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Master Planning for Conservation and Development of Krung Rattanakosin 2032

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ABSTRACT

This paper presents the research and development of the "Master Plan of Conservation and Development of Krung Rattanakosin 2032," under the vision of "A glorious capital city of Siam Kingdom, dignified by urban heritage, blending with multi-cultural identity of the local community, and contemporary urbanism," that expresses the important stories of the area, including the story of the two capital cities of Thonburi and Krung Rattanakosin, the stories about palaces, and spatial development, through the Krung Rattanakosin urban structure and significant aspects of the cultural heritage. This paper emphasizes the importance of integrated planning through a participatory process. The results can be used to enhance conservation and development of Krung Rattanakosin by the relevant agencies. It can also be used as a guideline for other historic town conservation and development initiatives in Thailand.

Keywords: *Master plan, conservation, development, Krung Rattanakosin, integrated planning, participatory process*

INTRODUCTION

'Krung Rattanakosin' refers to Bangkok's old town area, founded in 1782 as the capital city of the Rattanakosin Kingdom, the present kingdom in the history of Thailand. Due to its long history of more than 200 years of urban settlement, this area contains many significant cultural heritage sites such as architecture, monuments, city border structures, and many more which can inspire civic pride and stir the imagination of what life might have been like in earlier times. Krung Rattanakosin is clearly a very important historical city in terms of historical, architectural, art, and culture, and lifestyle dimensions of current and former residents.

This paper presents the research and development of the Master Plan of Conservation and Development of Krung Rattanakosin 2032 (hereafter, 'Master Plan') targeted for the 250th anniversary of Krung Rattanakosin foundation in 2032, which is to be implemented over a period of 15 years. The research emphasizes the importance of integrated planning through a participatory process. The results can be used to enhance conservation and development of Krung Rattanakosin by the relevant agencies. It can also be used as a guideline for other historic town conservation and development initiatives in Thailand.

THEORETICAL FRAMEWORK

Heritage as a cultural process

Dating back from the late 19th century, the debate on heritage discourse has been dominated by a sense of need to protect or preserve the material past. Heritage has traditionally been perceived as a site, building or other material that can be mapped, surveyed, recorded, and placed. Nas et al. (2002) argued that this idea inevitably freezes heritage in the past and isolates it from the present and present-day values.

Smith (2006) suggested that 'heritage' is not only about the past, or just about material things. Instead, heritage is a cultural process. That is, heritage is about using the past and tapping into the collective or individual memory, to negotiate new ways of being and expressing identity. In this process, the material heritage (e.g., sites, places or institutions such as museums) becomes a cultural tool or prop to facilitate this process. In this sense, all heritage is 'intangible' whether these values or meanings are symbolized by physical representations, or are represented within the performance of art, or other forms of intangible heritage. In this sense, place is sort of cultural tool in expressing a sense of place -- not only a sense of abstract identity -- but also the sense of nation, community or individuality, and our place in our cultural, social, and material world. Heritage, particularly in its material representation, provides a geographical sense of belonging, and allows us to negotiate a sense of belonging within the social, class, and community realms.

Consequently, over the last decade, the discussion of 'heritage' has broadened to include the idea of cultural landscapes and their historical value such as memory, music, language, dialects, oral history, traditions, dance, and craft-making skills Accordingly, the term 'heritage' can then be classified into 'tangible heritage' as the material representation of 'intangible heritage' (Haldrup & Bœrenholdt, 2015; Smith, 2006).

Conservation of historical town

The movement for the conservation of the 'old town' and related historic sites is embodied in the Washington Charter (ICOMOS, 1987), which asserts that the conservation of cities and historical communities must be integrated into economic, socio-cultural, and urban development policies through an interdisciplinary approach which connects historic urban communities with surrounding neighborhoods. This process involves the upgrading of quality of life by improving physical living space, traffic management and, most importantly, participation of the local community.

The debate over the 2001 UNESCO Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity is instructive. Nas et al. (2002) state that creating lists and measures to safeguard the intangible heritage will inevitably result in the 'freezing' or fossilization of cultural change. Accordingly, management and protection is indeed about fossilization; and, secondly, that the inherent values of tangible heritage are immutable (Smith, 2006).

In addition, the Valletta Principles (ICOMOS & UNESCO, 2011) state that any conservation operations launched in the 'old town' and other historical sites must respect and connect with both tangible and intangible cultural values.

In the tourism sector, the International Cultural Tourism Charter (Brooks, 2002) provides the principles for cultural tourism promotion and development that should consider aesthetics, socio-cultural, and environmental dimensions. In addition, tourism development must consider the cultural heritage value and the potentially adverse impact from mass tourism. The 2002 Charter highlights the role of local community participation in conservation planning and tourism management.

In the urban planning sector, a good cultural heritage conservation strategy requires the integrity of the overall planning process which blends in with the city or urban context. It also requires the intensive participation of the local community in all aspects of development and implementation (Srinivas, 2015). This entails the need to promote communication and cooperation in planning and avoid conflict between government agencies and communities. The sustainable conservation plans should cover four aspects: Economy, environment, society, and culture (Nasser, 2003). Grabow, Hilliker and Moscal specify the five levels of participation in the master planning process, from lowest to highest: 1) Public awareness, 2) Public education, 3) Public input, 4) Public interaction, and 5) Public partnership (Grabow, Hilliker, & Moskal, 2006). Finally, the key factor behind success in promoting public participation in the planning process is two-way interactive meetings such as seminars, focus group discussions, and workshops that serve as platforms for exchange and consensus building (Peerapun, 2017).

Planning methodology

According to the theoretical literature cited above, the research team has established the concept for preservation and development of the Krung Rattanakosin 2032 Master Plan as an integrated plan which highlights cultural heritage conservation in tandem with urban development. This approach addresses the economic, socio-cultural, and environmental dimensions to contribute to a better quality of life for all. The structural components of the plan encompass the management of the cultural heritage in terms of physical, economic, social, and urban planning dimensions. The Master Plan calls for cultural heritage conservation and development across the following sectors: land use, landscape, traffic and transport, public utilities, public facilities, physical condition and daily life of the local community, and tourism. Finally, the implementation strategy requires active participatory planning with involvement of representatives from the public and private sector, local community, other stakeholders, and the non-profit sector such as academia, researchers, and NGOs. The research team conducted the study in accordance with the principles mentioned above, which included the following three main steps (Figure 1) (ONEP, 2018c, p. 3-1):

Stage 1 Data collection and analysis: The contextual study, including trends and potential, was conducted by gathering secondary data from relevant literature, existing master plans, and other related documents on public policy, laws, and legislation. Primary data were collected from surveys, and large and small public meetings. The research team analyzed and synthesized the primary and secondary data. The results of this stage were used to establish the vision, strategy, and conservation and development plans.

Stage 2 Cultural heritage survey and assessment: The survey and assessment of sites of cultural heritage value were conducted by urban conservation experts. This stage consisted of surveying, mapping, and documenting the significant cultural heritage assets. The results show the spatial distribution and agglomeration of cultural heritage sites and landmarks in relation to the urban fabric as well as other significant values such as aesthetic, architectural, historical, scientific, social, spiritual, linguistic, and technological value or significance. Those findings are combined with the results of the first step to enrich the vision of the conservation and development strategy.

Stage 3 Establishing the vision and strategy for conservation and development: This stage applied academic principles in concert with the participatory process. Representatives from all related sectors participated in public hearings and discussions, in both large- and small-group settings. The results of this stage led to the vision and strategy for conservation and development that is consistent with the changing local context, and acceptable to all related sectors.

For Stages 1 and 3 of the planning process mentioned above, one large meeting and two small meetings were conducted. The large meeting tapped into opinions and recommendations from different perspectives regarding the integrated planning principles. The small meetings solicited comments and suggestions from different perspectives (ONEP,

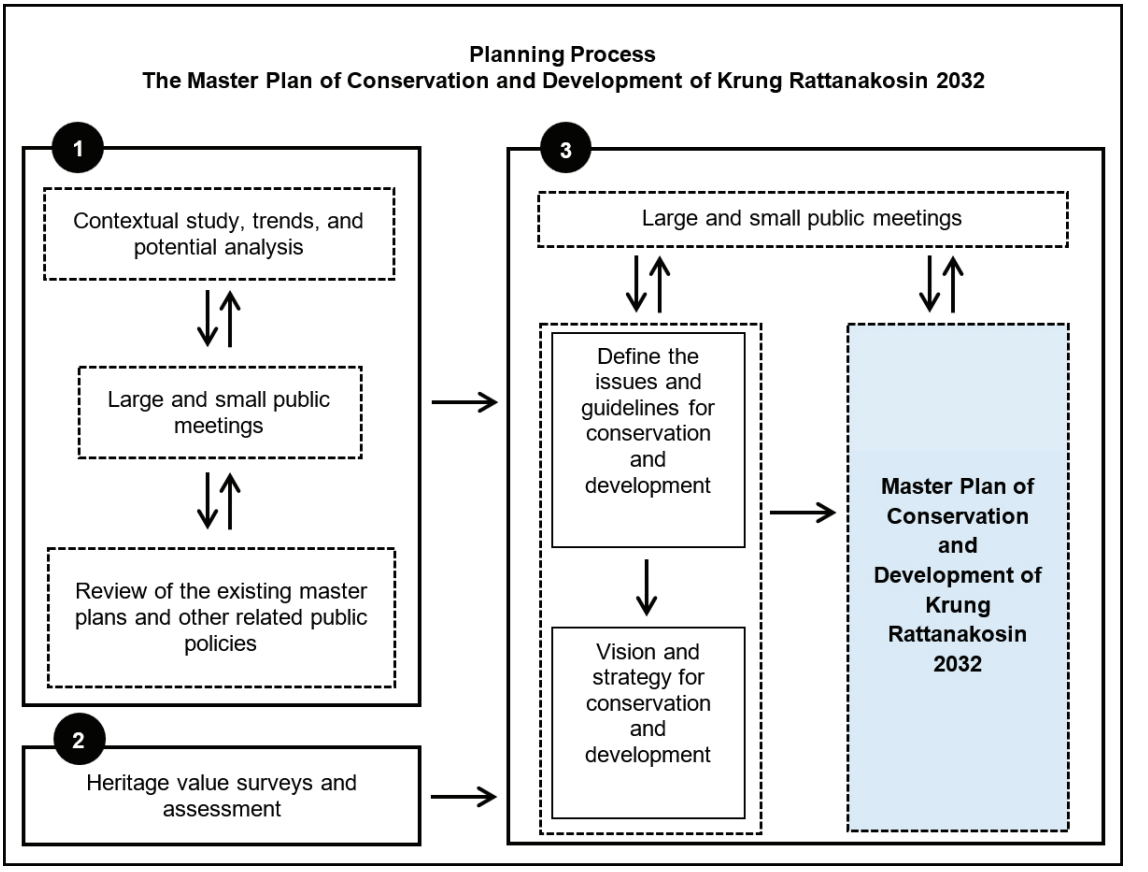

Figure 1:
Planning process of the master plan of conservation and development of Krung Rattanakosin 2032.
(Source: Adapted from (ONEP, 2018c, p. 2-7:8))

2018c, p. 7-1:36). Participants in the large meeting include representatives from academia, researchers, NGOs, media, host communities, temples, schools, and relevant agencies, from both the public and private sector. Participants in the small meetings consisted of representatives of the local community, temples, schools, and related agencies, both public and private.

DEFINING PLANNING AREA OF KRUNG RATTANAKOSIN 2032

The target area of the Master Plan is collectively called *Krung Rattanakosin* and covers 9.98 km^2 of two 'old town' settlements of Bangkok along the Chao Phraya River (Figure 2). The area can be sub-divided into the following areas: 1) Inner Krung Rattanakosin; 2) Outer Krung Rattanakosin; 3) Thonburi Area Opposite Krung Rattanakosin; 4) Continuous Outer Krung Rattanakosin; and 5) Continuous Thonburi, opposite Krung Rattanakosin. The first two areas were defined in the 1997 Master Plan of Conservation and Development of Krung Rattanakosin. Area 3 was defined in the 2000 Master Plan and Action Plan of Conservation and Development on the Thonburi Side, opposite Krung Rattanakosin. Area 4 was defined by the Committee (2016) as a background of the Krung Rattanakosin. This zone covers the continuous area around the Outer Krung Rattanakosin Area toward Klong Phadung Krung Kasem. Area 5 was defined by the research team as background of the Thonburi Side, opposite Krung Rattanakosin and the panorama as seen from inner Krung Rattanakosin.

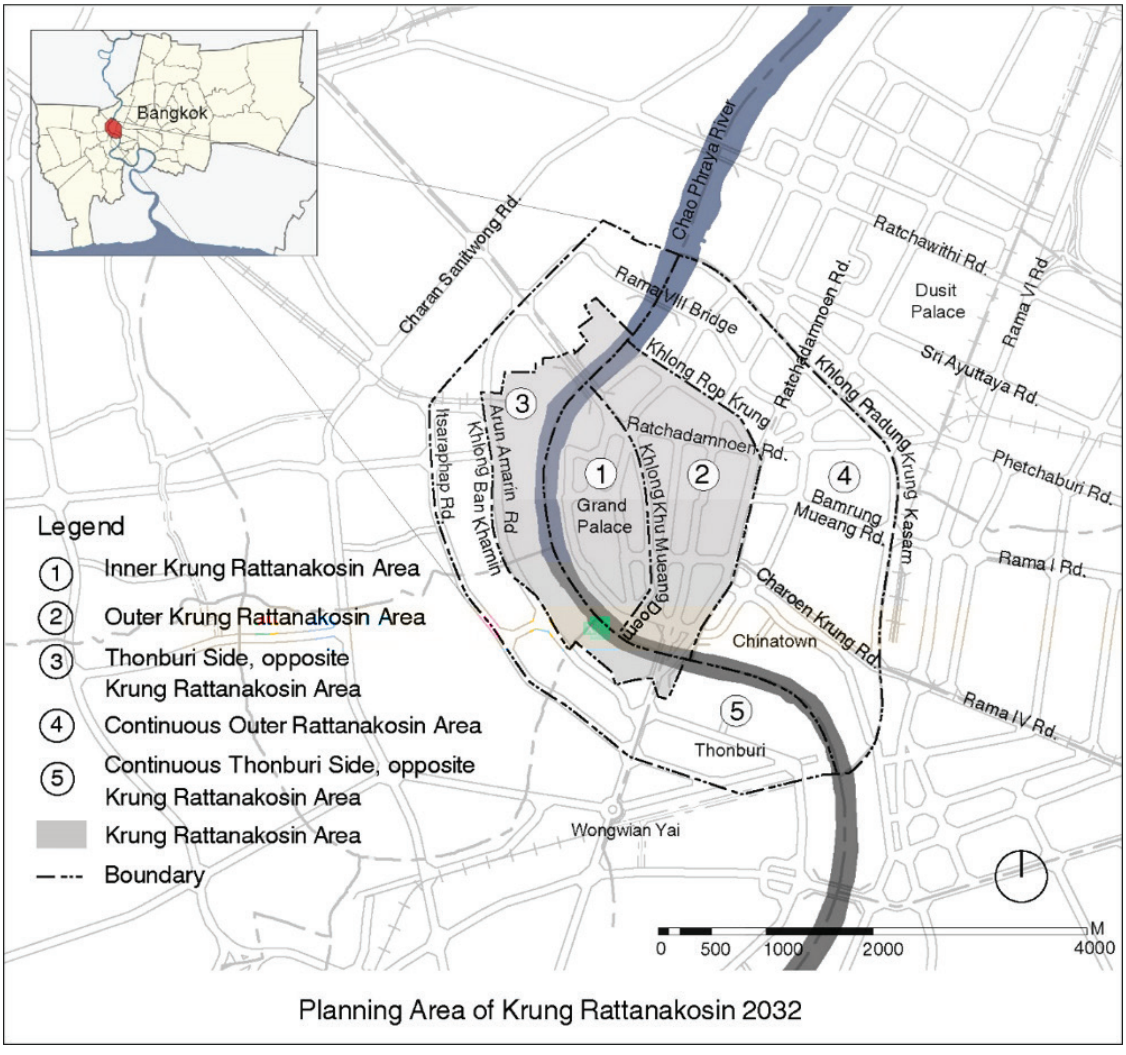

Figure 2:
Planning area of Krug Rattanakosin 2032
(Source: Adapted from (ONEP, 2018a, p. 1-3))

RESULTS

Urban development of Krung Rattanakosin

Ayutthaya Kingdom era (1350-1767)

Krung Rattanakosin has a long history of urban settlement, spanning more than six centuries, dating from the middle Ayutthaya Kingdom era. According to the annals of the reign of King Narai the Great (reign 1656-1688), the small village named *'Bangkok'* was renamed as *'Thonburi'*. Thonburi was established as a fortress city, and two western-styles forts were built on both banks of Chao Praya River. At that time, the part of Bangkok opposite Thonburi City was a large community with the venerated Buddhist temple -- Wat Pho Tharam which later became the Royal Temple of the Rattanakosin Kingdom. (ONEP, 2018c, p. 3-1:2)

Thonburi Kingdom era (1767-1782)

King Taksin the Great of Thonburi Kingdom, (reign 1767-1782) was the leader of the liberation of Siam

from Burmese occupation and the subsequent unification of Siam after the second fall of the Ayutthaya Kingdom in 1767. The city of Ayutthaya had been mostly destroyed by the liberation conflict and, thus, the new capital was established at Thonburi. King Taksin renamed Thonburi to *'Krung Thonburi Sri Mahasamut'* (or Krung Thonburi). Thonburi was considered to be a more strategic location for the capital due to its proximity to the Gulf of Siam and natural obstacles to invasion. The east bank of the Chao Phraya River (i.e., in Bangkok village) was called the Inner Krung Rattanakosin Area. During the era of the Thonburi Kingdom, moats were dug, and city walls were built along the river to protect the capital (ONEP, 2018c, p. 3-2:3).

Early Rattanakosin Kingdom era (1782-1932)

King Rama I (reign 1782-1809) was the founder of Rattanakosin Kingdom and the first monarch of the reigning Chakri dynasty of Siam. A new capital city, named *"Krung Rattanakosin,"* was established on the east bank of the Chao Phraya River, using the river and canals around the city as a boundary. Development of the area continued during the reign of King Rama IV by the digging of the Phadung Krung Kasem Canal to expand the urban area further to the east. In the reign of King Rama V, road systems were developed inside and outside the city walls of Krung Rattanakosin. Since that time, the area within Krung Rattanakosin has been modernized, with construction of a new road and bridge network over the canals and river. Over time, the defensive city walls and fortifications were gradually demolished to allow urban expansion and development, as influenced by Western modernization standards. During the reigns of King Rama VI (1910-1925) and King Rama VII (1925-1935), Bangkok transitioned from an aquatic-based city connected primarily by waterways, to a land-based city. The Phra Buddha Yod Fa Bridge (opened in 1932, and commonly known as 'Memorial Bridge') was constructed to support road traffic between the two sides of the Chao Phraya River. Many new roads were constructed to extend the Bangkok urban area (ONEP, 2018c, p. 3-2:3) (Figure 3).

Rattanakosin era after World War II (1945-2017)

In the reign of King Rama XI (1950-2019), a massive migration from the rural area to Bangkok started after World War II (1939-1945), and this led to the rapid urbanization of Bangkok. During the 1960s, a modernization policy was promoted which called for large-scale development and creating new connections with suburban settlements (O'Connor 1989). This urban expansion was accompanied

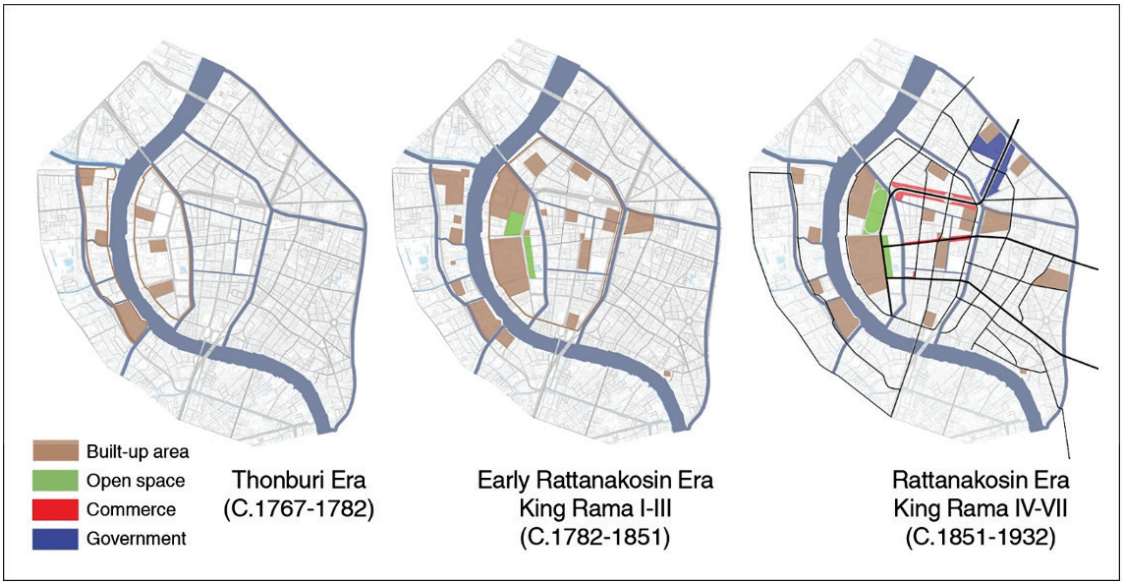

Figure 3:
Development of Krung Rattanakosin, 1767-1932
(Source: Adapted from (ONEP, 2018c, p. 3-16))

by the shift of commercial hubs from Krung Rattanakosin to the newly-developed business centers such as Silom District. The nobles also moved their residences from Krung Rattanakosin to the outer areas such as Sukhumvit, Phya Thai, Dusit, etc., and those inner-city neighborhoods now became available for either public buildings or immigrants from both rural areas and abroad (Kasam & Davisi, 2008).

According to the long history of Krung Rattanakosin, there are important stories of the area, including the story of the two capital cities of Thonburi and Krung Rattanakosin, the stories about palaces, and the lore about spatial development which link the past and the present for the future conservation movement. The common cultural values were identified in two dimensions: (1) the integration of Royal heritage sites and ordinary people's cultural heritage sites; and (2) the spatial elements reflecting the identity of each period such as river, canals, moats, fortresses, roads, and bridges.

Problems and challenges in Krung Rattanakosin historic town conservation

Bangkok's transformation from a modern city to a global metropolis started in the 1980s. One aspect of globalization has been the influx of overseas investment which saturated the capital city and generated the economic boom in Thailand toward the end of the 1980s. While the important role of Krung Rattanakosin in historical and governmental functions still remains, it has been reincarnated as a premier tourist destination. (ONEP, 2018c, p. 3-1:7). Since 1982, just after the Krung Rattanakosin bicentenary celebration, the Bangkok Metropolitan Administration (BMA) projected that Krung Rattanakosin would become one of the main tourist destinations of the future, and this led to the establishment of several state investments in restoring and preserving the local heritage.

In order to conserve the cultural heritage sites in Thailand, the Office of Natural Resources and Environmental Policy and Planning (ONEP), under the Ministry of Natural Resource and Environment of Thailand (MNRE), enacted the policies and master plans for conservation and development, together with establishing the Rattanakosin and Historic Town Committee (hereafter, 'Committee'). This Committee was appointed by the Cabinet on July 4, 1978 to supervise implementation of the policies and master plans. One major policy and two master plans were produced to protect the cultural heritage sites in Krung Rattanakosin and surrounding area as follows:

1) The Land Use Policy of Krung Rattanakosin Area and the Chao Phraya River on the Thonburi Side Area, as approved by the Cabinet on October 13, 1981;
2) The Master Plan of Conservation and Development of Krung Rattanakosin, as approved by the Cabinet on May 21, 1997 (Synchron, 1997); and
3) The Master Plan and Action Plan of Conservation and Development of Thonburi Side, opposite Krung Rattanakosin, as approved by the Cabinet on May 2, 2000 (Synchron, 2000).

This policy and the master plans were used as a framework for the Bangkok Building Control Act, effective for the period 1979-2004. Regulations in the BMA Comprehensive Plan, enacted in 2013, include the specific plans for urban regeneration and rehabilitation, implemented by other related public and private sector entities (ONEP, 2018c, p. 1-1).

In 1982, according to the Land Use Policy of Krung Rattanakosin Area and the Chao Phraya River on the Thonburi Side Area, as approved by the Cabinet on October 13, 1981, the Committee announced 133 items for 'important structure preservation' to commemorate the bicentennial of the Chakri Dynasty. The list includes palaces, city borders, and places of religious worship, representing the cultural and political manifestation of the dynasty. As of May 21, 1997, any physical alteration within Krung Rattanakosin must be referenced in the Master Plan of Conservation and Development of Krung Rattanakosin. On May 2, 2000, the Master Plan and Action Plan of Conservation and Development of the Thonburi Side, opposite Krung Rattanakosin was approved by the Cabinet to preserve the cultural heritage sites from the Thonburi Kingdom era, as Thonburi District is considered the historical foundation of Krung Rattanakosin.

The two master plans contribute to the safeguarding of cultural heritage sites such as statutory protection of a privileged royal area of the city. Nevertheless, the heritage of the local people, such as daily life, landscape, markets, and shop-houses are excluded. That is because the 'old town' conservation concept emphasized only the elegant urban heritage sites

and static physical components, without considering the socio-economic and environmental impact on the society, especially on the fragmented communities. Furthermore, the planning process used a top-down approach without public participation or communication with the residents and other stakeholders in the area. As a result, there was a lack of a connection among plans/projects and local needs. Conflict began to emerge after 20 projects for landscaping and scenic enhancement were launched in 1997. Several residences and shop-houses that were deemed insignificant were to be

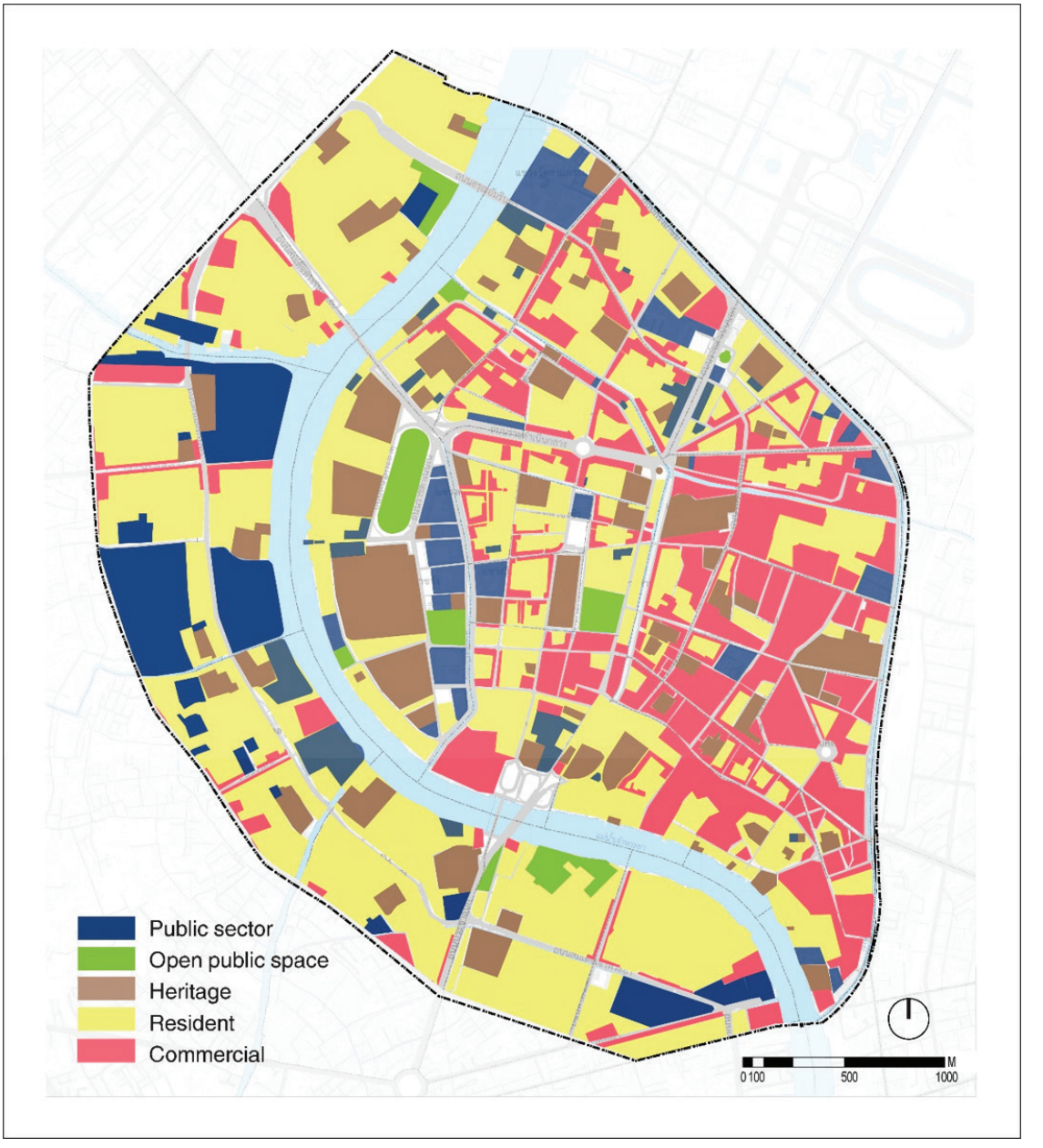

Figure 4:
Existing land use of Krung Rattanakosin, 2017
(Source: Adapted from (ONEP, 2018c, p. 3-16))

demolished. Local resistance to implementation of these projects grew (Sirisrisak, 2009).

In addition, many inconsistencies were found between the two master plans and the Bangkok Building Control Act (1979), and the Bangkok Comprehensive Plan (2013) which include regulations for land use, density, and set-back controls. The absence of appropriate guidelines for urban and architectural design and heritage-site management meant that many projects were suspended or barely implemented (ONEP, 2018c, p. 1-71).

The present-day pattern of use of Krung Rattanakosin can be seen as coexistence with overlapping layers of different stages of urban development. Change due to the socio-economic, environmental, and technological development of Bangkok in the last 20 years has left the two Master Plans behind, causing them to lose some of their relevance. Importantly, there has been a paradigm shift in how society views its cultural heritage, including embracing the complexity and diversity of traditional local lifestyles. Therefore, it became necessary to revise the Master Plan of Conservation and Development of Krung Rattanakosin to be a more flexible framework for conservation and development in a rapidly-changing world (Figure 4).

Cultural heritage of Krung Rattanakosin

The heritage of Krung Rattanakosin has both tangible and intangible cultural assets. (Figure 5) According to secondary data analysis and surveys conducted in 2017, the planning area comprises 319 tangible cultural heritage assets in total, categorized into the following groups: palaces and other royal domiciles (N=26); Buddhist temples (78), and other places of religious worship such as mosques, churches, shrines (30); residential houses (22), and shop-houses (46); public and commercial buildings (60); monuments (13); river, canals and bridges (32); forts and city walls (8); and open spaces. These cultural heritage assets can also be classified according to their registration status as a national antiquity, as overseen by the Fine Art Department of Thailand. In this category, there are 121 registered cultural heritage assets, 119 cultural heritage assets pending registration, and another 79 heritage assets that are significant but not listed (ONEP, 2018d, p. 2-7:8).

This study applied the criteria for classifying a site as a “cultural heritage asset” based on those used by various institutions. These include the UNESCO World Cultural Heritage Criteria (UNESCO, 2005), the Western Australian Government Cultural Heritage Criteria (DPLH, 2012), and the Standards and Guidelines of FAD in the Operation of Ancient Sites (FAD, 1992).

The dimensions of a tangible cultural heritage asset include the following: aesthetics, history and antiquity, science and education, society and culture, and size and condition. Using these criteria, five levels were classified as follows: 13 most significant cultural heritage assets; 22 very significant cultural heritage assets; 92 moderately significant cultural heritage assets; 133 limited-priority cultural heritage assets; and 59 low-priority cultural heritage assets (ONEP, 2018d, p. 3-1:2).

Assessing the intangible cultural heritage assets is complicated by the fact that these attributes are inherent to the tangible heritage assets. However, 45 intangible heritage assets could be identified, and are classified into the following four categories: local traditions and festivals (N=18); food culture (7); dance arts (4); and craftsmanship (16) (ONEP, 2018c, pp. 6-83). In addition, Krung Rattanakosin also comprises many old districts and communities that reflect spatial development, including 20 major business districts and 22 significant communities (ONEP, 2018c, p. 6-92). (Figure 5)

Vision for conservation and development of Krung Rattanakosin 2032

The planning for conservation and development of Krung Rattanakosin has three main objectives: 1) to highlight and promote the valuable identity of cultural heritage in the area; 2) to help define guidelines for cultural heritage assets management as harmonized with sustainable development principles; and 3) to enhance the quality of community life. Consequently, the Master Plan requires the following four main criteria (ONEP, 2018a, p. 2-1):

1) *Integrity:* Systematically integrating strategy and plans in both the spatial and conservation/ development dimensions. Spatial integrity requires connectivity and consistency among cultural heritage sites, traffic and transport,

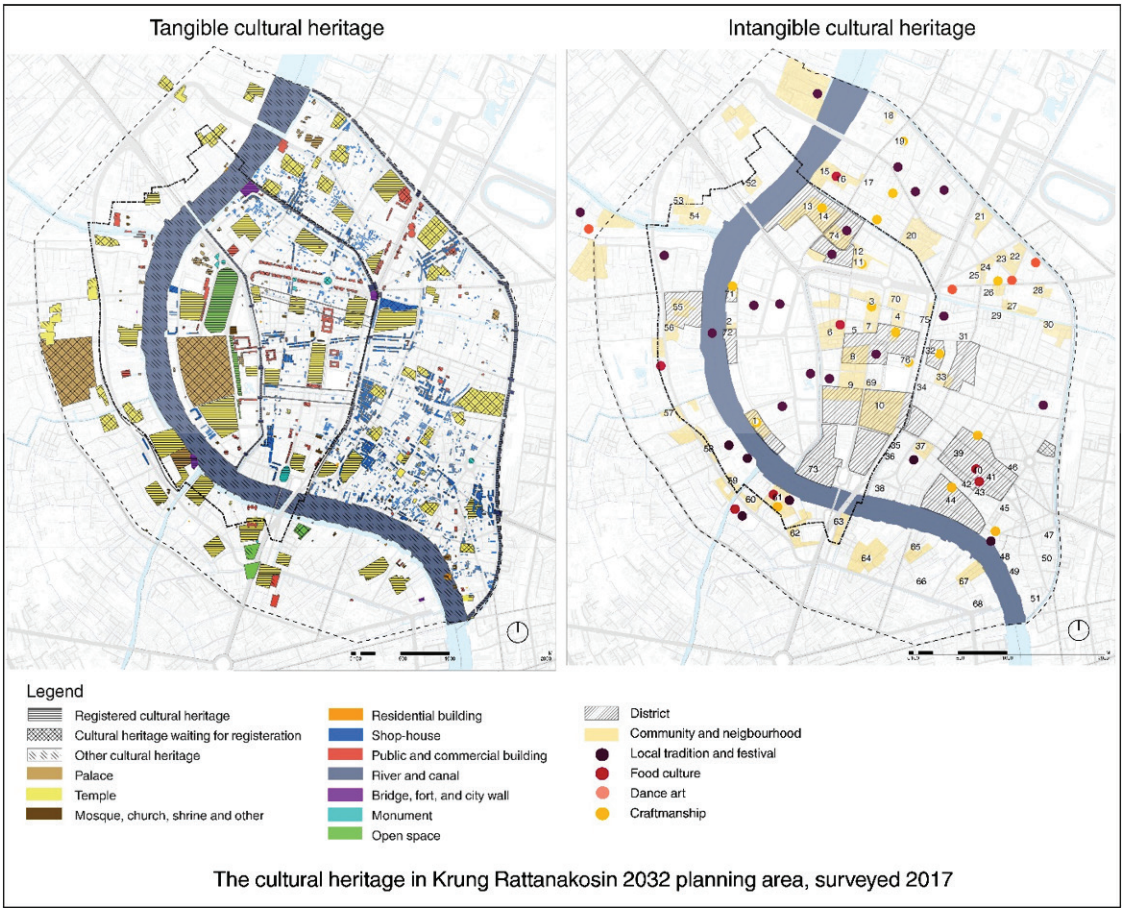

Figure 5:
The cultural heritage in Krung Rattanakosin 2032 planning area, in surveyed in 2017
(Source: Adapted from (ONEP, 2018b, p. 3-4, 3-7))

landscape, etc. Conservation and development integrity requires an overall plan that connects cultural heritage conservation with socio-economic, cultural, and environmental development;

2) *Balance:* Creating a balance between conservation and development by emphasizing the constructive coexistence between cultural heritage assets, communities, and socio-economic activities;

3) *Sustainability:* Fostering sustainable cultural heritage conservation by encompassing suitable development with reference to the cultural heritage, especially large-scale building construction and development.

4) *Flexibility:* Introducing a more flexible master plan by defining the core framework with the clearly-articulated components, consisting of guidelines which allow adaptation in implementation (i.e., the details can be adjusted without affecting the core framework).

The objectives and criteria mentioned above led to the vision of Krung Rattanakosin 2032 as *"A glorious capital city of Siam Kingdom, dignified by cultural heritage sites, blending with multi-cultural identity of local communities and contemporary urbanism."* Therefore, the eight main goals of the Master Plan are as follows: 1) preserving the valuable cultural heritage; 2) defining appropriate land use and building controls; 3) Managing the traffic and connecting the intermodal networks; 4) designing the urban landscape improvement guidelines to highlight the significant historical structures and other cultural heritage assets to appreciate the aesthetics

and the meaning of the area; 5) promoting the harmonious coexistence of cultural heritage assets and surrounding communities; 6) promoting the local community economy; 7) managing tourism; and 8) improving public utilities and facilities to meet future needs.

The Master Plan of Conservation and Development of Krung Rattanakosin 2032

This vision and the results from the large and small public meetings led to the concept for the Master Plan as an integrated blueprint in response to the dynamic context of the multiple opportunities and constraints. The Master Plan highlights the urban structure and significant heritage assets which express the important stories of the area, including the story of the two capital cities of Krung Thonburi and Krung Rattanakosin, the stories about magnificent palaces, and the saga of spatial urban development. The conservation and development programs are planned for a 15-year period of implementation, with all projects to be completed by 2032 -- the 250th anniversary of the founding of Krung Rattanakosin. Implementation is divided into three phases of five years each. A project impact assessment is scheduled for the end of each period. Each phase allows for the adjustment and refinement of the plans and projects, as long as those revisions do not affect the core framework. Stakeholders from all related sectors were involved in planning process through large and small public meetings. This participatory process ensures consistency of projects of the Master Plan with local needs and dynamic changes.

The strategy for conservation and development programs and projects can be presented by sector and area. By sector, there are eight sub-strategies as follows:

1) **Cultural heritage strategy:** As the cultural heritage sites have deteriorated over time, the maintenance, protection, and restoration of sites are ongoing endeavors. There is a framework for the maintenance and protection of tangible cultural heritage assets and rehabilitation of both tangible and intangible cultural heritage assets. This strategy consists of the following two programs: (1) protection and restoration of the tangible cultural heritage; and (2) restoration of the intangible cultural heritage (i.e., the traditional ways of community life). These programs encompass seven projects as follows: 1) the Chao Phraya River Protection Project; 2) highlighted cultural heritage assets restoration; 3) cultural heritage site restoration in the Krung Rattanakosin area; 4) registration of historic sites; 5) local heritage registration and local heritage restoration promotion; 6) restoration and inheritance of local traditions and festivals; and 7) restoration of local wisdom, culture, food, dance, and crafts. Most of the projects are planned to be ongoing during all three plan periods.

2) **Land use control strategy**: This is a framework for land use control by using urban planning tools. These include promoting mixed-use land parcels, job and housing balance, and Transit Oriented Development (TOD) implementation around mass transit train stations. This strategy consists of two programs: (1) improvement of BMA land use and building control measures; and (2) planning and implementing in accordance with the specific plan. The two programs encompass five projects: 1) improvement of the Bangkok Land Use Zoning Plan and measures regarding the Bangkok Town Planning Act (1975); 2) improvement of the Bangkok Building Code of Laws related to the Bangkok Building Control Act (1979); 3) establishing a cultural environment protection measure; 4) planning and implementation of the Bangkok specific plan along the Chao Phraya riverfront as per the Bangkok Town Planning Act (1975); and 5) planning and implementation of TOD. Land use management is another important issue and a major challenge for development of the target area. Most projects are scheduled for the first five-year period of implementation.

3) **Landscape strategy:** This is a framework for raising awareness and appreciation of the historical urban fabric of Krung Rattanakosin, to enhance the notable cultural environment, and increase the potential and strength of landscaping. This strategy involves designing the cultural heritage landscape so that there is a network of connections through green linkages with the public spaces for daily use and festive events. This includes a maintenance system for large trees within the cultural landscape using arboriculture principles. This strategy consists of two programs: (1) Urban landscape improvement; and (2) Urban landscape

management. The two programs encompass six projects: 1) Landscape improvement around cultural heritage assets; 2) Landscape improvement regarding the visual structure; 3) Landscape improvement along the Chao Phraya River and significant canals; 4) Public space improvement; 5) Urban lighting and illumination of the historical urban fabric and cultural heritage; and 6) Maintenance system for large trees. Most projects are planned to be ongoing throughout the 15 years of the Master Plan.

4) **Transport strategy:** This provides a framework for systemic linkage between eco-friendly transportation and networks within Krung Rattanakosin that is consistent with prescribed land use and TOD. According to Green Historical and Cultural Moves (ONEP, 2018c, pp. 3-29), the 'primary' road is defined as a ring road around the city, while the 'secondary' roads are to be used only for small vehicles, walking, and cycling within the area. This strategy consists of three programs: (1) Linking the transport networks; (2) Promoting walking and cycling; and (3) Designing, developing, and improving intermodal transit nodes. These three programs encompass seven projects; 1) Promoting intermodal linkage; 2) Replacing parking on traffic surface by providing proper parking facilities; 3) Traffic limitation in the Inner Krung Rattanakosin Area; 4) Promoting mass transportation; 5) Promoting fee management for vehicle access in the Outer Krung Rattanakosin Area; 6) Traffic management of the specific economic zone; and 7) Developing and improving ports and ferry terminals. These projects will be implemented throughout the 15-year period and be consistent with the on-going construction of the mass rapid transit system.

5) **Public utilities strategy:** This provides a framework for improving the physical infrastructure so that it is integrated with the social infrastructure to improve the quality of life. The strategy calls for transformation of basic utilities to be multi-purpose amenities that can serve not only basic but also socio-cultural needs. For example, flood walls can be turned into a public space when water level conditions allow it. This strategy includes upgrading both the aesthetic and technological features to be in harmony with the cultural heritage assets. This strategy consists of two programs: (1) Flood prevention and water quality improvement; and (2) Improvement of the public utilities network. The two programs encompass five projects: 1) Redesigning and developing flood prevention; 2) Improving canals and water quality; 3) Improving drainage systems; 4) Installing underground electrical and communication networks; and 5) Establishing a public utilities cooperation center, including a 3-D infrastructure database and network. Most of these projects are urgent and are scheduled for the first five-year period.

6) **Public facilities strategy:** This is a framework to improve quality of life and well-being by upgrading public facilities in response to demographic and socio-economic changes. The strategy includes the adaptive reuse of public facilities to respond to urban disasters and crises. This strategy consists of two programs: (1) Improvement of public facilities; and (2) Planning of urban disaster resilience management. The two programs encompass four projects: 1) Improving the underused temples and schools so that they can also be used as centers for the elderly and underprivileged persons; 2) Integrating social facilities with the underused schools to that they can house learning centers, vocational training centers, and recreation sites; 3) Upgrading the schools so that they can function as an evacuation shelter during disasters; and 4) Installing of equipment for community safety. All these projects are planned to be implemented in the first ten-year period.

7) **Strategy for physical conditions and everyday life of the community:** This strategy provides a framework for promoting socio-economic development as well as supporting the peaceful co-existence of the local community and cultural heritage assets. This strategy requires physical condition improvement, local wisdom promotion, and local economic strengthening. This strategy consists of two programs: (1) Improving the physical condition of the target communities; and (2) Strengthening the local economy. These programs include the following four projects: 1) Improvement of the living conditions of the significant communities; 2) Improvement of public space for neighborhoods and communities usually found in places of religious worship; 3) Promoting and developing local products made by local entrepreneurs and artisans; and 4) Promoting digital entrepreneurs. Most projects are planned to be implemented during the first 10-year period.

8) **Tourism strategy:** This provides a framework for building sustainability and consistency with historical value, based upon an existing economic system related to tourism activities in the area. This strategy involves adding value and diversity to enhance the tourism experience, developing information and communication systems, increasing tourist facilities, and raising standards of tourist accommodations. This strategy consists of three programs: (1) Improving tourist attractions; (2) Developing tourism routes; and (3) Developing tourist accommodations to meet international standards. These programs include the following seven projects: 1) Improvement of tourist information and communication; 2) Development of local community tourist information devices; 3) Organization of events and festivals for cultural tourism promotion; 4) Tourist zoning management; 5) Improvement of tourist information kiosks and signage; 6) Development of tourist maps and online tourist information; and 7) Promotion of the upgrading of tourist accommodations to meet international standards. Most projects are planned for the first five-year period.

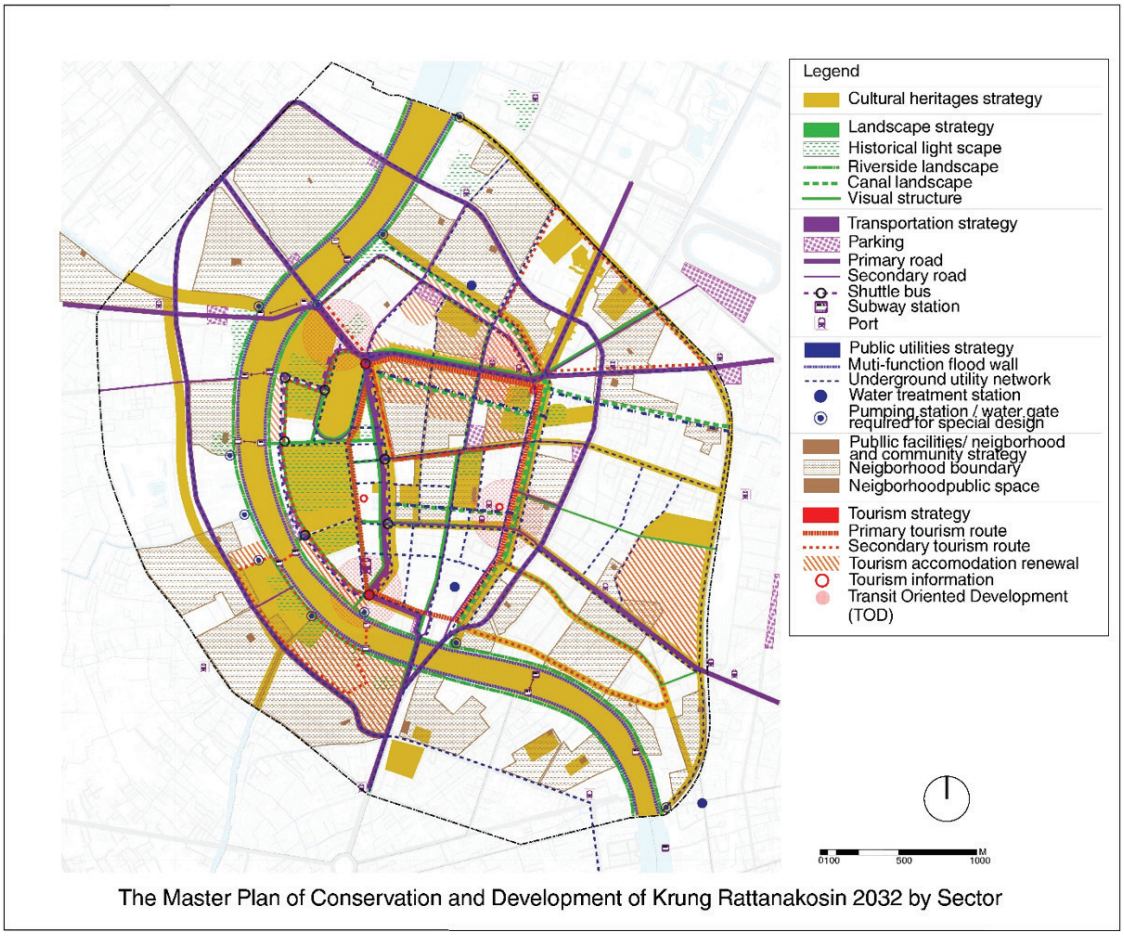

Figure 6:
Master Plan of Conservation and Development of Krung Rattanakosin 2032 by sector
(Source: Adapted from ONEP (2018a, p. 2-68))

The integrated structural plan can be depicted by overlaying these eight sub-strategies. All programs and projects mentioned in each sector strategy will have two types of implementation as follows: 1) programs and projects implemented in several continuous areas as shown in the Master Plan by sector (Figure 6), used for a large and continuous implementation within the area; 2) programs and projects within a specific area, as shown in Master Plan by area (Figure 7), used for concrete achievements, consisting of 12 specific implementation zones sorted by the evolution of urban settlements and the distribution of cultural heritage sites and daily life, reflecting existing conditions and development potential. The 12 zones are as follows: 1) Grand Palace Zone (Inner Krung Rattanakosin Area) (Figure 8); 2) Banglamphu District Zone; 3) Ratchadamnoeun -Phan Fah Lilat Zone (Figure 9); 4) Sao Chingcha District Zone; 5) Pak Klong Talad District Zone; 6) Wang Doem -Wang Lang Zone; 7) Wat Dusitaram -Bang Yi Kan Zone; 8) Bang Khun Phrom Zone; 9) Nangleoung -Mahanak Zone; 10) Yoawarat-Wongwien 22 Zone; 11) Talad Noi District Zone; and 12) Kudi Jeen – Klong San District Zone (Figure 10). The responsible agencies can use this component of the Master Plan for further deliberation and implementation.

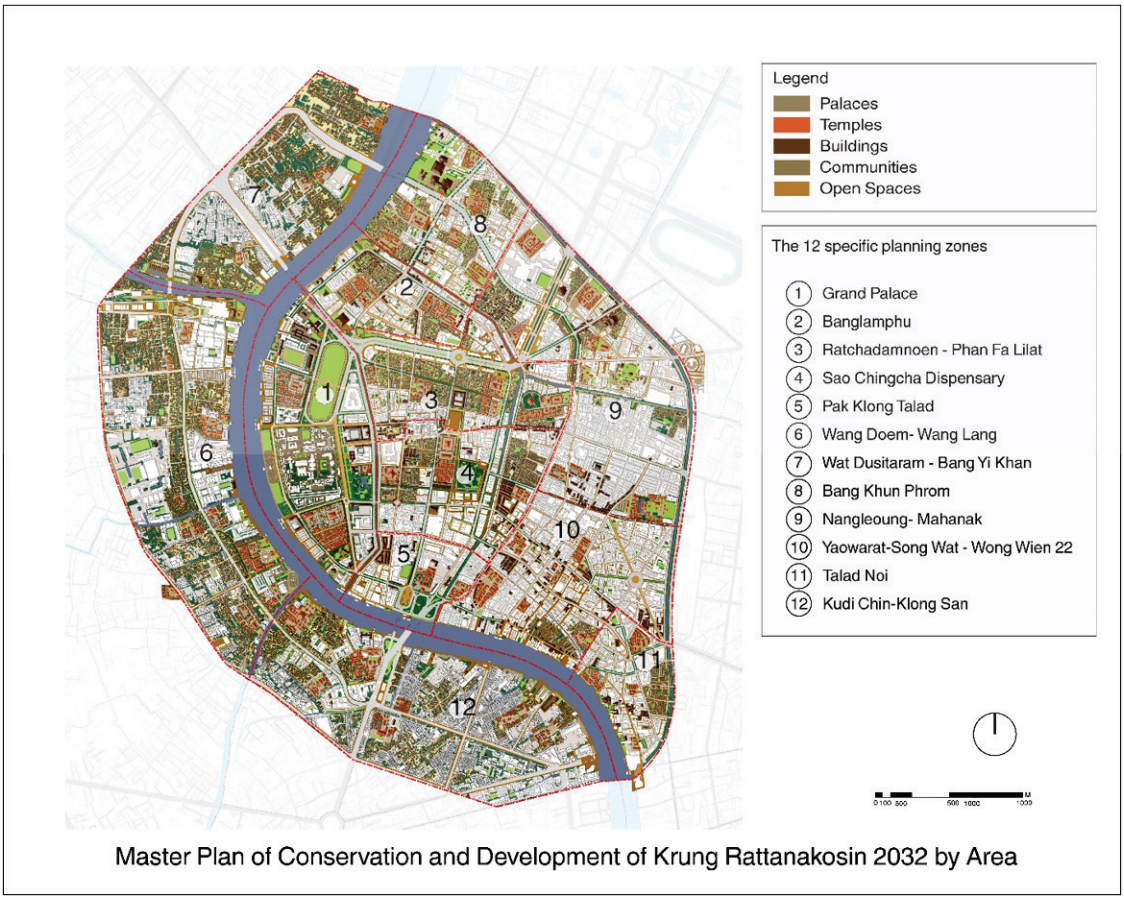

Figure 7:
Master Plan of Conservation and Development of Krung Rattanakosin 2032 by Area
(Source: Adapted from ONEP (2018a, p. 4-6))

Figure 8:
Krung Rattanakosin 2032 Vision -- View of the Grand Palace from the Chao Phraya Riverfront
(Source: Adapted from ONEP (2018a, p. 4-10))

Figure 9:
Krung Rattanakosin 2032 Vision -- Ratchadamnoen-Phan Fah Lilat Zone
(Source: Adapted from ONEP (2018a, p. 4-30))

Figure 10:
Krung Rattanakosin 2032 Vision -- the Chao Phraya Riverfront Regeneration below Memorial Bridge in the Kudi Chin-Klong San Zone
(Source: Adapted from ONEP (2018a, p. 4-50))

FINDINGS AND DISCUSSION

The Master Plan integrates cultural heritage management with quality of life and community development across the physical, socio-economic, and urban planning dimensions. Planning was conducted through a participatory process with local residents, stakeholders, and representatives of the public and private sectors, in accordance with the Washington Charter guidelines (ICOMOS, 1987). Three main findings are the key mechanisms to accomplish the goals: (1) participatory planning process for 'old town' conservation; (2) systematic integrity in planning which facilitates cooperation among all relevant agencies; and (3) incentive measures for conservation and development. These findings are also consistent with Srinivas (2015) who suggested that an effective cultural heritage preservation strategy must be integrated into the overall planning process. The effective and intensive participation initiates communication between government agencies and the target communities, and that should lead to cooperation, plan integration, and conflict reduction.

Participatory planning process for 'old town' conservation

The Master Plan was developed from the participatory planning research and development. It differs from the previous style of planning in Thailand in which consultants complete the study and planning process independently before presenting the draft plan at a public hearing. By contrast, the Master Plan integrated public meetings throughout the planning process. The plans were revised until there was consensus approval by the stakeholders. The options, recommendations, problems, and needs were considered in constructing the vision, strategy, overall plan, design of projects, and implementation.

These stakeholders include government agencies, private sector, entrepreneurs, local residents, community leaders, scholars, experts, NGOs, and social entrepreneurs in the non-profit sector. Aside from being able to receive in-depth comments and suggestions that are comprehensive, these public meetings helped to reduce or avoid conflict, and anticipate any negative impact as a result of implementation. Any contentious issues were thoroughly discussed and resolved at the earliest possible time in the preparation of the Master Plan. This approach also encourages the representatives of the government agencies, state enterprise entities, and private organizations to work together. They realized that cooperation in problem solving helps reduce overlap that either causes redundancies or disruption of implementation. Moreover, the public meetings also helped to upgrade the level of participation, from public awareness to public interaction, and that is in accordance with the principles put forth by Grabow et al. (2006). While the public meetings were conducted as prescribed in the literature, the level of individual collaboration did not necessarily reach its full potential. That is, in part, due to the fact that participatory planning of this nature is still relatively new for the Thai context. For that to happen, more time is required to achieve a more complete understanding and full trust among the relevant sectors. Nevertheless, the results thus far have been exemplary.

Systematic integrity in the planning process

Many relevant public agencies are to be involved in the implementation of the Master Plan. At the policy and planning level, ONEP takes charge of secretarial duties, policy making, and project impact assessment, while the Krung Rattanakosin and Historic Town Committee takes charge of supervision. At the operational level, the key agency is the BMA. According to the analysis of responsible agencies and budget (Table 1), the BMA has primary responsibility for plan implementation, accounting for 56.1% of spending. Secondly, joint implementation between the BMA and other public agencies accounts for an additional 27.4%. Thirdly, the Fine Arts Department accounts for 16.7% of spending. The final 0.6% of the spending is attributed to other partners. The above overview shows the principal role of the BMA in driving the Master Plan to achieve efficient implementation. This will require close cooperation among multiple BMA agencies (such as the Department of City Planning and Urban Development, Department of Public Works, and Department of Traffic and Transport). Efficient implementation also requires cooperation between other public agencies and the local community in accordance with integrated participatory planning principles.

Unfortunately, the BMA has not yet designated a single agency or unit to take full-time charge of Krung Rattanakosin cultural heritage conservation. Based on past experience, leaving implementation to a consortium of government agencies makes the plan vulnerable to confusion and inaction. Accordingly, for the Master Plan to be efficiently implemented, it is strongly recommended that the BMA or the Committee host the Master Plan, and establish a dedicated agency to be responsible for implementation, supervision, and coordination with all related agencies and entities.

Incentive measures for conservation and development

Another key success mechanism required for efficient implementation of the Master Plan is the approval and collaboration from the land and building owners in the area. That is because those individuals will experience a direct impact from the land use and building control required by Master Plan implementation. In the past, there were insufficient incentives for local land/building owners to buy into the preservation of Krung Rattanakosin. Thus, for the Master Plan to be successful, several incentive measures are proposed, such as transfer of development rights and tax incentives to attract private sector involvement and creating a sense of joint ownership of the vision. Moreover, public awareness of stakeholders is needed, especially among the local leaders within the community such as teachers, religious leaders, and community leaders to ensure a full understanding of the importance of cultural heritage preservation for their own constituents and society as a whole.

Table 1: Prospective responsible agencies and budget estimated to be needed for the implementation of the Master Plan of Conservation and Development of Krung Rattanakosin 2032

Strategy	Prospect responsible agency and budget (million baht)				
	BMA	BMA and other agencies	Department of Fine Arts	Other agencies	Total
1. Cultural heritage	620.00	-	3,562.00	-	4,182.00
2. Land use	740.00	-	-	20.00	760.00
3. Landscape	3,797.83	-	-	-	3,797.83
4. Traffic and transport	189.00	160.00	-	48.00	397.00
5. Public utilities	4,564.60	4,187.21	-	-	8,751.81
6. Public facilities	212.20	-	-	-	212.20
7. Physical conditions and the daily life of community	744.00	-	-	60.00	804.00
8. Tourism	3,061.20	-	-	60.00	31,212
Total	**12,357.40**	**5,978.64**	**3,562.00**	**128.00**	**22,026.04**
Percent	**56.1**	**27.1**	**16.2**	**0.6**	**100.00**

(Source: Summarized from ONEP, 2018a)

CONCLUSIONS AND RECOMMENDATIONS

The Master Plan of Conservation and Development of Krung Rattanakosin 2032 was designed to replace previous policies and plans which have become somewhat obsolete, given the rapidly changing context. The Master Plan reflects a planning process which integrates cultural conservation with the development of quality of life across the socio-economic, cultural, environmental, and urban planning dimensions. The value of both tangible and intangible cultural heritage assets is considered. All relevant sectors and stakeholders were involved in every stage of plan development. As a result, a clear vision, strategy, and mission were produced to generate efficient and effective implementation. The projects in the Master Plan have been designed to be flexible and adaptable, with a precise time frame for implementation. Interim results will be assessed every five years, and adjustments can be made as needed. In addition, the Master Plan introduces implementation guidelines for legal/organizational/development incentives and raising public awareness. Even in today's world, the above features may not be considered new. However, in the case of Thailand, the integrated planning process through public participation, using focused public meetings as an effective advocacy mechanism, could be considered as an innovative planning approach, especially for the conservation of the 'old town' and historic districts of Bangkok. The results are quite satisfactory, as the conflicts and negative impacts of plan implementation should be minimal since these were anticipated and resolved in advance. Thus, it is reasonable to expect that implementation will be efficient and effective, especially if the recommendations from this study are followed. In conclusion, the Master Plan of Conservation and Development of Krung Rattanakosin 2032 should be an excellent prototype that can be applied to many other 'old towns' and historical districts in other provinces of Thailand. The prospective planners could draw from the lessons from this study and apply those to other historical areas as appropriate.

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