Quality Control System (qcs) Web of Tourism Industry Sector in Palembang City

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Abstract. Each regency/city in South Sumatra Province would be synergized to advance the tourism sector in accordance with the South Sumatra Tourism Development Master Plan for 2016-2025. The problems that exist in the tourism industry in South Sumatra province, especially Palembang City was the difficulty in quality control (Quality Control) because the available performance data and information was incomplete and integrated. The purpose of this study was to produce Quality Control System (QCS) Website of Tourism Industry Sector in Palembang City. This study used the Extreme Programming method. The result of this study was the website http://www.qcs-pariwisata.com, which provided four types of access rights, namely, super admin (overall website manager) or in this case the tourism agency, tourism business owner (this access is obtained if the user has registered and paid the registration fee to be able to post tourist data that is owned), registered visitors, and unregistered visitors.

1. Introduction

Tourism is a type of business that has economic value because tourism is a process that can create added value for goods or services as a product unit, both real and unreal. Republic of Indonesia Law No. 10 of 2009 on Tourism in Chapter VI Tourism Business states that tourism businesses, including: tourist attractions, tourism areas, tourism transportation services, tourism travel services, food and beverage services, provision of accommodation, organizing entertainment and recreational activities, organizing meetings, incentive trips, conferences and exhibitions, tourism information services, tourism consulting services, tour guides, water tourism, and spas. Based on the Regulation of the Minister of Tourism and Creative Economy of the Republic of Indonesia Number 25 of 2014 on the Standards of Tourism Information Services Business also mentions the existence of Tourism Information Services Businesses. Tourism services business is an effort to provide data, news, features, photos, videos and research results on tourism which are distributed in the form of printed and/or electronic materials. Law no. 10 of 2009 also states that the tourism industry is a collection of interrelated businesses in order to produce goods and/or services to meet the needs of tourists in the implementation of tourism, and tourism business is business that provides goods and/or services to meet the needs of tourists and tourism providers. Thus, it can be said that the tourism industry is one industry that has a strong linkage with other sectors because tourism can be said to be a combination of phenomena and reciprocity due to interaction with tourists, business actors, the government of tourism destinations and the community of tourist destinations.

According to data from the World Tourism Agency (UNWTO) and WTTC 2015, the tourism sector contributed 9.8% of global Gross Domestic Product (GDP), contributed to world total exports of US $ 7.58 trillion and foreign exchange earnings in the Tourism sector grew 25.1% and tourism open wide employment opportunities, where 1 in 11 jobs are in the tourism sector [1].

The tourism sector is one sector that is very promising, especially for countries with a diversity of cultures, traditions, ethnicities, races, languages and attractions. A well-managed tourism sector can be the main source of income and prosperity for the community which is directly related to the tourism
activities and those affected indirectly. This sector can grow and move the economy quickly. Moreover, it has been proven that the tourism sector has become a mainstay of various countries in generating foreign exchange and has a broad influence on people's income. Republic of Indonesia Government Regulation No. 50 of 2011 on the Master Plan for National Tourism Development (RIPPN) in 2010-2025 [2] in Article 2 states that national tourism development includes: tourism destinations, tourism marketing, tourism industry and tourism institutions. The development of the national tourism industry includes: strengthening the structure of the tourism industry, increasing the competitiveness of tourism products, developing tourism business partnerships, creating business credibility, and developing environmental responsibility. The RIPPN is then continued with the Regional Tourism Development Master Plan (RIPPDA) both at the provincial level and at the city and regency level which contains information about tourism.

At present, Indonesia's tourism sector contributes approximately 4% of the total economy. The President has set a tourism target in the next five years where on 2019 must have double tourism target, with details; contributing to national GDP of 8%, foreign exchange generated Rp 240 trillion, creating jobs in tourism as many as 13 million people, number of foreign tourists visiting 20 million and the movement of domestic tourists of 275 million, as well as the Indonesian Tourism Competitiveness Index are ranked 30 in the world. The government will focus on improving Indonesia's infrastructure in order to achieve the targets, including information technology and communication infrastructure, access, health and hygiene, as well as improving promotional campaigns (online marketing) abroad. The government also revised the free visa access policy in 2015 to attract more foreign tourists. Whereas for 2017, the Ministry of Tourism also set targets on a macro and micro level. The macro target indicators include contributions to national GDP, foreign exchange, and the number of workers. The 2017 tourism target could contribute 13% of national GDP from only 11% [3]. The following are achievements in 2016 and an overview of the target of Indonesia's tourism industry from 2017-2019:

Table 1. Overview of 2016 Tourism Industry Sector Achievements and Targets Set for 2017-2019

| Information                      | 2016     | 2017     | 2018     | 2019     |
|----------------------------------|----------|----------|----------|----------|
| Contributions to GDP (%)         | 11       | 13       | 14       | 15       |
| Foreign Exchange Revenue (IDR trillion) | 172.8    | 182.0    | 223.0    | 275.0    |
| Manpower Absorption (million people) | 11.7     | 12.4     | 12.7     | 13.0     |
| Competitiveness Index (WEF)     | n.a.     | 40       | n.a.     | 30       |
| Tourists Visit (million)        | 12       | 15       | 17       | 20       |
| Tourist Travel (million)        | 260      | 265      | 270      | 275      |

Source: [3]

The tourism industry (invisible export) is an industry that "sells" services to people who are traveling (visitors). The tourism industry is a composition of organizations, both government and private related to the development, production, and product marketing of a service that meets the needs of people who are traveling. Tourism Business is a business that provides goods and/or services for meeting the needs of tourists and organizing tourism. The business sector in the tourism industry consists of Tourism Facility Enterprises, Tourism Information Services Businesses, and Exploitation of ODTW (Tourist Attractions and Objects).

The Government of the South Sumatra Province in the 2018 Development Work Plan places the business sector and tourism as national priority programs. Along with that, the South Sumatra Provincial Government is targeting the tourism sector as a leading sector. Therefore, each regency/city in South Sumatra Province will be synergized to advance the tourism sector in accordance with the South Sumatra Tourism Development Master Plan for 2016-2025. The tourism sector in the context of regional development plays a decisive role and can be a catalyst to gradually improve the development of other sectors. Each regency/city has a large tourism potential to be managed and utilized in order to improve the welfare of the community. The description of the
tourism sector growth, foreign tourists and Gross Regional Domestic Product (GRDP) in South Sumatra Province in 2003 - 2015 is presented in the following table.

Table 2. Growth in the Tourism, Foreign Tourist and GDP sectors in South Sumatra Province 2003 - 2014

| Year | Tourism Sector | Foreign Tourist | GDP    |
|------|----------------|----------------|--------|
| 2003 | 5,618.8*       | 20,990         | 45,297.4 |
| 2004 | 5,963*         | 21,273         | 47,344.4 |
| 2005 | 6,429.5*       | 17,192         | 49,633.3 |
| 2006 | 6,939.6*       | 17,259         | 52,214.8 |
| 2007 | 7,567.2*       | 17,647         | 55,262.1 |
| 2008 | 8,087*         | 17,793         | 58,065  |
| 2009 | 8,340*         | 18,090         | 60,453  |
| 2010 | 8,916*         | 30,333         | 63,858  |
| 2011 | 9,632*         | 42,953         | 68,011  |
| 2012 | 1,590,850**    | 2,749          | 28,577.89 |
| 2013 | 2,033,564**    | 11,096         | 29,679.57 |
| 2014 | 2,206,797**    | 11,044         | 30,627.55 |

Source: [4]
Remarks: * in hundred thousand
** in million

Based on Table 1 it is necessary to revamp the tourism sector which is synergistic and comprehensive which can realize the target of making the tourism sector as the leading sector of South Sumatra Province. Along with the rapid development of the tourism industry, references, standards, systems and control mechanisms are needed to ensure that a tourism industry does not deviate from the applicable legal norms and is in accordance with the needs of tourism service users. Therefore, the South Sumatra Province continues to improve its tourism industry while still referring to the prevailing laws and regulations, especially the fulfillment of Tourism Business Standards. Tourism Business Standards are the formulations of tourism business qualifications and/or tourism business classifications that cover aspects of products, services, and management of tourism businesses. The standard of tourism business refers to Government Regulation Number 52 of 2012 on Competency Certification and Business Certification in Regulation of the Minister of Tourism of the Republic of Indonesia Number 25 of 2014 on the Standard of Tourism Information Services Business which requires not only products but needs standards for services tourism sector. Furthermore, Regulation of the Minister of Tourism of the Republic of Indonesia Number 12 of 2016 on Amendments to the Regulation of the Minister of Tourism No. 1 of 2016 on the Implementation of Tourism Business Certification. Likewise, Law No. 20 of 2014 on Standards and Conformity Assessment which also requires that products/services produced by tourism businesses must meet Indonesian National Standards. Each tourism business can meet tourism industry standards that have been determined according to the type of business and business products/services.[5][6][7]. According to [8] "quality is a key component of strategic planning". So that in the preparation of a company's work plan should pay attention to strategic objectives, vision, and mission that focuses on the quality of the products produced. [9] quality control is a planned technique and action, carried out to achieve, maintain and improve the quality of a product and service to conform to established standards and can meet customer satisfaction. Quality control is part of quality management focused on fulfilling quality requirements. QC focuses on meeting the quality requirements of a product or service [10]. QC is an integrated control system in the process, QC has a function to prevent the occurrence of defect/non-conformity output, one of the methods that are well known is right from beginning or right from the start. This method is proven to be able to eliminate non-conformity in output with prevention. The basic technique of QC is the inspection of production results or service whether the process has been carried out in accordance with
consumer requirements (it conforms to customer requirements). Conformity means that the product produced in accordance with the wishes of the consumer while non-conformity means that it is not appropriate.

Therefore, if the tourism industry standards that apply in Indonesia have been widely applied, the implementations are monitored and began to be fulfilled it will be easy to meet the ASEAN tourism industry standards as outlined in the Mutual Recognition Arrangement for Tourism Professionals (MRA-TP). The problems that exist in the tourism industry in the South Sumatra Province, especially the Palembang City is the difficulty in quality control because the available performance data and information is incomplete and integrated. Data that is not yet complete and integrated both regarding the existing tourism businesses, including clear classification between primary and secondary companies engaged in the tourism industry both directly and indirectly with companies that are not engaged in tourism. Data on how many tourism businesses actually run tourism businesses and new businesses that emerge, especially in Palembang City. Data on how many tourism businesses have/do not have competency and business certification, as well as ongoing competency and business certification. Besides that, how many business sectors were recorded statistically that achieved the standard requirements of tourism businesses consistently including many tourism businesses that received awards in the field of tourism and business development assistance. Other data that are not yet available are statistical data on the number of foreign tourist arrivals, domestic tourists, and national tourists for every tourism business that exists in particular in the Palembang City. Then the other data is data regarding the amount of tourist expenditure. The data above is needed for planning and development in the tourism sector that will support the tourism performance of the South Sumatra Province, especially the Palembang City. Previous research related to Quality Control, which was performed by [11] on the Development of a Quality Management System (QMS) Model in Small and Medium Industries. The development of the QMS model was carried out by making indicators of the QMS forming variables, namely I/F Supplier, I/F Company or the so-called Top Down and I/F Customer. To find out the level of QMS implementation by SMEs, a maturity level will also be created based on the QMS forming indicators created. Another study was carried out by [12] on Quality Assurance and Quality Control in ERP Systems Implementation. Many factors influence the successful Enterprise Resource Planning Systems (ERP). Quality Control and Quality Assurance are the most important points for successful and effective ERP systems. Quality Control in an ERP System is to detect and remove defects from the system and quality assurance planning. A systematic approach is used to ensure the ERP system process. To ensure the quality of ERP must be considered Data Quality. Data Quality is the measurement of the value of a particular set of data, which is used in a particular way for a specific purpose. The increasing amount and diversity of data and also critical data impact on the success of ERP systems.

2. Methodology
2.1. Type of Data
The type of data used in this study were primary data and secondary data. Primary data was obtained from direct observation and interviews with tourism business people. Whereas secondary data was obtained from documents and instruments used in the quality control process including the Palembang City 2013-2018 Medium Term Regional Development Plan (RPJMD). Data collection methods needed in this study are: 1) Interview with tourism industry actors in Palembang City and Palembang City Tourism Office staffs, 2) Observation was made on the tourism industry sector data collection process which carried out by the Palembang City Tourism Office, 3) Documentation was carried out by studying the instruments used in the QC process of the tourism industry sector, 4) Literature studies from library sources as a basis for analyzing the problems compiled in this study, 5) Collecting data obtained from system modeling and system simulation which will later be used to analyze the QCS of the tourism industry sector.
2.2. System Development Method
The system development method used in this study is the Agile method with the Extreme Programming (XP) approach. The Extreme Programming life cycle consists of 5 phases, namely: exploration, planning, iteration to release, productionizing, maintenance dan death [13].

2.3. Research Framework

![Figure 1. Research Framework](image)

3. Result and Discussion
The following is a further description of the Tourism QCS website ([http://www.qcs-pisata.com](http://www.qcs-pisata.com)), starting from the beginning when you first visit the website, can be seen in Figure 2, where there are several menus, including Home, Category, News/Articles, Contact, Registration, and Login. Each menu has its own functions, namely;

a. Home Page is the starting page when you first visit the website. The following is the Home Page view:

![Figure 2. Start Page of Tourism QCS](image)

b. News/Article Page: This page contains news and articles posted by the admin of the Palembang City Tourism Office / Super Admin.

![Figure 3. News/Article Page Display](image)

![Figure 4. Contact Page Display](image)

c. Contact Page: This page is used by visitors to send a message to the Palembang City Tourism Office / Super Admin, as shown in Figure 4. Aside from this menu, we can use the livechat tawk.to feature provided by the Tourism QCS website as shown in Figure 1.4 to send criticism and advice to the Tourism Office.

d. Register Page: This page is used by visitors to register as a member of the Tourism QCS website. The page can be seen in Figure 5. The page display is as follows:
e. Login Page: This page is used by visitors who have registered to log in using their account. The page can be seen in Figure 6 below.

After registering and successfully logging into the website using the registered account, the user will find an additional menu as shown in Figure 7.

f. Administrator Page: Pages that are only owned by accounts with super admin access/Tourism Office of Palembang City, in this menu there are other menus used to control the existing tourism data on the website as shown in Figure 8., this is the start page on the administrator menu page.

g. My Profile Page: This page is about the profile of the user who is currently logged in. This page can also be used to update the relevant user data as shown in Figure 9., there are also other menus on this page, namely: change the package, which serves to confirm the user who is upgrading the account to become a Tourism Business Owner or upgrade tourist attraction restrictions that can be added by the Tourism Business Owner as shown in Figure 10.

h. Tourism QCS Page: This page is about any tourism place data that has been posted by the relevant user, the page can be seen in Figure 11. In Figure 11. there are several other menus on this page,
such as: add, edit, and delete information, as seen in Figure 12., 13., 14., this menu is used to manage tourism data that has been added by the relevant user.

i. Map Option Page: The page that is used to change the default map option on the system, so that when users access the account they have, it will point to the coordinates that have been configured in this menu. The page can be seen in Figure 15 below:

j. Change Password Page: The page used to update the user's password, as shown in Figure 16.

k. Logout Page: This page is a menu for logging out as a registered user/tourism business owner/Tourism Office and being an unregistered user.

l. Register Page: This page is a menu that is completely different from the registration menu, if previously the registration menu was used to create a user account, in this menu, users can add tourism places if they have fulfilled the specified requirements. This page can be seen in Figures 17. and 18. below:

If the user enters with a registered account, and is the Super Admin/Tourism Office access, then as previously explained, that the user has an Admin Page menu that serves to control tourism. As seen
in Figure 19, is the initial display of the Admin Page, where there are various other menus such as; The Package Information.

![Figure 19. Dashboard on Admin Page](image)

The Package Information, is a menu of information about all packages, whether approved, those that have been used up, and those that are waiting to be confirmed. Simply put, the package here is a term to make Registered Users become Tourism Business Owners so that registered users can add tourist attractions that they have. The submenu in this menu corresponds to the menu name itself which consists of convenience for: Approved Package Page, Run Out Package Page, Waiting To Be Confirmed Package Page. Category Information, is a menu for managing categories and sub-categories, as shown in Figure 20 and 21.

![Figure 20. Manage Category Page](image)

![Figure 21. Manage Sub-Category Page](image)

- Region, is a menu for managing the region, as shown in Figure 22.
- Payment Method, is a menu to manage listing of Account Number Information that is useful when ordering a package needs to be made via payment transfer. The display of the menu is shown in Figure 23.

![Figure 22. Manage Region Page](image)

![Figure 23. Manage Bank Account Information Page](image)

- Partner, is a menu to manage partner data in collaboration with the Tourism QCS website. The display of the menu can be seen in Figure 24.
Figure 24. Manage Partner Page

- User list, is a menu used to manage user data, Admin data and User Information Page.
- Dynamic Page, is a menu used to manage dynamic pages on the Tourism QCS website, as shown in Figure 25 and 26.

Figure 25. Add Dynamic Page
Figure 26. Edit Dynamic Page

- News/Article, is a menu used to manage news/article page on the Tourism QCS website, as shown in Figures 27 and 28.

Figure 27. Add News/Article Page
Figure 28. Edit News/Article Page

- Package, is a menu used to manage packages on the Tourism QCS website, consists of: Add Package, and Edit Package.
- Message, is a menu used to view messages sent by users through the contact menu on a public page, as shown in Figure 29.

Figure 29. Message Page

- General Settings, is a menu that is used to configure the Tourism QCS website, as for the display of this menu as shown in Figures 30, 31, 32, and 33.
Home settings, is a menu that is used to configure the public homepage on the Tourism QCS website, as shown in Figure 34.

Details about tourist destination can be seen in Figure 35., on this page there is a delete menu that will appear if the user logs in as Super Admin/Tourism Office, and there is also a write review button to write a review about tourist destinations by registered users, business owners tourism and Super Admin as shown in Figure 36.

On this web there is also a payment reporting page for package installation as shown in Figure 37., this page can be accessed on my profile then selecting the change package, and selecting the desired package. Information regarding Account Number can be seen on the bank account button, while the listing of Account Number as shown in Figure 38. can be added by Super Admin / Palembang Tourism Office staff through the Administrator Page.
4. Conclusion

This research produced the website http://www.qcs-pisata.com, which provides four types of access rights, namely, super admin (overall website manager) or in this case the tourism agency, tourism business owner (this access is obtained if the user has registered and paid the registration fee to be able to post the data of tourist places owned), registered visitors, and unregistered visitors. Further research is recommended to develop a tourism system using a more complete statistical indicator which results are needed by many relevant parties.

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