaborative teams comprising of academician (4 peoples) and young leaders of WatKet collected necessary secondary and primary data and information. In brief, information needed for urban design, such as, physical, land use, information, facilities, housing, transportation, ecology, demography and economy of the designated area were collected with cooperation from offices building that are part of the collaboration mechanism. Information about urbanization that needed integration under Hybrid Urban Planning were collected not only from office but also from leaders that conducted several surveys and meetings, They comprised of the history about settlement and land use, dynamic land holding, dynamic demography, culture, social and economic change, problems and needs of area.

2) All information collected were analyzed using a holistic causal relationship, resulting in certain for livable area. First conceptual designs was formulated. It included detailed designs for the improvement of the two designated areas, For Chareonrat Road the proposed plan covers, HDD activity, adding footpath and bike lanes, renovating posts and signs as well as historic building. For Ping Riverside, the plan include renovations of "Gateway" to the living museum of WatKet, walkway and bike lane, recreation and sport center, land marks of timber industries and historic bridge, decorating landscape with tree and grass, All of which were to make the place as a part of living museum in tangible and the common vision of the "only living Lanna in the city" in abstractive terms. Addition team members and key stakeholders unanimously accepted the results of the conceptual design. It was later used to produce the final design.

3) The conceptual design was presented for feedback to five groups of thirty stakeholders, including people in government sectors, leaders of four religions, Wat-Ket community leaders, opinion of leaders community and entrepreneurs of Ping Riverside business.

4) The conceptual design was later corrected following the requirements and suggestions of five stakeholder groups leading to the final design of the collaborative project for Wat-Ket's sustainable development.



**Figure 3** Ecological Development of Ping Riverside. The design of the Ecological Development of Ping Riverside was done by having conversations with stakeholders.

### **Suggestions from 80 interviewees from 5 sampling groups on participation of Wat-Ket people**

The data are collected by using conversation about details on drafts of specific plans, which the stakeholders (interviewee) consist of 80 persons in 5 sampling groups: Everyone was selected by community: 16 business leaders, 16 religious leaders, 16 government leaders, 16 community leaders and 16 knowledgeable about community. The results of adding stakeholders are shown in Table 1-2.

**Table 1** Opinions on drafts of specific plans with adding of stakeholders on Chareonrat Road development (land management)

**1. Chareonrat Road development by burying electric and telephone lines (HDD system with 2m width and 1m depth).**

	Average	Interpretation
Improving Chareonrat Road by widening road surface to 7m	5	Highest
Improving Chareonrat Road by adding 2.5m-wide pedestrian in the East	5	Highest
Improving Chareonrat Road by adding 1m-wide bicycle land in the West	5	Highest
Improving Chareonrat Road by adding four points of drainage channel to Ping River	4	Highest

**2. Chareonrat Road development on transportation**

	Average	Interpretation
Improving Chareonrat Road from two-lane road to increase traffic area and prohibit parking on roadside	4	Highest
Temporary close the road during festival and religious activities	4	Highest
Arrange parking lot at Railway park and increase transport system by using electric car from the park to 8-12 transit points in Wat-Ket area	5	Highest

**3. Decoration for supporting living museum**

	Average	Interpretation
Increase and decorate guidepost as Wat-Ket identity	5	Highest
Support houses and ancient building on Chareonrat Road to have Wat-Ket identity following the study of TanitChoomsaeng	4	Highest
Manage faithful road in significant day of four religions	5	Highest

**4. Development for safety management**

	Average	Interpretation
To increase electricity system and light	5	Highest
To increase five places of CCTV for safety	5	Highest
To increase five alarm points for safety	5	Highest

**2<sup>nd</sup> part: Ecological development of Ping Riverside (spatial management)**

**Table 2** Opinions on drafts of specific plans with adding of stakeholders on ecological development of Ping Riverside (land management)

**1. Landscape improvement (public area of 25m width and 80m length)**

	<b>Average</b>	<b>Interpretation</b>
Improving Ping Riverside ecosystem by making three steps of ladder with 0.5m depth for each	5	Highest
Improving Ping Riverside ecosystem by changing public area to pedestrian (with 2.5m width and 850m long) and bicycle lane (with 2m width and 850m long) from Nawarat Bridge to Nakhonping Bridge	5	Highest

**2.Semi-public area method for ecological development of Ping Riverside**

	<b>Average</b>	<b>Interpretation</b>
Improving Ping Riverside ecosystem by creating regulation on sharing benefit on semi-public area	4	Highest
Improving Ping Riverside ecosystem by managing semi-public area (with 0.5m width and 850m long from Nawarat Bridge to Nakhonping Bridge) to have landscape concordance with tree fence, grass field, sitting area and large tree	5	Highest

**Theoretical discussion**

From the literature review, it is evident that contemporary urban planning, especially the new urbanism approach, attempts to cope with urban problems as well as to accommodate future aspects of cities being new technology, environmental concerns, and new city culture. This has been logically sound and is likely to produce promising results (Chareonwongsak, 2014). However, it is arguable that, firstly, in an urban area where the problems are very complex, having unique cultural and historical identities, and its people livelihood has undergone rapid changes, the contemporary planning approach may not be sufficient to bring about a sustainable city. Secondly, regardless of the urban planning approach, especially the case in developing countries like Thailand, the planning process dominated by the professional city planners using a top down approach may results in implementation and enforcement problems, because of the lack of people involved.

The hybrid urban planning approach, therefore, is an attempt to full fill the gap as mentioned above. Logically, only integration of the concepts and methods of new urbanism with those of urbanization's and collaboration of professional planners and local people with flexible and adaptive process may help make a place more sustainable. Practically, to be realistic, this approach posits an important scope if conditions are as follows. Firstly, it has a potential to work in a small urban area within the city or metropolitan. Secondly, that urban area has complex problems and/or a unique cultural and historical identity. Finally, that the

area maintains a certain degree of community where its leaders and groups are more or less strong and determined to solve their problems.

If hybrid urban planning is to be successful it does not only have to operate according to the above mentioned scope conditions, but also adhere to the following guiding principles. Firstly, there must be collaborative teams directly or indirectly involved with stakeholders from the area as well as concerned government offices and involvement from private sectors. Secondly, the area, through the initial to the end of the process, must have a mutually agreed upon common vision that is used as the main guideline and creation of the collective efforts. And finally, it needs a flexible and adaptive process of data collection and analysis in order to formulate a conceptual design, and latter, the final design with detailed requirements and commitment after obtaining acceptance and feedback from all stakeholders. It is eventually the balance between bottom up and top down strategies. An experiment at Wat-Ket area as the specific plan to support the living museum and as partial fulfillment of the common vision of making the place the only living Lanna in Chiangmai city. It has proved that the hybrid urban planning is one of the promising urban planning approaches.

### **Future research and policy implications**

This study is rather a pilot project on experimenting the hybrid urban planning to formulate the specific plan at one urban area having met the scope conditions. Besides a certain degree of success, the study has found out two substantive determinants that need further investigation in order for this new approach to make a contribution to the field of urban planning as well as resulting in a real implementation towards a sustainable city. The first one addresses logic and methodology of urban design and urbanization integration. Hybrid urban planning requires academic specialty characterized by the multidisciplinary fields with urban planning and social sciences as the core. It is the field that understands elements and factors affecting urban phenomena holistically. It requires methodology that captures urban design and urbanization domains and an ability to analyze informations systematically in order to be a foundation for specific plan design. Therefore planners with this qualification are very necessary. The big challenge for further investigation is how to add on this qualification to new or existing planners or researchers and install into the process.

Another determinant involves social aspects of city planning and mobilizing. This study conceptualizes the urban hybrid planning with social aspects as one of the implicit foundations. In particular, inclusion of an area-based collaboration concept, especially having the collaborative team as planning and mobilizing mechanism for specific plan and beyond is evident and appears very promising. However, owing to such limitations as time and resources of this study to fully implement and investigate substantive results, it becomes necessary to further follow the ongoing process where local leaders who are part of the

mechanism to manage socially, economically and politically. The next study should address the research question of how and in what conditions leaders and their organization can not only collaboratively plan their urban area, but also continuously are able to manage and mobilize their specific plan. If we understand deeper into this social aspect of urban management in addition to the existing system and governance, making urban space more sustainable will be realized.

In terms of policy, it is conceivable that urban planning agencies from central provincial and local governance are looking forward to the end result of making cities livable and improving health standards. They can materialize this goal by beginning to replicate and adapting all endeavors of this study to places having the three scope conditions. An immediate operation is organizing collaborative mechanism by selecting and supporting academic team with the above mentioned qualifications and incorporate local leaders. Then the role of planners as part of the collaborative mechanism will be social mobilizers and coordinators in addition to exercising their city planning expertise. When the hybrid urban planning process is mobilized the results of a sustainable city will be more or less evident.

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