# Prototype of Community Tourist Application (Non-Principal Towns), Nakhon Nayok Province

*Youdthachai Lertworaprachaya[1], Wattana Tanongphaeng[2], Salita Saribut[3], Pim-on Kaewdang[4]

[1]Information System Department
Faculty of Business Administration
Rajamangala University of Technology Thanyaburi
PathumThani, Thailand
e-mail : youdba@rmutt.ac.th

[2]Hotel Management Department
Faculty of Liberal Arts
Rajamangala University of Technology Thanyaburi
PathumThani, Thailand
e-mail : tawattana@rmutt.ac.th

[3]Marketing Department
Faculty of Business Administration
Rajamangala University of Technology Thanyaburi
PathumThani, Thailand
e-mail : salita_s@rmutt.ac.th

[4]Tourism and Hospitality Department
Faculty of Liberal Arts
Rajamangala University of Technology Thanyaburi
PathumThani, Thailand
e-mail : pimonk@rmutt.ac.th

*Abstract*— This research purposes a new prototype of community tourist application for non-principal towns. Most existing tourist applications have not insight information about the attractions of Nakhon Nayok Province. However, specific tourist information of Nakhon Nayok Province is not available in general tourist application. In this paper, we represent a prototype as community tourist application in Nakhon Nayok Province. We also study and investigate tourist information by meeting with local people in several communities in Nakhon Nayok province. Thus, the perfect community tourist information is available to search for tourist information and focus on tourists, especially working age tourist groups and new generation people or gen Y tourist groups. This new prototype of community tourist application non principal towns Nakhon Nayok Province contains travel route, tourist information and tourist map, etc. That tourists can choose their own travel routes and search for tourist attractions and automatically connect to the Google map.

*Keywords-tourist information, community tourist application, non-principal towns, Nakhon Nayok Province.*

## I. PRELIMINARY

The government's policy on Thailand 4.0 (Thailand 4.0) affects the policy of the tourism industry of Thailand and the tourism market 4.0 that focuses on technology innovation and creativity in tourism management. The innovation in information technology applied to tourism in non-principal towns such as Nakhon Nayok Province. It is necessary and is extremely appropriate. This is in line with the Thailand 4.0 model in accordance with the government's policy of using information technology in balancing efficiency and transparency of the work system. The information technology to the business sector has an increasing trend, especially in tourism. Due to huge of tourism information, which it was not collected and stored in a systematic manner. It leads to cause problems for those who want to use the tourism information, but there is no database to search for. For instance, in Nakhon Nayok Province, which has many tourist attractions. But there is insufficient information available for tourists to find information about Nakhon Nayok attractions. The information that tourists want to know include tourist information, accommodation information, restaurants information, etc. If the community has a good systematic collection of tourism information. It will facilitate tourists and the general public to come to travel in Nakhon Nayok Province. Thus, you can easily and quickly to find tourist information from this application.

Therefore, if there is a community tourist application (non-principal towns) that can be used in the area that is a tourist attraction in Nakhon Nayok Province. It will make people living in the said area have more income from visiting foreign and foreign tourists. When those tourists have access to information on attractions, accommodation, guides, tour arrangements by local tour operators, restaurants, local merchandise, etc.

## II.    LITERATURE AND THEORIES REVIEW

### A.  Literature

The research results related to application creation are complaints application from Bua Loi Subdistrict Administrative Organization, Nong Khae District, Saraburi Province [1]. The aforementioned application has been used for testing with the Bualoy Subdistrict Administrative Organization. It turned out that the results were very satisfactory to the officials of the Bua Loi Subdistrict Administrative Organization. It found that the results were very satisfactory to the staff of the Bualoy Subdistrict Administrative Organization. People can save traveling costs and have no waste time for traveling to the Bua Loi Subdistrict Administrative Organization [1]. For a smartphone application for group traveller. This application is developed to suit the needs of group travel, such as group of family and friends etc. The 5W1H (what, when, where, why, who, and how questions) theory is deployed to analyze traveller groups [2]. The behavior in tourism activities are focused as the important features that can draw attention from most users or group traveller to develop this application of group traveller. The example of features, such as initiative of tourism, solicitation, first alternative assessment, finding information, evaluation of alternatives, decision making, planning on various matters before the trip, travel, travel, sharing experiences, recording experiences, and after the trip [2]. Tourist application should have notification of past travel of group traveller. Thus, a notification is essential because notifications are the hallmark of a smartphone in making users return to employ application more and more [2]. A study of the factors used by Chinese tourists traveling to Thailand when they select a mobile application for online accommodation booking. The results explored that accommodations online booking of Chinese tourists has a very high level [3]. Factors that affect Chinese tourists' alternative online accommodation booking applications are age, online hotel reservations cost. Online room layout, and online booking resources [3].

### B.  Theories

An application is a software program that runs on a computer. Each program has a specific application for the user. For example, Airbnb, Triplt, and Packt. An application is made of a program, or set of programs and it is designed to interact with the end user of the computer. It also helps the user perform certain tasks. A mobile application, also referred to as a mobile app. A computer program or software application is designed to run on a mobile device such as a phone, tablet, or watch. Mobile applications are split into three types: native application, hybrid application and web application.

A database is a systematic collection of data, generally stored and accessed electronically from a computer system [4]. The components of a database system includes data, hardware, software, procedure, and database access language. Hardware refers to computer, hard disks, and I/O channels for data, before any data is stored into the memory. Software refers to a set of programs and they are employed to control the database. For instance, DBMS or database management system software serves as an interface between the database and end-users. Thus, end-users can update, delete, retrieve and manage data in databases. Data in a database are the actual or operational data and the metadata. Procedure is the rules and instructions. In order to guide the users that operate and manage it. So, procedure is needed on how to use the database. Database access language is deployed to access the data to and from the database [5].

Android Studio is the official Integrated Development Environment (IDE) for Android application development, based on IntelliJ IDEA. Specifically, it is referred to as the operating system of mobile devices, such as mobile phones, tablets, etc. There are two steps to writing Android on Android Studio: Java SDK and Android Studio installed.

## III.    RESEARCH METHODOLOGY

### A.  Scope of research

The study area is tourist attraction in Nakhon Nayok Province with potential for experiential tourism. The province is divided into four districts as following: Mueang Nakhon Nayok district, Pak Phli district, Ban Na district, and Ongkharak district.

In this research, the researchers team was interested in the tourist is working-age tourists and generation y groups. Both of these groups have difference in tourism. So, the community tourist application focuses on attraction area for the both groups.

### B.  Process of community toueidm application prototype development

Initial study the desire of the community and the needs of tourists for experiential tourism with the participation of the community in Nakhon Nayok Province. Using qualitative tools and quantitative: semi structure in-depth interview with focus groups and questionnaires.

The population in this research is Elderly people aged 55 years and over. They are residing in Bangkok and its vicinity and also have the potential to travel. The tourists who are traveling in the Bangkok and metropolitan areas and stakeholder groups in tourism in Nakhon Nayok Province, which comprises of tourism entrepreneurial communities government and private agencies.
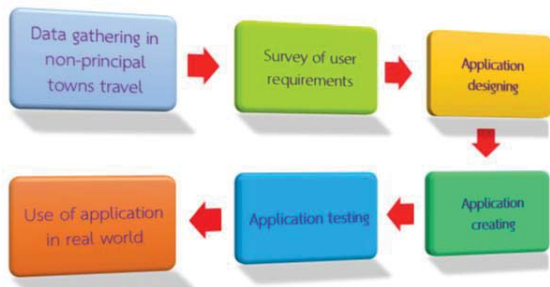
Figure 1. Process of an application development

Application of community tourism (non-principal towns) Nakhon Nayok province prepares to facilitate tourists and can find information about places or attractions that are interesting and there are many places in Nakhon Nayok Province. It also provides information about accommodation, such as resorts, homestays, and hotels, etc. Travelers can choose accommodation according to the budget of each traveler. If tourists want to buy souvenirs or local products and they can find information from the application of community tourism (Non-principal towns), Nakhon Nayok Province as well. The process for developing community tourist application has the steps to be taken as Figure 1.

Figure 1 depicted the process of application development. Step 1, it is collect information for creating an application. The core information includes tourist information, accommodation information, restaurant, merchandise and souvenirs information, attractions and tourism activities etc. Step 2 is to survey of user requirements about the use of travel applications. Step 3 is to design the database and application pages. Step 4 is to create the application. Step 5 is to test each function of the application. Initial test is unit testing for all menus. Then is integration testing and system testing of application, respectively. Final step is to correct the application and ready to use. Then, it is applied to the existing system.

The main page of community tourist application (non-principal towns) is designed as shown in Figure 2.



Figure 2. Main page of community tourism application

Figure 2 shown the main menu structure on the main page of the community tourist application (non-principal towns). Main menu consists of tourist routes, travel maps, reviews, tourist information, recommended websites, and administrator.

C. *The security and servers in using the application.*

- Security on mobile applications

Areas covered by mobile application security include database, cache or configuration files, protect mobile applications and devices from vulnerabilities. For the TTA app, *Review* (รีวิว) menu in Figure 3 is needed to protect the comments of tourists. So, we employed Secure Socket Layer (SSL) for protection.

- Server for android mobile

In order to serve application content to tourists that it need some sort of server space. The TTA app run on only android mobile. Thus, the server for TTA app is employed to handle requests for information or files from user or tourists, such as photo files or picture files, tourist information, and comments.

IV. COMMUNITY TOURIST APPLICATION (NON-PRINCIPAL TOWNS) NAKHON NAYOK PROVINCE.

The prototype of community tourist application is introduced and it is called "Tiny Trip Application" (TTA app). TTA app refers to an application that provides travel routes as a small trip, such as one day trip and two days trip.



Figure 3. Main page of Tiny Trip Application

In Figure 3, the description of all main menus are the same as the menu structure in Figure 2. How does it work? Clicking on the *Travel routes* (เส้นทางท่องเที่ยว) button connects to the next page that comprises four menus, such as *Travel routes* (กำหนดเส้นทางท่องเที่ยว), *Attractions* (แหล่งท่องเที่ยว), *Accommodation / Homestay* (ที่พัก/โฮมสเตย์), and *Shops / Souvenirs shops* (ร้านขายสินค้า /ของที่ระลึก) as shown in Figure 4 (a.). In Figure 3, if clicking on the *Tourist information*

(ข้อมูลท่องเที่ยว) button. Then menus on the new page includes *Attractions and activities, Plastic waste processing learning center*(ศูนย์การเรียนรู้และการจัดการพลาสติก), and *Local food promotion activities* for tourism (กิจกรรมส่งเสริมอาหารพื้นบ้านเพื่อการท่องเที่ยว) as shown in Figure 4 (b.).



(a.)          (b.)
Figure 4. (a.) Travel route page (b.) Tourist information Page

In Figure 4 (a.), clicking on the *Travel routes* (กำหนดเส้นทางท่องเที่ยว) button links to the travel routes page in Figure 5 and on *Travel routes plan* menu (แผนเส้นทางท่องเที่ยว) comprises the alternative menus for tourists choose whether to use a predetermined itinerary plan by clicking the designed travel itinerary plan button or the tourists want to plan their own itinerary. So, they can clicking on the *Custom plan* (กำหนดแผนเอง) button to customize the plan. The next menu is the *Type of tourists* menu (ประเภทนักท่องเที่ยว) that is separated into *working age* (กลุ่มวัยทำงาน) *groups* and *Gen Y age* (กลุ่มคนรุ่นใหม่ หรือ Gen Y) *groups*. The last menu is *Travel trips* menu that is split into (1) *one day trip* and (2) *two days trip* as shown in Figure 5.



(a.)          (b.)
Figure 5. (a.) Travel routes page (b.) Detail of travel routes page

In Figure 5 (a.), after *Travel routes plan* menu (แผนเส้นทางท่องเที่ยว), *Type of tourist* menu (ประเภทนักท่องเที่ยว), and *Travel trips* menu are completely selected then clicking on the (Menu) *OK* (ตกลง) button to confirm or the (Menu) *Cancel* (ยกเลิก) button to reject. The application page of the travel route is shown as in Figure 6.

Figure 5 (b.) shown information of travel routes which details of information are navigation information, and review information. The bottom of this page is a list of attractions, time to visit, location of attractions, and distances. Figure 5 (b.), clicking on the (Menu) *Navigation box* (นำทาง) connects to google maps as shown in Figure 6.



Figure 6. Google maps

In Figure 6, navigation box refers to it is intended for tourists to view the map. The tourists able to know the location of attractions and distance. Where the selected tourist destination information will be linked to the map on google map. The tourists can select the review box to comment on the tourist attractions and tourist activities that they have attended.



Figure 7. Tourist attractions in Nakhon Nayok Province

Figure 7 depicted tourist attractions of Nakhon Nayok Province. Each tourist attraction is depend on the district that consists of four districts: Mueang Nakhon Nayok

District, Pak Phli District, Ban Na District, and Ongkharak District.



Figure 8. Shop and souvenirs shop page

In addition, the community tourist application (non-principal towns) Nakhon Nayok Province also created a page of the shops and souvenirs shop of each district In Nakhon Nayok Province as shown in Figure 8. Moreover, information of tourist attractions / attractions is split into another application page that tourists easily find information as in Figure 9.
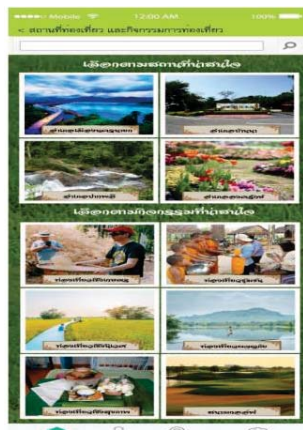


Figure 9. Attractions page

In Figure 9, attractions information is separated into two types:
- Selecting interesting attractions refers to tourists can set attractions the travel route by themselves.
- Selecting interesting activities refers to tourists can set activities the travel route by themselves.

These are the important pages on the community tourist application.

## V. CONCLUSION

In this paper, we proposed a prototype TTA for community tourist application, non-principal towns, Nakhon Nayok Province. In the proposed prototype, community tourist information is employed to this application. In addition, tourist information is split into travel routes, attractions, accommodation/homestay, and shops/souvenirs shops. On Travel routes plan menu is separated into designed travel itinerary plan and custom plan. Moreover, the tourists able to know the location of attractions and distance by linking the selected tourist destination information to the map on google map.

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