



The Development of Adaptive Use of Historic Building in Thailand¹

พัฒนาการของการปรับการใช้สอยอาคารประวัติศาสตร์ในประเทศไทย

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Abstract:

Changing of use in building occurs naturally at all time especially when there was a decline in utilisation as well as urban function. With the form of alteration, historic building is therefore shifted in meaning and perception in both physicality and quality. Although the definition of “Adaptation”, “Adaptive reuse” or “reuse” has been developed since the mid-20th century, it has still been criticism among conservationists up until the theory incorporated with building conservation at the end of the 20th century. In the western countries the development of the method has focused on the process of historic building transformation for further utilizations in order to resist with the constraint of urban sprawl whereas the others may be involved with regeneration and revitalisation of historic urban area. With various approach of the application, adaptive use of historic building is differently based on socio-cultural and economic pattern when it is applied to such a specific locality. The paper is to defining adaptive use in relevant to conservation according to the Thai circumstance. The study was derived by chronical study and the data was summarized by categorization of conservation and building adaptation method. The study can be concluded that adaptation of Thai historic building function has evolutionally associated to pattern of living within belief of enhancement to the place and alteration is much concern on useful purpose on individual economic enhancement.

Keywords: 1. Adaptive use 2. Adaptation 3. Conservation 4. Characteristic of changes 5. Thailand

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บทคัดย่อ

การเปลี่ยนแปลงการใช้สอยในอาคารเป็นปรากฏการณ์ที่เกิดขึ้นตามธรรมชาติ เมื่อการใช้สอยของอาคารและประโยชน์ใช้สอยของพื้นที่เมืองเริ่มเสื่อมถอย อันมีสาเหตุมาจากการเสื่อมของปัจจัยจากองค์ประกอบอื่นของเมือง ซึ่งการเปลี่ยนแปลงการใช้สอยของอาคารที่เกิดขึ้น อาจส่งผลต่อความหมายและคุณลักษณะของอาคารทั้งทางด้านกายภาพและคุณภาพ ที่ส่งผลต่อการรับรู้และการสื่อความหมายทางด้านสถาปัตยกรรม การทำความเข้าใจทั้งกระบวนการ และวิธีการต่างๆของการเปลี่ยนแปลงการใช้สอยในอาคาร จึงมีความจำเป็นต้องเข้าใจในนิยามของการเปลี่ยนแปลง ที่อยู่ภายใต้กรอบของบริบทของที่อาคารตั้งอยู่

จากการทบทวนวรรณกรรม พบว่า การปรับอาคารให้มีการใช้สอย (adaptation) การปรับปรุงอาคารเพื่อการเปลี่ยนแปลงการใช้สอย (Adaptive reuse) และการเปลี่ยนแปลงการใช้สอย (reuse) เป็นวิธีที่ใช้ในการปรับปรุงการใช้สอยให้กับอาคารมาตั้งแต่กลางศตวรรษที่ 20 แต่มักถูกต่อต้านจากกลุ่มนักอนุรักษ์นิยม ว่าเป็นการทำลายและการบิดเบือนความหมายและคุณค่าของอาคาร ซึ่งทำให้กระบวนการนี้ไม่เป็นที่ยอมรับในกลุ่มนักอนุรักษ์เท่าที่ควร โดยในปลายศตวรรษที่ 20 การปรับอาคารให้มีการใช้สอย (adaptation) และการปรับการใช้สอยอาคาร (adaptive use) ได้รับการพัฒนาร่วมกับทฤษฎีด้านการอนุรักษ์สถาปัตยกรรม จึงก่อให้เกิดการยอมรับว่า การปรับปรุงอาคารให้มีการใช้สอยนั้นเป็นวิธีทางด้านการอนุรักษ์สถาปัตยกรรมแบบหนึ่ง ที่ช่วยให้อาคารเกิดการพัฒนาในด้านการใช้งาน และลดการขยายตัวของพื้นที่เมือง โดยการส่งเสริมการปรับปรุงอาคารประวัติศาสตร์ให้เกิดการใช้สอยไปพร้อมกันกับการฟื้นฟูพื้นที่เมืองเก่า โดยในระยะเวลาที่ผ่านมา การศึกษาด้านการปรับปรุงอาคารให้มีการใช้สอยได้พัฒนาจนมีความหลากหลายของแนวทางของการนำไปใช้ในการวางแผนและการปฏิบัติ ซึ่งมักเป็นไปตามทฤษฎีอนุรักษ์มรดกทางสถาปัตยกรรมในแบบอย่างตะวันตกเสียเป็นส่วนใหญ่ ซึ่งอาจไม่สอดคล้องกับแนวคิดและวิธีการอนุรักษ์สถาปัตยกรรมในประเทศไทย

บทความนี้จึงขอนำเสนอและยกตัวอย่างของนิยามคำว่า adaptive use ในความหมายว่า “การปรับการใช้สอยอาคาร” ในบริบทของการอนุรักษ์มรดกทางสถาปัตยกรรมในประเทศไทย ผ่านการศึกษาทางประวัติศาสตร์และพัฒนาการของนิยามของมรดกทางสถาปัตยกรรม เพื่อทำความเข้าใจแบบแผนและวิธีการและความสัมพันธ์ของการปรับปรุงการใช้สอยอาคารกับการอนุรักษ์มรดกทางสถาปัตยกรรม ผลการศึกษาสามารถสรุปได้ว่า การปรับอาคารให้มีการใช้สอยของอาคารในประเทศไทยสะท้อนให้เห็นถึงแบบแผนของการอยู่อาศัย และการเปลี่ยนแปลงที่คำนึงถึงประโยชน์ของการเกิดประโยชน์ในทางวัฒนธรรมและเศรษฐกิจที่เปลี่ยนแปลงไปตามยุคสมัยของกาลเวลา

คำสำคัญ: 1. การปรับการใช้สอยอาคาร 2. การปรับอาคารให้มีการใช้สอย 3. การอนุรักษ์ 4. ลักษณะของการเปลี่ยนแปลง 5. ประเทศไทย

Adaptive use mentioned by Fielden (1982 and 2003: 10-11) in Conservation of Historic Buildings, that changing utilisation of the building was the way to secure historic and aesthetic values, could be saved economically while the building was improved to the contemporary standard. At the same time, Cunnington (1982) pointed that conversion forwarded by various purposes from amenity society, including finding a new use, protection or even threaten building, rather than supplied the demand. "Conversion or adaptive reuse of historic building restores to utility by changing the building functions (Rypkema, 1992: 206 Tiesdell, 1996: 34) that any cultural significance should be retained both tangible and intangible values (Burra Charter, 1999). To Increase lifespan, compatible use is always expected in terms of functional appropriation, space use and usage impact. To develop the process of creative reuse project Latham (2000: 93-106) suggested that the brief of the project must be carefully written among the stakeholders under the profession of architect, developer, owner and other authorities. In fact, adaptive use and adaptive reuse are prospect tools ensued widely through historic town in Europe, America and some Asian countries in order to reboot both local and regional economy for which the expectation of proposed benefits required Obasali (2009: 1). Recently adaptive use also assisted the existing building to have a higher standard of living by the upgrading of building service system, safety and regulation standard Giebeler (2009: 14). So the standard of upgrading the existing one has also shifted to embrace ecological enhancement including reducing impacts to our environment. Besides, Pimonsathean (2004: 166) exposed that the idea of adaptive re-use would enable gentrification in neighbourhood area after local seen the opportunity of changing building function to be more viable. The active use – commercial use was mentioned in his paper that it would bring higher income to existing buildings in designated area.

Compatible use is the most desirable when the building is in the programme of changing use. Since conversion of building is always controversy, any changes to the physicality should be ideally reversible back to the original state (Burra Charters: 6) and carefully considered before any destruction. "*Change may be necessary to retain cultural significance, but is undesirable where it reduces cultural significance. The amount of change to a place should be guided by the cultural significance of the place and its appropriate interpretation* (Burra Charters, 1999: 6)". Therefore change is a result from the

³ Renovation is the process of restoring the building to an earlier condition.

with a new use at the aim of forwarding to the next generation. At this point, the constraint of maintenance cost regarding conservation, for example, has arrived. Later the rising trend of heritage as a part of economic sector had developed following to the socio-cultural trend. So meaning of heritage in Thailand has started to cultivate according to public thought towards the national legacy and integration to everyday use.

Development of conservation concept in Thailand as a result of religious way of life is reflecting to the activity of making a merit to the temple they supported. Conservation and inheritance of importance substance was concealed by annual activity of temple improvement in which part of faith⁴. So application to the temple building and its environment was fabricated to Buddhist's activity essentials. In fact each wealth family habitually donated a large amount of money to the temple restoration and refurbishment. The idea towards the importance of heritage then hardly comprehended in this case. The formal definition to heritage was firstly promulgated in 1854 (2397 B.E.) during the Reign of the King Rama IV - Phrabat Somdet Phraporamenthramaha Mongkut Phra Chomkiao Chaoyuhua when the boundary of the temple was specified to highlighting the protected area⁵ (Ked Rangwat). Again when there was an establishment of the Royal Museum and Archaeological Club during the King Rama V- Phrabatsomdet Phraporaminthramaha Chulalongkorn Phra Chulachomkiao Chaoyuhua. At this time the strong idea of civilization had forced the development of new urban life, hence many types of utilities were invented both in and out of the city wall. The new museum and library, for example, were temporary occupied in the Grand Palace.

Later old object and historic building under the concern of Prince Damrong Rajanubhab, who was the founder of the modern Thai education as well as conservationist, established a notion of conservation applied to those old stuffs including objects and buildings aged more than 100 years to have historical importance attached⁶. At this time the inventory of all importance was conceived under the criteria of age, craftsmanship, and spiritual value. In 1929 (2472 B.E.) the member of Royal Institute was established to

⁴ Pinraj Khanjanusthiti. 2009. Karn Anurak Moradok Sathapattayakum Lae Chomchun. (In Thai). **Conservation of Architectural Heritage and Community in Thailand**. Bangkok: Chulalongkorn University Publishing. 18-19.

⁵ Ibid., 20.

⁶ Ibid., 23.



authorize all listed historic buildings and objects⁷. Later the authorization was processed by Fine Art Department, erected in 1933 (2476 B.E.). At this period, conservation in Thailand was mainly focusing on the ruin monuments in Sukuthai, Ayutthaya and other historic town, however the building still in use was barely concerned on conservation works apart from the temples. The marked spot of Conservation in Thailand was when the promulgation of Conservation of Historic Building, Historic Object and National Museum Act 1961 (2504 B.E.) to strengthen the national heritage protection from illegal antiquities trade.

The dramatic change in the Thai conservation again shifted promptly when there was a foundation of built heritage conservation committee in 1976 (2519 B.E.) in order to take a responsibility on preservation of all historic buildings in Bangkok by selected criteria of historical value, archaeological value, artistic value and architectural value. Followed by the foundation of 1978 (2521 B.E.) committee of Bangkok's 200th anniversary set up the policy for new building, infrastructure and annual expenditure for clearance and development of new park, conservation of valued building and planning of land use on the Rattanakosin Island⁸. Later the promulgation of historic building practice guidance in 1985 (2528 B.E.) has included a new definition of “**Rehabilitation**” which is mainly the maintenance and upgrade of in use historic building⁹. Other than that, the revision of the Conservation of historic building, historic object and National Museum Act 1961 revised in 1992 (2535 B.E.) has brought about the expansion of the conservation method which parallel to the international guideline¹⁰. The new definition - “**Renovation**”, a method of building adaptation bringing back to original state and upgrading to suit the contemporary use, has mentioned in the practice guidance of this Act.

In parallel to the Conservation Act, Bangkok Building Code regarding prohibited area of construction, prohibition of building adaptation, prohibition of utilisation of some building type or category in the area of inner Rattanakosin, Phraborom maha ratchawang Phranakorn,

⁷ Ibid., 25.

⁸ *ibid.*, 31.

⁹ Fine Art Department. (n.d). Rang Mattra Than Lae Naeothang Patibat Khong Kromsinlapakon Nai Kan Damnoenkan Boransathan Borankhadi Lae Kan Phiphitthaphan . (In Thai). Draft of Standard and Practice Guidance of Historic Building and Archaeology and Museum Working Proceude by the Fine Art Department. 115.

¹⁰ Kikom Musikakhama. 2005. Naeo Patibat Nai Kan Sa-nguan Raksa Boransathan Tam Phraratchabanyat Boransathan Boranwatthu Lae Phiphitthaphanthasathan Haeng Chat Phoso 2504 Kaekhai Phoemtoem Phoso 2535. (In Thai). Practice Guidance of Historic Building and Archaeology and Museum Working Proceude in 1961 revised in 1992. 115.

Bangkok 1985 (2528 B.E.) has controlled functions in the Conservation area of Rattanakosin Island, where is the major location of listed building, to limitation. Followed by Bangkok Building Code regarding the area not allowed construction, prohibition of building adaptation, prohibition of utilisation of some building type or category in the area of outer Rattanakosin Phra borom maharatchawang Phranakorn Bangkok 1987 (2530 B.E.), the control to the area of Rattanakosin, historic core of Bangkok, has been under allowance of very limited functions. Therefore the whole island has become confined. In fact, there are constraint on such utility of production and small industrial in the household. The dramatic change to the urban functions by means of master plan, land use and control of use has brought many of building in the inner historic area to become redundant before the turn of tourism arrival in 1992 (2535 B.E.).

While conservation area in Thailand after 1987 (2530 B.E.) was progressively control of utilisation in the protected boundary, the Fine Art Department, Ministry of Culture started to preserve significant buildings still in use by promulgation of legislation as a national heritage. This trend was rising gradually because the enduring buildings constructed during the beginning of urbanization period in the 1900s are old enough for legislation. At the same time, the sudden recession – Tom Yum Kung Crisis in 1997 (2540 B.E.) has totally downed scale of business. Therefore many empty buildings were simply refurbished for new use. However the concept is not relevant to conservation. Pragmatically adaptation and conservation seem to develop separately through the concept and procedure. In reality the concept of adaptive use in Thailand has not officially described by the guidance of the Fine Art Department.

5.2. “The development of Adaptive use in Thailand”

Re-use of building in Thailand occurs through time due to changing in politics, economic, and social function. This is especially in abandoned building or its original use is failed from previous service. Within the same location, the building always changes its meaning and spirit by replacing utilization in order to fabricate with updated surrounding and purpose of new use. Adaptive use of historic building in Thailand has not just defined officially but it occurs naturally with the reason of usefulness. In this paper, the evolution of adaptive use in Thailand is explained through the understanding of “heritage” role.

Primarily, reuse of Thai house for other public purposes, for example, could be commonly in the case of donation. When the owner of the building passes away, the family



always removed the timber house to the temple as part of making a merit activity. Another sample is that once the building in the area of the temple falls into disused, it was always converted to occupy by the other functions. In fact, the former timber house which used to be the residence of the King Rama I, Phra Phutthayotfa Chulalok, before his reign was later donated to use as a chronical house (Ho Trai) at Rakang Temple. In this case, the house was recomposed to assemble an appropriate space for Thai long book made of palm leaf including reading and writing area. Another interesting case is the conversion of previous sanctuary space of Phra Chetuphon Wimolmangklaram Rajwaramahaviharn Temple to become Sermon hall (Sala Kanparian) where the Buddhist usually comes for making a merit. The existing building was expanded frankly on each side for larger space to represent new building style of era. In this period adaptive reuse was not defined by actual conservation, but fabricate in cultural way of living and making a merit. Up until the Reign of the King Rama V, there was a dramatic change in building conversion, when the definition of new building categories such as museum and library were invented.

A sample can be described “adaptive use” during that time was the Wang Na or the Front Palace where it used to be a residence of the king’s younger brother promoted as a viceroy. After the death of Krom Phra Ratchawang Bowon Wichaichan, the viceroy was changed to the crown prince therefore the Front Palace was left abandoned. Within the best location where next to the Grand Palace and Grand Field - Sanam Luang, the Front Palace was converted to the National Museum (Image1) in order to store treasure exhibited during the first Thai Expo at Sanam Luang. Other cases at similar period are conversion of Royal Sermon Hall of Previous Royal Cremation located next to the south west of Sanam Luang to become a public library¹¹. The sample which is differently to the others is conversion of Phraya Thai palace into Phraya Thai Hotel which economic and new development are major keys¹².

In summary many significant buildings during this era were adapted for further usages after the previous one expired. The new additions were always added but most of them are temporary and reversible. For permanent extension the adding features were designed to

¹¹ Fine Art Department. (2013). Wang Na. (In Thai). Front Palace. Bangkok : Borisat Rung Sin Kan Phim (1977) Chamkat. (In Thai).

¹² Chomrom Khonrak Wang Nai Phra Upatham Somdet Phakhini Thoe Chaofa Phet Rattana Ratchasuda Siri Sophannawadi. Phraratchawang Phaya Thai Wan Na Lae Wann. Bangkok : Hochoko G.S.M. trading.

blend with the existing structure both materials and forms. The new addition of building space was aimed for more area of utilisation, functional accumulation and expansion of building scale.

Adaptation of building was developed slowly up until the reformation in 1932 (2475 B.E.) when many palaces were repossessed to the government. Hence they were occupied by government authorities. In reality new uses replaced the existing spaces had not much change to the building physicality both on building fabrics and other components. For example, Bangkunphrom palace was turned to the youth soldier office while Ladawan palace was purchased by the Crown Property Bureau. New furnitures for office uses were replaced the old household one by fitting to the available spaces. The actual alteration applied later when each organisation had growth over than building capacity. Then the extension was added at the back and sometimes higher expectation of convenience in the work place had forced the building turned into the closed system with air-conditioning which was transforming the place to go far from originality.

The dramatic change in adaptive reuse of historic building in Thailand was when Rattanakosin Island was registered as a conservation area in 1982¹³. Hence many existing building functions were terminated due to the reason of safety and tidiness to the protected area. Many important buildings lost their usages and became redundancy. The new uses that were appointed to suit with the new masterplan were specified for cultural uses such as museum, art gallery and library. As a result many government offices were proposed to relocation. With this concept many of previous palace was returned to possess by the actual owner or the foundation required the building for cultural uses. The Royal Coin Factory, for example, was converted to the National Art Gallery, after the previous function was out of the new context – proposed conservation. This trend is carried on up until recently since the building as “heritage place” is defined for something precious for preservation and protection as originality.

Another significant development to changing building use of heritage is when the conservation of historic building, historic object and art object and national museum act (revision) 1992 (2535 B.E.) were revised and there were higher number of historic building

¹³ Somchart Chungsirirarak. 2011. Khwamchuea Lae Naeo Khwamkhit Nai Kan Anurak Boransathan Khong Thai Chak Adit Su Patchuban. (In Thai). THAI'S ATTITUDE AND CONCEPT IN CONSERVATION OF HISTORIC STRUCTURES FROM PAST TO PRESENT. *Najua*. Vol 8 (2011) September 2011- August 2012. 105-127.

still in use registered. Any conservation works to the listed building were regularly supervised by the specialist from the Fine Art Department, Cultural Ministry, therefore any changes applied to misrepresent the building from original build were raked out. At the same time the new design always proposed the physicality of the building back to the original state. Samples are the adaptive use of Bang Khunphrom Palace to Bank of Thailand Museum, the adaptation of Throne Hall (called Thong Pra Rong in Thai), and the conversion of centre mansion (called Tam Nak Klang in Thai) and Pannarai mansion to classroom and later art gallery for Silpakorn University (Image 2). Even these two projects have different purpose of functions, but their inner rooms and corridors were retained as the previous pattern of Royal residence with minor adaptation to building elements¹⁴. However Peeraya Boonprasong (2015) mentioned in “Creative Reuse of Western Style Buildings Constructed between 1851 and 1925 in Bangkok for Museum Uses: Design Interpretation and Procedure” the building in the process of adaptive use was sometimes proposed for conservation works before the actual use was desired. Therefore the historic building was under the constraint of threats after changing use. For the case that adaptation and conservation concept had been developed together the building may challenge other difficulty of fitting the right use into the right space.

In 2003 important building as a national heritage located on the Rattanakosin Island where is protected as a conservation area is strategically proposed for multi-cultural use. The nine important buildings previously used as government offices were proposed for different theme of active learning museums (Chaianan Samuthrawanich, 2005 (2548 B.E.)). In fact only 2 projects: the Museum Siam and Nitasrattanakosin (Rattanakosin Exhibition Hall) were conceived. Interestingly conversion at this time was brought about modification of building structure and space to fit with the existing exhibition space and special techniques (Image 3). These samples represented the shift of changing building use to creative reuse where process of programme, design concept and change were carefully planned before the project started. The new uses of existing buildings were proposed to building

¹⁴ Peeraya Boonprasong & Pobsook Tadtong. 2014. Wichai Rueang Kan Pramoen Akhan Baep Tawantok Rawang Phoso 2394 Thueng Phoso 2468 Thi Dairap Kan Prapprung Phuea Prayot Chaisoi Thang Watthanatham . (In Thai). The Evaluation of Western Style Buildings constructed between 1852 and 1925 in Thailand after Converting to Cultural Use. Granted by supported research from additional budget of annual finance year 2011. Silpakorn University Research and Development Institute in the category of research/creative project.

importance. The new integrated technologies – sounds, films and computer generated images were designed to enhance interpretation through exhibited contents.



Image 1: Illustrates replacement of building space used to be an inner Throne Hall at National Museum (taken by the writer)



Image 2: Illustrates new fitting in the former centre mansion (called Tam Nak Klang in Thai) and Pannarai mansion to an art gallery of Silpakorn University

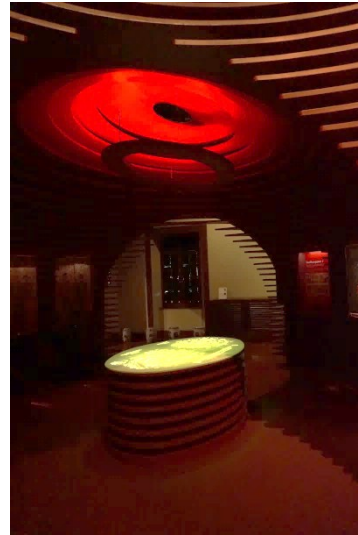


Image 3: Illustrates multi-media application used at Museum Siam (taken by the writer)

For other buildings, which are not officially listed, there was a rising trend of converting an old building for commercial benefit after the recession in 1997. Small redundant buildings with unique characteristics in such a swamp historic area have become the opportunities for those who had low ability of new business investment. In reality, old wooden houses, row houses and shop houses were replaced by new comers from the outside who required small business and simply living. Alongside of this occurrence was that creative reuse of old property for creative cultural manner to serve the sector of cultural tourism.

The last sample is revision of old businesses inherited from the ancestor. These forms of changes are providing opportunities in business competitiveness. In this case adaptations are proposed both business model and image. Therefore the historic building which was obsoleted from the previous function was upgraded. At the same time, the product is also rebranded. Samples are outdate shops on Yaowarat Road (China town) where the existing businesses have been carried on for 3-4 generations were reinvigorated.

The new design of physical image, logo and product are necessarily revised to meet the needs of shopper behavior.

Adaptive use in Thailand is frequently proposed when one building was turned from one use to one another in the form of rehabilitation. A new use may apply to fit within the building or either context by developer and owner background and experiences.

6. Analysis

Adaptive use as a method of shifting building usages occurs in a way of living process as a result of buildings alteration, adaptation, extension, modification and modernization. The development of adaptive use in Thailand intertwined with Thai conservation of historic building is analysed with characteristic of adaptation method which are change of use, conversion, adaptive use, adaptation, reuse, creative reuse and adaptive reuse. Firstly terminology of adaptive use is defined. Secondly the development of adaptive use in Thailand is understood through conservation idea, level of intervention, characteristic of changes, samples, adaptation method and presence of heritage.

From the literature review, terminology of adaptation can be divided into 7 categories: change of use, conversion, adaptive use, adaptation, reuse, creative reuse and adaptive reuse. The Table below (Table 1) represents ideas of change and applied methods of adaptive use terminology.

Terminology	Ideas of change		Methods
	Buildings	Buildings with significance (Heritage)	
Change of use	1) Space replacement	-	Fitting in existing layout
	-	2) Limited modification	Preserving layout and decoration of the building (ICOMOS, 1964)
Conversion	Appropriateness between new use	-	Physical matches between functions and existing

Terminology	Ideas of change		Methods
	Buildings	Buildings with significance (Heritage)	
	and existing space		spaces desired spatial relationships between the functions to be located (Aylward, G. 1979).
Adaptive use	-	Shifting level of usage	Upgrade of building structure in which values are conserved (Fielden, 1993)
Adaptation	1) Minor amendment of existing building by a creative transformation process to endure usage	-	Continuing use of existing building or fitting new use by limited changes of building characteristic (Crammer, 2007)
	-	2) Process of altering significant building	Allowance of modification by consideration of significance (ICOMOS AUSTRALIA, 1999)
Reuse	Replacing building with a new function	-	Anticipate extended values by modification and extension to the existing



Terminology	Ideas of change		Methods
	Buildings	Buildings with significance (Heritage)	
			fabric
Creative reuse	-	Process of developing new compatible function for historic building to fit within the changing context (Latham, 2000)	Various approaches of uses for further benefits from society and cultural distinctiveness to assessable economic and environmental improvement (Orbasli, 2009)
Adaptive reuse	-	Method encompassed changing expired function to become rejuvenating	Sustainable development as economic value in a standing structure (Murray 2012).

Table 1: Idea of changes and methods of adaptive use terminology

In conclusion, terminology in relevant to process of changing use can be divided into 3 main categories which are 1) Terminology of change without conservation concept 2) Terminology of change with conservation concept and 3) Terminology of change included conservation and habitation. Firstly, change of use, conversion, adaptation and reuse are frequent terminology used when building is shifting of usage. Secondly, Change of use, adaptive use, creative reuse and adaptive reuse are the method of shifting use in historic building which is defined as significant one. Thirdly, Change of use and adaptation seem to be methods that bound concept of conservation and habitant changing process together. Change of use is mainly focus on fitting new function into the existing space by limitation of change, but adaptation is a method allowance for minor changes with retention of overall

characteristic. These 3 categories of methods has shown that methods of adaptive use can be divided into 3 levels of modification. Firstly, change of use without conservation happens as fabrication of living where existing space of building is replaced by same use or new use. At this level, changes have not complied with building fabrics. At the second level, changes always take a form of partial adaptability since building fabrics are interpreted for values and significance. The third level is reuse and adaptive reuse which is the method of shifting use to rejuvenate decline and deteriorate building to become alive. Benefits are always expected after the process because of expensive cost of refurbishment. With these characteristic of changes, adaptive use in Thailand will be analysed and discuss in the next section. The Table 2 illustrates relationship of heritage protection and adaptive use in Thailand.

Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaption	Heritage Interpretation
Rama I to Present	-	<ul style="list-style-type: none"> ■ The resident of the King Rama I adapted to a chronical house (Ho Trai) at Rakang Temple ■ Previous sanctuary 	<ul style="list-style-type: none"> ■ House expansion ■ Temple repair and refurbishment ■ Donation of old house to temple 	<ul style="list-style-type: none"> ■ Growth of area required ■ Replacement of existing space ■ Extension of existing space ■ Existing building still in use which 	<ul style="list-style-type: none"> ● Change of use ● Adaptation 	N/A



Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
		space of Phra Chetuphon Wimolmangklaram Rajwaramahaviharn Temple adapted to Sermon hall (Sala Kanparian)		<p>needed more space</p> <ul style="list-style-type: none"> ■ Conversion of no building to have useful function ■ Extension 		
Rama IV	Protection of area around temple	-	<ul style="list-style-type: none"> ■ Temple Protection and enhancement 	<ul style="list-style-type: none"> ■ Enhancement: new building added ■ Extension of existing space 	<ul style="list-style-type: none"> ■ Protection 	<ul style="list-style-type: none"> ■ Temple as a monument ■ Other building as everyday

Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
Rama V	Protection of building and object over 100 years old	<ul style="list-style-type: none"> ■ Front palace (Wang Na) converted to the National Museum ■ Royal Sermon Hall of Previous Royal Cremation converted to public library 	<ul style="list-style-type: none"> ■ Conversion of unused building 	<ul style="list-style-type: none"> ■ New use applied to unused building by replacement of existing space 	<ul style="list-style-type: none"> ■ Change of use ■ Conversion ■ Adaptation 	use
Rama VI to Rama VII	Protection of building and object over 100	<ul style="list-style-type: none"> ■ Phraya Thai palace into Phraya Thai Hotel 	<ul style="list-style-type: none"> ■ Conversion of existing building 	<ul style="list-style-type: none"> ■ Changing use of building to have feasible income 	<ul style="list-style-type: none"> ■ Change of use ■ Conversion ■ Adaptation 	



Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
	years old			<ul style="list-style-type: none"> Inserting new element to serve new requirement of use without changing the whole image of the building 	<ul style="list-style-type: none"> Adaptive reuse 	
After the establishment of Fine 1932 (2475 B.E.)	Preservation of monument regarding 1933 (2476 B.E.) Act	-	<ul style="list-style-type: none"> Historic Ruin and monument 	<ul style="list-style-type: none"> Preservation of existing building 	<ul style="list-style-type: none"> Conservation 	Heritage as a monument but it has not applied to all types of architecture
		<ul style="list-style-type: none"> Bangkunphrom palace adapted 	<ul style="list-style-type: none"> Existing palaces converted and 	<ul style="list-style-type: none"> Replacement of existing space 	<ul style="list-style-type: none"> Change of use Conversion 	Destruction of important buildings

Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
		to youth soldier office ■ Ladawan palace adapted to Crown Property Bureau office	adapted to small scale offices		■ Adaptation	
Around 1970s to 1990s	Conservation of historic building, historic object and National Museum Act 1961	-	■ Historic Ruin and monument	■ Conservation of important buildings	■ Conservation	Heritage as a monument
		■ The Royal Coin Factory converted to the National Art Gallery	■ Building with significance ■ Old building	■ Conversion of existing buildings around Rattanakosin Island (Protected area which	■ Conversion ■ Adaptation ■ Reuse ■ Adaptive	



Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
		<ul style="list-style-type: none"> ■ Bang Khunphrom Palace to Bank of Thailand Museum ■ Throne Hall (called Thong Pra Rong in Thai), and the centre mansion (called Tam Nak Klang in Thai) and Pannarai mansion converted to 		<p>was later a conservation area)</p> <ul style="list-style-type: none"> ■ Previous palace, occupied by office use after 1932, restored and refurbished for cultural uses 	<p>use</p>	

Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
		classroom and later art gallery for Silpakorn University				
After 1992 (2535 B.E.) to present	Conservation of building still in Use regarding the Conservation of historic building, historic object and National Museum	<ul style="list-style-type: none"> ■ Revision of Bang Khunphrom Palace to Bank of Thailand Museum ■ Adaptive use of John Sampson & Son Limited (previous Department of 	<ul style="list-style-type: none"> ■ Building with magnificent character converted to cultural and educational uses 	<ul style="list-style-type: none"> ■ Extension of existing space ■ Modification 	<ul style="list-style-type: none"> ■ Conservation ■ Conservation and change of use ■ Conservation and adaptive use ■ Conservation and adaptation 	Heritage as cultural function



Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
	Act 1961 revised in 1992 (2535 B.E.)	Public Works and Town & County Planning to Phrapokklao Museum <ul style="list-style-type: none"> Conversion of Parussakan Palace to Police Museum 				
After 1997 (2540 B.E.) to present	NA/ Local Building regulation	<ul style="list-style-type: none"> Former Embassy of the Russian Federation to the Kingdom 	<ul style="list-style-type: none"> Revision of new business model Renovation of new 	<ul style="list-style-type: none"> Replacement of existing building space Extension of existing 	<ul style="list-style-type: none"> Conservation and conversion Conservation and 	Heritage as commodity

Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
		of Thailand to lounge of W Hotel ■ Former Lord's mansion to Praya Palazzo (3 stars hotel)	building image ■ Rebranding of existing business	space ■ Modification to new image ■ Process of finding new use for obsolete and redundant building ■ Feasibility	Change of use ■ Conservation and Adaptation ■ Adaptive use ■ Adaptive reuse	
After 2003 (2546 B.E.) to present	Conservation of building still in Use regarding the Conservation of	■ Adaptation of Former Ministry of Commerce office to Museum Siam ■ Adaptation of former Ratchadu	■ Building with magnificent character converted to public	■ Replacement of existing space ■ Extension of existing space ■ Modification ■ New	■ Conservation ■ Conservation and conversion ■ Conservation	Heritage as strategic agency



Period	Conservation Law and Policy	Sample	Level of Intervention	Characteristic of changes	Relationship of conservation and adaptation	Heritage Interpretation
	historic building, historic object and National Museum Act 1961 revised in 1992 (2535 B.E.) and policy on enhancement of public space on Rattanakosin Island conservation plan	mnuen Building to Nitasrattanakosin (Rattanakosin Exhibition Hall)	uses as well as urban function	creative function <ul style="list-style-type: none"> Process of changing 	ion and Change of use <ul style="list-style-type: none"> Conservation and Adaptation Adaptive use Creative reuse 	

Table 2: Relationship of heritage conservation and adaptive use in Thailand

From the table above, it can be concluded that changes occur at all time when the building are growing and declining. Change of use is essential when use of building is obsolete or expired from one purpose. Before heritage conservation was erected in Thailand, change of building use occurs from way of living to replacing the existing empty building space. The two different approaches were use as available space and use as modification and extension of building fabric. In reality, existing use was expanded by increase numbers of participants therefore larger space was required. At the same time, new use and changing of owner would bring the new programme to the existing building. In this paper, this pattern has happened since the beginning of Rattanakosin era and still carried on through time.

Even though conservation was formally invented in 1932 under the act by the Fine Art Department, changing of use in building still carries on up to owner requirements and expectation of uses. Change of use and adaptation was shift to new use which has not been existed in Thailand such as museum and art gallery. Replacement and modification of building fabric was applied by change of use, adaptation and adaptive use. After 1970s, redundant buildings on Rattanakosin Island were converted to new cultural use by concern of protection and lost to significance and value of heritage. Change of use started to merge with the idea of conservation as a result of adaptive use and adaptation. The process of changing use was shifted again after the revision of historic object and National Museum Act 1961 in 1992. Adaptive use and adaptation was also focused on reinstatement of building characteristic to first build. Adaptation in this approach is thoughtfully examined in the process of change. In fact modification on building fabric is hardly allowed when building is defined for “heritage as a monument”.

Later meaning of heritage was developed to become a strategic agency where creative function is developing during the conservation procedure. Peeraya Boonprasong (2014) pointed that conversion of outdated and redundant buildings were strategically proposed for new long term utilisation as an urban function in which new uses integrated within the context. The method of this conversion can be implied to creative reuse. Recently, shifting of consumption trend has led the market to deliver a new chance for the building with special characteristics to re-investment. In this case, adaptive reuse is applied in through working process. The original characteristic of the building is habitually preserved for added values while the new design may be proposed for the enhancement. By these

two approaches, adaptive use can be defined for strategic tool in planning as creativity, investment and sustainability. The idea of conservation and adaptation has started to against each other about what to preserve and care for. However the other cases such as old buildings in good location or good condition are still allowed for reuse. By this case, the building is freely altered under the control of building regulation.

7. Discussion:

Adaptation in the Thai context is always fabricated with our pattern of living since the idea of residential expansion, temple renovation and replacement of outdated function. Up until the arrival of conservation in 1961 (2504 B.E.), adaptation and conservation started to be against each other when the requirement of use and preservation of heritage represented their own hierarchy. The heritage conservation has later expanded to include both cultural significance and inheritance hence the use of heritage is not only defined for cultural area, but also strategic tool in the economic sector. Historic building as heritage integrated with adaptation and creative reuse has become an opportunity for building conservation. However the constraint of conservation and the lack of public understanding have caused the difficulty during the working process. In fact strong regulation on modification and alteration may force the owner to demolish their properties. At the same time, lack of conservation knowledge among the public may allow people to convert their properties liberally. So, adaptation and conservation should be urgently developed for an option of conservation methods, offering more opportunity for historic buildings in Thailand to stay stand. Importantly we must understand the architectural means of conservation in which change is for protecting building substance and maintaining values (Cramer. & Breitling. 2007: 16).

8. Conclusion

Adaptive use occurs in Thailand as a tool of changing building function which takes part of everyday living in which a form of minor modifications. Once conservation has been invented to the protection of important buildings, extreme frame of control in building fabric causes difficulty to a number of buildings to be altered. For the one that not listed, their unique characteristics have become opportunities for reuse.

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