

CHAPTER IV

FINDING AND DISCUSSION

The research aim to study the current cycling infrastructure based on cyclists' experiences related to their requirements was conducted in order to provide useful guidelines for the future bicycle tourism development in Bangkok. This chapter indicates from the cyclists' perspective based on fact of visible cycling infrastructure and their emotional to approach to their experience. There are two parts as follows;

1. Findings
2. Discussion

Findings

Although some of research plan seems almost too optimistic, cyclist representatives made a major breakthrough in the approach to the data collected, both by direct observation and interviews. The researcher obtained data on the fact of physical concerns which consist of bike lanes, cycling sign, cycling route, cycling path and parking including other factors toward from visible condition and cyclist view point. The emotional data was most important to provide a broad picture of the areas that need to be improved as;

1. The efficiency of current bicycle infrastructure in Rattanakhosin Island.
2. Cyclists' experiences on bicycle infrastructure.
3. The appropriate bicycle infrastructures require for the improvement.

Physical Data: The efficiency of current bicycle infrastructure in Rattanakhosin Island

A summary of bicycling infrastructure that visible and recorded with check list in each location is provided in table 5. The checklist provided condition score rate in every bicycle infrastructure were found along bicycling route and briefly note taken reasonably. Photograph in Table 6 provided broaden picture in the visible of physical condition as;

Physical Condition of bicycle infrastructure in 5 Locations within Rattanakhosin Island.

Table 5 Summary of physical condition of bicycle infrastructure

Bicycle Infrastructure	%
Bike lanes	24.4
Bike path	24.4
Bicycling Pave	15.6
Signed share roadway	24.4
Connecting Route	15.6
Bicycle Rack	20.0
Parking	26.7
Safety and Security	24.4
Others element	11.1
Total	100.0

The data collected from five locations in Rattanakhosin Island attraction were analyzed in order to determine the current cycling infrastructures condition toward to their efficiency. Obviously, bike lane, path, signed and safety in all locations observed was similar of 24.4 % of their capability that current place in these area while parking was highest reached 26.7% of visible conditions provided to cycling. A total of five locations shared a low efficiency at 15.6% to the connecting route but lowest come from others elements such as road surface, manhole cover over bike lane etc.,

Table 6 Physical condition recorded

Infrastructure	Barrier for cycling	Locations
Bike lanes	Full of other vehicles	L1,L2,L3, L4,L5
Bike path	Shared with foot path, full of street vendor, motorcycle parking	L1,L2,L3, L4,L5
Bicycling Pave	Broken pave and some are not available	L3,L4
Signed share roadway	Look Invisible , others driver ignored to keep out from bicycling route	L1, L4,L5
Connecting Route	Not appropriate, not provided the connecting route from one to another	L1,L2,L3, L4,L5
Bicycle Rack	Fewness found, parking in public area	L1,L2,L3, L4,L5
Parking	not facilitate to cyclist who own their bike, safety parking not available along bike route(official use only)	L1,L2,L3, L4,L5
Safety and Security	Most cyclists have their own safety lock but not public provided, only at the stations, Cycling is dangerous.	L1,L2,L3, L4,L5
Others element	Unconditioned surface such as manhole cover over lanes.	L1,L2,L3, L4,L5

This theme (Table 6) was drawn to provided how physical of current cycling infrastructure visible to use in order to supported the rate of their efficiency included sufficiency that meet cyclists requirement based on fact were found through direct observed and recorded as;

1. According to **bike lanes** provided, it is most important to provide sufficient lanes with safety conditions. The cycling lanes along Rattanakhosin attraction such the most gorgeous of Grand Palace and temples was full of other vehicles such as bus, van and three wheel motorcycle some interrupted by vendor. It is also found in others areas along with Rattanakhosin bike route.

2. The **bike paths** shared with walking path in all locations, from Bangkok Tourism Division through Ban Phra Athit onward found motorcycle parking while street vendors were lie over.

3. The most important cycling facilities output in Rattanakhosin Island is the **cycling parking spot**, there are 8 parking station appear as official provided. Generally, parking for bicycle set under government seems to not facilitate to cyclist who own their bike as the result official parking spot are only provide for people including international tourist use.

4. The **cycling signs** provided since “Bangkok Green Bike Project” established in 2009 almost look invisible or unclear to other driver recognize to respect cycling. The others driver ignore the sign and parking over the cycling route where the signed present.

5. It was not every provided, the breakage of **cycling pave** was found in some areas while the existing surface of pavements and cycling paths uneven condition. There was some pavement useful to cycling up and down but still, the gap from one to another was not tie up while the beginning could ride up but there was not ride down.

6. It was notice that the hazards **connecting route** was place and shared with public road. It was found that each location from L1-L5 not provided connecting route from place to place such as route through public transport station.

7. The **bicycle rack** was mainly provided to official bicycle offer to tourists, along bicycle route found very few of bike rack. The most tourists was parking at main station while majority of own bike parking in public area around attractions, some was locked.

8. **Safety and security** was important to whom taken cycling along cycling attraction, there was a motorbike, van and bus interrupt cycling lane cause of accident. Similarly, public locked, security was not available in each station and around the areas.

9. **Others element** were observed through bicycle route found significant factor made difficult cycling appeared over cycling lanes, the unconditioned surface along with bicycle route originated unsafe cycling.

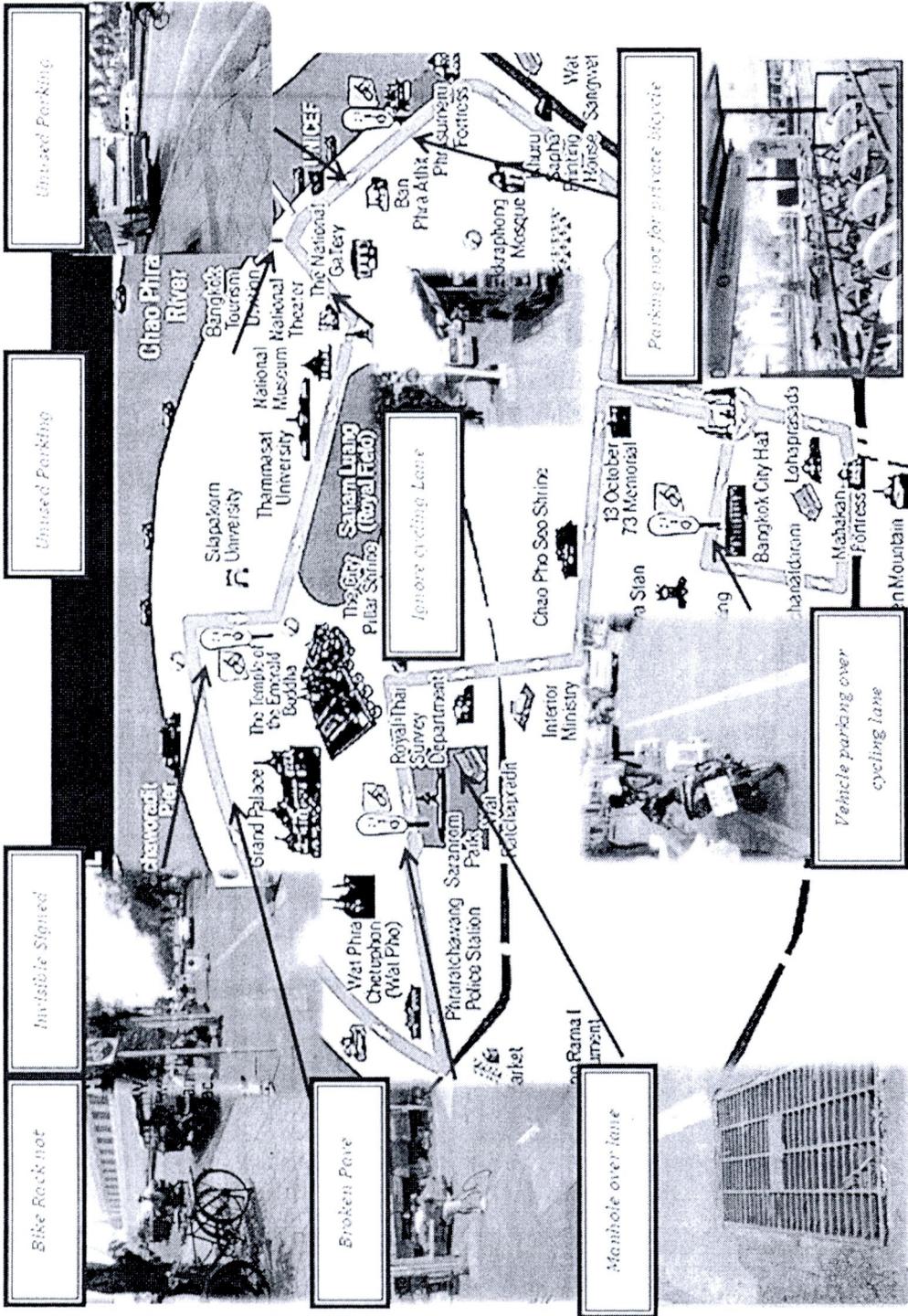


Figure 7 Observed photograph along Rattanakosin bicycle route

Figure 7 illustrates through direct observation by photos taken in several areas along Rattanakosin bike route, each locations shows the physical condition as;

(L1) shows that bike lanes were interrupted with others vehicle such as bus, 3 wheels motorcycle and motorcycle distinctly. The bicycle sign presented but it was ignore from vendors and tourist service agent therefore, the tourist coach included van taxi was park over the bike lanes. Bike parking provided since “Green Bangkok Bike” was empty, the free bicycle was removed from the station but still private bike not allowed to park. There was not bike rack available along this route thus the cyclists who own their bike was park freely with safety awareness. According to security while cycling, several photo illustrated cyclist was cycling out of lane as a result of others vehicle blocked bicycling lanes.

(L2) It was clearly seen that numerous attraction along this route were found, cyclists seem to stop more than other area. The parking spot available with no safety lock provided while Phrasumen Fort station was not allowed the cyclist park their own bike. It was proved that bike pave was unconditioned for safety cycling; from the beginning to the end of (L2) several found broken pave as note taken the up and down level not appropriated place. Nevertheless, it was a good signed that many sign shared road often found along this route.

(L3) From the Bangkok City Hall found similar ignorance driver as (L1), the number of both private and public transport parking over the bike lanes and blocked cycling. It was found much more street vendor on bicycle paths moreover, motorcycle ride with speed by in opposite direction. Throughout route was blocked with chairs, private vehicle particular in front of attraction point in order to park food vendor and/or souvenir. The prohibit sign placed but were ignore.

(L4) Similar to (L1), (L2), (L3) bicycle lanes were interrupted besides unconditioned surface was found along bike route. It was illustrated that manhole cover place over bicycle lanes included invisible signed share roadway however, the only firmed bicycling space was found around the Grand Palace street corner with visible other vehicle prohibited sign in order to provided free space for cycling tourist. Unfortunately, through the bike route apart from attraction area was found vehicle ride on cycling lanes.

(L5) In addition, (L1), (L2), (L3), (L4) bicycle lane, path, signed share roadway and security were similar found however (L5) drawn up how connecting route has been set up. It was untidy arrange one to another through public space therefore the connecting route was not continue from route to route with bicycling signed moreover, it was seem to interconnect as bike route map but not in reality of used. All type of vehicles parking and driven through the bike route while numerous motorcycle not in order stopped.

Emotional Data: The experiences and feeling of infrastructure used reflection to requirement the appropriate cycling infrastructure improvement.

A summary of experience background to the bicycle infrastructure data provided in Table 7. The data involved participants viewpoint and feeling related thus the participants data focused on 2 issues of :

1. Cyclist's opinion toward current bicycle infrastructure and
2. Their requirement to improve bicycling infrastructure.

Cyclist's opinion toward current bicycle infrastructure

The eight key informants were interviewed on their opinion to the bicycling infrastructure was experienced within Rattanakhosin Island. A total of five participants shared that current cycling infrastructure was fair facilitate to cycling the others three agree that infrastructure was poor surprisingly seven participants agree that cycling infrastructure provided was not efficiency. All participants were reasonable satisfied through the current bicycling infrastructure provided moreover eight participant in different cyclist categories totally agree that the appropriated bicycle infrastructure provided would great motivate people to cycling.

Their requirement to improve bicycling infrastructure

The entire participants was put their requirement that need to improved on physical used such as lanes, route, particular separated lane and road or walking path in addition, shower room, information and appropriate map were require while safety and security was significant asked.

Cyclists' experience in bicycle infrastructure

Table 7 Summary of cyclists experienced on cycling infrastructure

	Yes	No	Excellent	Good	Fair	Poor	Need improvement	Comment
Do the current cycling infrastructure facilitated to you? How?	√				5	3		<ul style="list-style-type: none"> - unsafe cycling - unconditioned bike lanes surface - vehicle interrupted
Do the current cycling infrastructure efficiency and sufficiency in your opinion?		√				1	7	<ul style="list-style-type: none"> - Not enough and poor management - Invisible signed - Limited
Do you satisfy of cycling infrastructure used around Rattanakosin Island? And How?	√				8			<ul style="list-style-type: none"> - Bicycling lane was interrupted by other vehicle and vendors - No rule to control and government ignore to support the safety.
Do you agree the appropriate infrastructure can motivate people to cycling in Bangkok, and How?	√						8	<ul style="list-style-type: none"> - Safety and security is most important and also their sufficiency provided.
Do you require improving for future development? What are your requirements?	√						8	<ul style="list-style-type: none"> - Route, lanes, shower room , bicycle rule or regulation - Separated bike lane from foot path and road, parking with security.

To broaden on emotion data gain from interviewed, cyclists experienced on the current cycling infrastructure were agree by eight participants that the appropriated

infrastructure motivated people to cycling and most require improving in physical safety while used. As one respondent (P1) indicated that the appropriate infrastructure would concern to the government provided and managed. The participant (P1) mentioned how a bicycling infrastructure was built for the **safety** of the bicycle rider and most complaints and advice that they receive was about **unsafe conditions** like speeding motorbike or about roads without any **bike lanes** visible to them.

Most participants agreed that cycling infrastructure is playing significant role to cycling in Bangkok. On the other hand, **the qualities and efficiency** must be strongly considered. According to interviewee of professional cyclist (P3) state that “ I can’t find any security for my valuable bike in shopping mall, attraction where I can park safely.” The **bike racks** provide does not firm of losing bike in the sense of its physical safety.

More than one agrees that the current cycling infrastructure was not efficiency to safe while cycling as (P2) stated that “It was found others vehicle parking over bike lanes made cyclist risk to accident” likewise (P4) mentioned that the ignore of bicycling sign without respect should consider to **law and regulation**.

Surprisingly, all key informants strongly agreed that government should push the **law and regulation** of cycling safety on Public Street in order to make respect to cyclist moreover; safe cycling will inspire more cycling. One participant also supported that he feel strange when complete safety wear visit outside communities it just because realizing of biking safety which he have learned from cycling oversea. The cycling safety was containing in their regulation.

According to signed provided (P5) (P6) (P7) and (P8) commented that signed share roadway was invisible and similar to (P2) (P4) stated that plenty of public bus, car, van, motorbike and food vendor occupied bicycle lanes.

Basically, everyone interviewed agreed that the growth of cycling number increased significantly as people concern Greenhouse effect and realize health enhancement but no one even know how importance of cycling activities. There is no specification was able to count any numbers or estimate of cycling use daily or even year record and any **particular sectors responsible** of development cycling tourism seriously. The significant statement was stated by (P2):

Today, Bangkok promotes several projects that consider to green issue and our cycling communities asked to participate. It was appreciated to help and we all agree that the best achieved green project such “Bangkok Green Bike” the tourism sector involved should take serious responsible and keep continue development in order to provide the sustainability.

Another participant (P8) suggests **promotion and campaign** of cycling in the cities was mention similar to (P2) as it obvious that government ignore to keep continue the project and introduce to general people know and familiar to cycling. Other participants highlighted the bicycling infrastructure compare to international experiences and their background (P4) stated “if shower room could provide along bike route would more facilitated”.

According the research finding, the research found that cycling infrastructure in the cyclist viewpoint was important physical factors to motivated people to cycling. Nevertheless, the efficiency and capabilities of infrastructure to safe cycling play more significant factor of inspiration to cycling. The physical circumstance of cycling infrastructure design should meet the international standard while the government or sector responsible takes consistent actions to build the missing parts of development plan.

Safety was very important to cycling. Almost every interviewee mentioned a concern for safety through international practice where they experienced. It may seem obviously apparent why safety was important but in the real world it was more than important and requirement to comfort and firmed life safety while cycling.

The research also found that the **law and regulation** is frequently mentioned by the cyclists. Therefore, they required the bicycle policies from the government to support cycling safety in Bangkok.

This physical and emotional aspects gather from cyclists make more understanding in cycling culture and their communities to provide guideline and practical of bicycle tourism development in Bangkok.

Discussion

From the findings, the researcher investigated the conditions that encourages bicycling tourism to be part of the sustainable development in Bangkok. The cycling

infrastructure is an important fundamental that encourages other factors to the bicycle tourism development. To reach the research objective, the part of discussion based on physical data that provided information on how current bicycling infrastructure efficiency or sufficiency to use along Rattanakosin bike route while the emotional data offer broaden on the physical condition of bicycle infrastructure reflect to the cyclists requirement and what are they require to improve to guide the appropriate development in the future.

There are interrelated between the efficiency of bicycling infrastructure link to their experienced and the cyclists experienced to the infrastructure providing their requirement to improve leading future development.

Copenhagen was a good practical livable cycling city as Traffic Department (2011, p. 23) supported that people feel safer while cycling originated from appropriated cycling infrastructure provide to use therefore, physical condition such as cycling lanes, route, path, cycling pave included connecting route are play important role to encourage more cycling in the city. Moreover, the research indicated that wider cycling track to safe from other vehicle attack. The current finding highlight the obvious in several area of cycling infrastructure was poor or need to improve particular unconditioned safety cycling lanes, path. In order to achieved the green project of using bike therefore the sector involved need to plan the appropriate development base on infrastructure to meet cyclist requirement.

Oregon Metro (2011, pp. 11-13) found that the trail or path with quality condition made more safety for bicyclist and reported picture a good condition not just only safe but including trail surface, width, length, cleanliness and surrounding area. Rattanakosin Island is most gorgeous attraction place, Bangkok should pay attention to improve bicycling path to reached international standard in order to make more tourist interested to cycling. The surface without manhole cover and wider would appropriate to be safe.

From the reviewed of world bicycle tourism background clearly supported the successes of development encourage from the local authorization in addition, the efficiency of development plan to meet cyclist requirement were come from knowledgeable within bicycling mode. Cooperation between cycling community or

association with sector involved would benefit and lead to the appropriate development.

In addition, Ritchie and Hall (1999, pp. 89-112) noted that cycling infrastructure play important to stimulate more people interested in bicycle tourism activities which related economic development thus cycling route significant considered however bicycle hire, repair shop included public toilet and shower room should recognized. The cycling route has developed around Rattanakosin attractions while the bicycle hire has set as only campaign project. It is also found that this project was owned by private bidder not government tourism sector thus the project has ended with no more bicycle hire. Nevertheless, there are several comments and require from the cyclist side therefore the shower room , toilet along the route included bicycle repair shop need to provide in Bangkok to meet cyclist demand.

The bicycle tourism development approached base on quality management is not only physical condition but the sense of responsible or understanding bicycle tourism as Gerike (2011, p. 6) suggested that activate more stakeholder to get involved of cycling awareness such as reduced speed motorbike and drive out from bicycle lane, parking management should consider by street vendor and other vehicle while put more integrate approach such as cycling tourism information, continue of communication and campaign would help to achieve bicycle tourism development in Bangkok.

The research discovered Rattanakosin's bicycling infrastructure and cyclist emotional on the fact of their experiences with the use of cycling infrastructure. In as attempt to describe this gap, the researcher design the concept to describe the context and major factors that go into cycling tourism development guideline adapted from the practical reviewed The Korea Transport Institute (2010, p. 25) as;

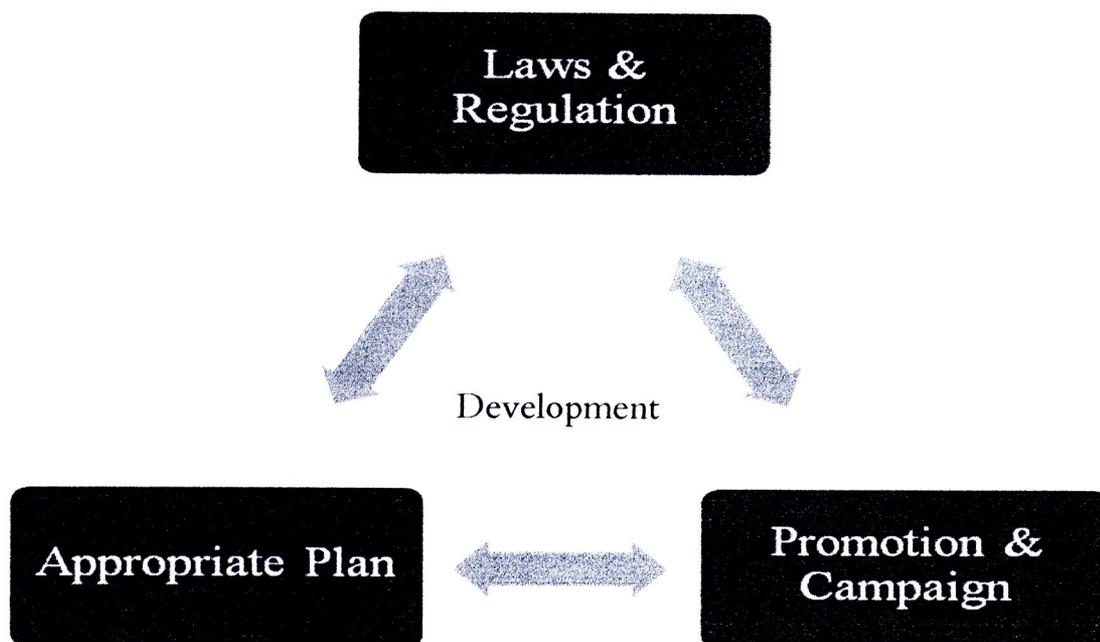


Figure 8 Cycling Tourism Development Guideline

Source: Adapted from Frameworks for Korean Policies to Stimulate Bicycle Use for Urban Transport, 2011, p.25

1. The most important part of cycling tourism development in Bangkok needs to consider **laws and regulations**. It is strongly suggested that to allow bicycling to become popular and sensible as a means of safety transportation in the city.

2. The second factor is **promotion and campaigns** adapted from Encouragement approached framework consider as significant part that allowed cycling tourism to be well-known and encourage cycling tourism to become very easy pick up in the first place for everyone and popular as a meaningful as mobile utility for such a long time.

3. The last part is **appropriate plan** which improved through feedback and evaluation while these include several factors to make a safety cycling around the city such as connecting route from side to side with respect of other vehicle to cycling people, the sufficiency parking with security that allows many more bicycle to use in

every places such as shopping mall, attraction site even market and other areas.

These three major factors of Bangkok's bicycle tourism development concept are interrelated to provide the guideline and able to implemented to other cities.

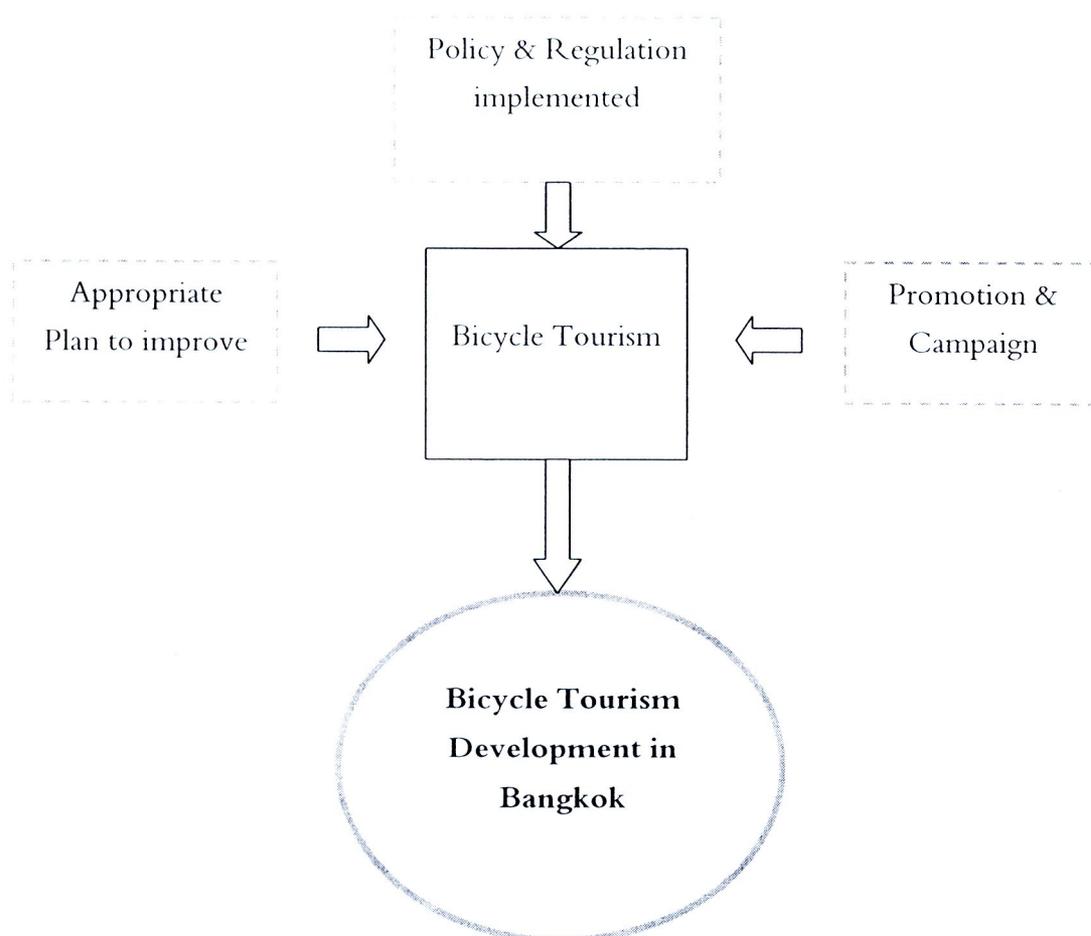


Figure 9 Interrelated 3 major factors to the Bicycle Tourism Development

This research found that the most important characteristics of this interaction between requirements and infrastructure are safety (The Technical and Environmental Administration, 2011, p. 5). That is to say, bicyclists in Bangkok feelings of safety with riding bicycles most inspire their cycling, and thus infrastructure is implemented in the form of bicycling lanes that improve the safety of bicycle ridership and allow bicyclists greater freedom of movement throughout the city, which in turn improves bicycling tourism in Bangkok of its achievement.

This also linked to the review of Institutional Frameworks for Korean Policies to Stimulate Bicycle Use for Urban Transport previously, the case studies of Rattanakhosin Island can be able to apply with other areas in Bangkok, the circumstance that reflected from cyclist perspective are the fact that visible to answer of what really make appropriate cycling tourism development because they are based on instinctive that practical or reliable as its results.

Therefore, the only way could influence the bicycle tourism development interaction between requirements and appropriate that defines Bangkok's bicycling tourism development is by implementing infrastructure. Taking lessons from Rattanakhosin Island's case study, the most logical way to jumpstart this process in a city like Bangkok would be to implement infrastructural elements that would improve how safe to ride bicycles in the city proper or how easy it is to move freely about the city on a bicycle. This would begin the association in the public mind between bicycles and safety and freedom at a cultural level, which would increase support for implementation of greater bicycling infrastructure, and so on, beginning the cultural-infrastructural complex in the new city and causing bicycling to play a greater role in the transportation of the populous of that city.

Similar cases exists in projects in the State of Oregon's Bicycle Programs 2nd adapted in 2011, the comprehensive context is great to continue future development of bicycle tourism in Bangkok in order to reaches of international standard (Oregon Department of Transportation, 2011, pp. 1-5).

To approach the bicycle tourism development through Bangkok, several factors would need to be implemented. These are physical factor improvements including the effort of understanding bicyclist requirements to guide the appropriate development.