

## Design of a CHSE Information System to Expand Tourism Market Segmentation

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**Abstract:** The destination of this research is to produce a CHSE (Cleanliness, Health, Safety, and Environment Sustainability). Pariwisata information system to expand the tourism market segmentation to make it easier for tourists who have limited time and have difficulty finding information about tourist attractions to no longer experience obstacles. This online site has special specifications by offering several advantages, including being able to see CHSE practices and marketed tourist attractions. This study uses the Waterfall Method a sequential software development process, passing through the phases of planning, modelling, implementation, and testing. In its development, the waterfall method has several stages such as a waterfall from top to bottom while from bottom to top coherently: requirements, system design, coding, testing, implementation and maintenance. The results of this study meet the need for information on recreational areas that are healthy and safe, good, conducive, and not only limited to certain locations making this CHSE information system an important contribution to expanding tourism market segmentation. It is easy to get and reach the information needs of recreational offerings for people who come from outside the city of East Java. For the realization of the CHSE information system, its application requires the readiness of human resources and the availability of information technology infrastructure for smooth transactions and personal interaction with buyers (customers). Future research needs to complement the e-payment payment system to provide convenience in conducting transactions.

**Keywords:** CHSE, Information, Tourism.

### INTRODUCTION

Among the influences of these technological breakthroughs is the use of information technology in solving problems of human life in different domains, including education, industry, agriculture, agri-business, the military, and publishing and promotions. Information technology can be used as a tool to develop promotional media, such as the use of online media as a means of publication or offering a product to the broader public that is not limited by place or time. Presence Information technology in CHSE has a growing impact on satisfying human needs. Everyone can perform online buying and selling transactions on various websites due to their accessibility and variety. The current number of internet users in Indonesia is 64 million, which will continue to rise. Approximately 25% of shoppers currently seek information via the Internet, 23% via newspapers, and 18% via media print (Kompas, March 4, 2016). Currently, the CHSE tourism information system has reached 96%, with only 14% utilizing newspapers and 3% using other print media (Doddy, March 4). This demonstrates that people's

shopping habits stimulate the growth of online CHSE to suit diverse requirements, including those for fashion, cosmetics, and technology products; the tourism industry is no different. (Kosasi, 2016:1-14). CHSE through digital media can provide numerous opportunities by prioritizing consumer service and allowing tourism agents to locate the most pleasing prospective purchasers. People with limited time and trouble locating tourism information no longer face obstacles thanks to the online system (Sandy, 2016:1-14). This condition stimulates the expansion of the tourism industry and sets in motion the economy's expansion as a whole.

CHSE information stem is a form of information technology development that has resulted in several changes, including a reduction in the cost of interaction between buyers and sellers, a simplification of interaction, the addition of more options and the facilitation of promotional activities, the opportunity to increase market share without the need for significant capital investment, greater transparency, and improved

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customer service (Chen and Hung, 2015: 187-202). The CHSE information system is an electronic business mechanism that focuses on online business transactions and allows the possibility to cultivate more humanistic and individualized client interactions (Li and Yang, 2012:190-198). People can make orders and purchases without location or time constraints in response to current information (Xiaohui *et al.*, 2014:3987-3993). Business expansion becomes more flexible, reaches a broader target market, cheaper and interactive promotional media, clear transparency of operational costs, digitizes products/services, facilitates distribution, provides ease of commercial transactions across cultural and national boundaries at a relatively more cost-effective rate, and makes it simpler to form business partnerships with a differentiation pattern that matches the needs of specific product/service specifications (Opreana and Vinerean, 2015:29-34). Therefore, the primary requirement for creating a CHSE information system is an effective method for expanding market share segmentation so that the organization has more opportunities to achieve competitive advantages and to be more competitive. Transparency of operational costs, digitizing products/services, facilitating distribution, providing convenience for commercial transactions across cultural and national boundaries at a relatively more cost-effective rate, and facilitating the formation of business partnerships with a differentiation pattern that meets the needs of particular product/service specifications (Opreana and Vinerean, 2015:29-34). Therefore, the primary requirement for creating a CHSE information system is an effective method for expanding market share segmentation so that the organization has more opportunities to achieve competitive advantages and to be more competitive. Transparency of operational costs, digitizing products/services, facilitating distribution, providing convenience for commercial transactions across cultural and national boundaries at a relatively more cost-effective rate, and facilitating the formation of business partnerships with a differentiation pattern that meets the needs of particular product/service specifications (Opreana and Vinerean, 2015:29-34). Therefore, the primary requirement for creating a CHSE information system is an effective method for expanding market share segmentation so that the organization has more opportunities to achieve competitive advantages and to be more competitive. Facilitate the formation of commercial alliances with a pattern of differentiation corresponding to specific product/service standards (Opreana and Vinerean, 2015:29-34). Therefore, the primary requirement for creating a CHSE information system is an effective method for expanding market share segmentation so that the organization has more opportunities to achieve competitive advantages and to be more competitive. Facilitate the formation of commercial alliances with a pattern of differentiation corresponding to specific product/service standards (Opreana and Vinerean, 2015:29-34). Therefore, the primary requirement for

creating a CHSE information system is an effective method for expanding market share segmentation so that the organization has more opportunities to achieve competitive advantages and to be more competitive. (Sandy Kosasi, 2015:680-686).

Previous research reveals that enterprises that aim to exploit digital businesses online require imaginative CHSE communications to address essential consequences. This effect significantly contributes to the expansion of the CHSE (Wu *et al.*, 2015:262-276). Companies that are effective at marketing their products online must avoid challenges and barriers, dangers and threats for customers to make purchases through CHSE by offering security for prevention in online shopping operations (Al-Matarnah, 2016: 62-69). These two technological characteristics of CHSE affect the system's acceptance. The willingness of customers to utilize the CHSE system must adapt to the characteristics of the technological influence, such as optimism, creativity, and system discomfort. While the effect for the CHSE attribute, such as CHSE supply, suitability of CHSE supply, perceived control, and pressure is insignificant. The appropriateness and desirability of CHSE supply can affect user optimism and indirectly influence user adoption (Li *et al.*, 2015:365-378).

This CHSE information system research has unique characteristics in that it offers several benefits, including the ability to view models and photos of destinations being marketed, the display of videos of the destination environment, the display of product prices, and easy access to desired recreational specifications, an attractive site design, and the simplicity of updating company information. This study aims to develop a CHSE information system that provides destination products/services to increase tourism market segmentation. It is a commercial opportunity to increase the tourism industry, particularly in East Java City. The research focuses on means and efforts to contribute to regional economic growth without the need for large-scale investment support and on empowering all levels of society to do so.

### **Conceptual Framework**

According to Romney and Steinbart (2015:3), a system involves two or more interdependent components collaborating to achieve a purpose. Most systems are comprised of subsystems supporting the more extensive system. According to Anastasia Diana and Lilis Setiawati (2011: 3), a system is "a sequence of interdependent pieces that work together to achieve specific objectives." According to Romney and Steinbart (2015:4), information is managed and analyzed data that provides meaning and enhances decision-making. As a result, as the quantity and quality of information rise, people make better decisions.

Therefore, information systems are structured methods for collecting, entering, processing, and storing data and for storing, managing, controlling, and reporting information so that an organization can fulfil its stated objectives. In marketing, promotion is a one-way flow of information or persuasion designed to direct a person or organization toward an action that generates an exchange. According to Buchari Alma (2007:179), promotion is a form of communication that persuasively explains goods and services to prospective buyers. According to Rafi (2008:2), "Web is an information environment where the sources of internal information are also provided with connections to connect with other sites and may be identified by a global identifier known as the Uniform Resource Identifier (URL)". "MySQL is the most popular database server used in PHP development. MySQL is

utilized for database storage and data manipulation. Data manipulation consists of adding, modifying, and deleting database data.

## RESEARCH METHOD

The Waterfall technique is a sequential software development methodology in which the phases of planning, modelling, implementation (construction) and testing are viewed as continually flowing downward (like a waterfall). In its creation, the waterfall approach employs a series of steps resembling a waterfall flowing from top to bottom while sequentially proceeding from bottom to top: requirements (needs analysis), system design (system design), Coding, Testing, Implementation, and Maintenance.

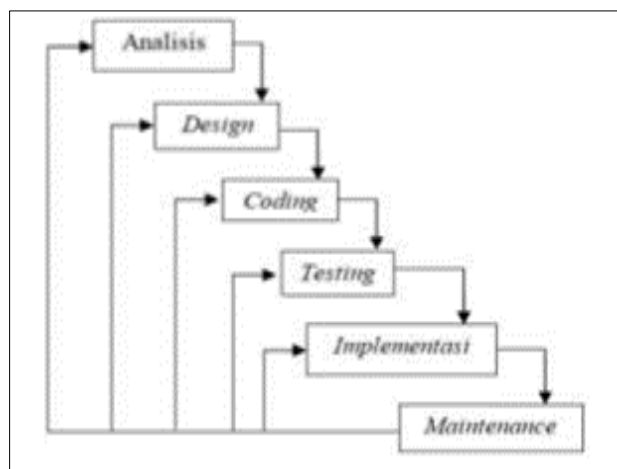


Figure 1: Research on the Waterfall Paradigm of Development

This study is a case study utilizing the R&D (Research & Development) research methodology. The study instrument utilized interview and observation procedures, while data processing utilized the approach of purposive sampling. Data that is easily checked, basic and straightforward to calculate, extreme data, and data that is not permitted are used to determine the test technique (Selly and Rosenblatt, 2012). In addition, CHSE uses CSS (Cascading Style Sheet), PHP (Personal Home Page), java script framework, jQuery, and CI (Code Igniter) framework in the process of building a prototype information system (Model View Controller). The market expansion analysis approach can collect several crucial elements for consumer wants using market opportunity analysis.

This study employs a single variable, the architecture of the CHSE information system, in order to increase tourism market segmentation. CHSE elements, such as destination product administration (category, product information, prices, photos, promotions, discount management, cash and credit transaction management), recreation type search management, ordering mechanisms, and online tourism

payment transactions, are among the research aspects. The necessity for analysis begins with determining the number of competitors for the tourism business that has not utilized Internet media extensively by the CHSE model, presenting an excellent chance (Goyindaraju and Chandra, 2012:9-14). The CHSE information system was designed using the Waterfall approach. This process involves assessing and obtaining comprehensive system requirements, generating the necessity for an online transaction mechanism. The second step is designing online business processes. The third stage involves designing and reconstructing the programming language by evaluating each unit's functions. The fifth phase involves testing and implementing the system within the organization. The final step is evaluating the user to determine the system's dependability (Sommerville, 2015).

## RESULTS AND DISCUSSION

Data compilation is the raw material that is transformed into information. Illustration of the following image:

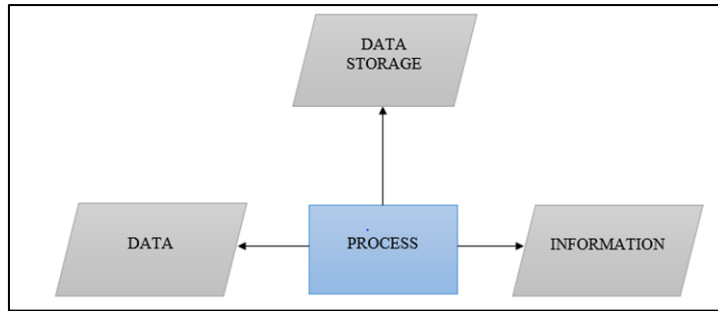


Figure 2: Data Processing

The planning phase of the CHSE information system for tourism products involves tracing every business process in the CHSE mechanism on the existing system. This activity aims to collect all information about the requirements of each CHSE tourism business process so that the application model and procedures of this CHSE information system are compatible with the conventional CHSE business processes. Formulate with business owners the functionality of the CHSE information system and the CHSE tourism destination products, as well as the user interface requirements (general public). Restructuring CHSE activities using digital media transform the tourism destination industry. This might be both a fresh opportunity and a solution to various limits faced by CV companies by analyzing the company's operational operations and current standardization. The objective is to generate the CHSE information system's digitization process without being dependent on location or the timing of business activities.

functional requirements are the necessities for managing all business activities of online purchasing and selling transactions. Meanwhile, non-functional needs concentrate on the tourist system's behaviour. All information structures and knowledge aspects from each client or the general public are included for system requirements planning. They are identifying information requirements and system restrictions as an alternative to modifying business processes to synchronize and interoperate information to manage all of a company's customer knowledge. The next phase of creating the tourist CHSE information system employs open-source PHP software with a Code Igniter (CI) framework and MVC (Model View Controller) files. To design databases with Dreamweaver and PHP My Admin. All the features required to develop an application are accessible through the CI framework, including application folders, assets folders, captcha folders, and system folders, making it easier to build the system.

The CHSE information system structure contains two sorts of requirements: functional requirements and non-functional requirements. The

Information on the link: <https://youtu.be/sHjwfd2QtOs>, display in the following image:

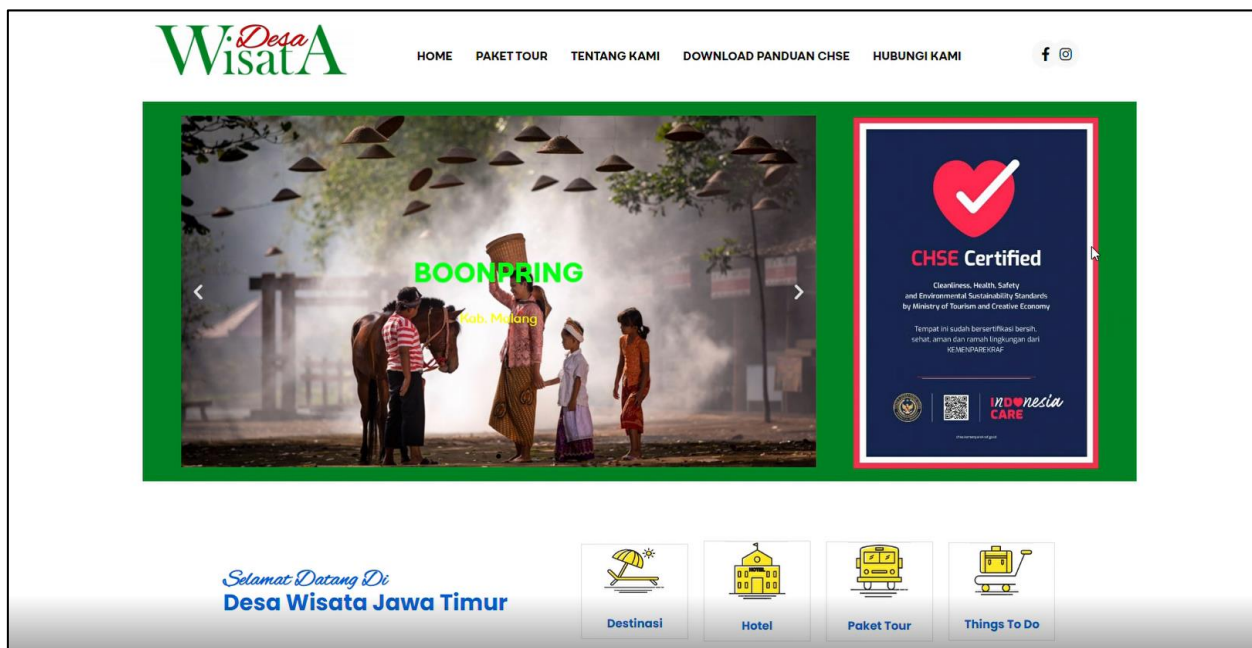


Figure 3: Information System for Boon Pring Tourism Village, Malang Regency

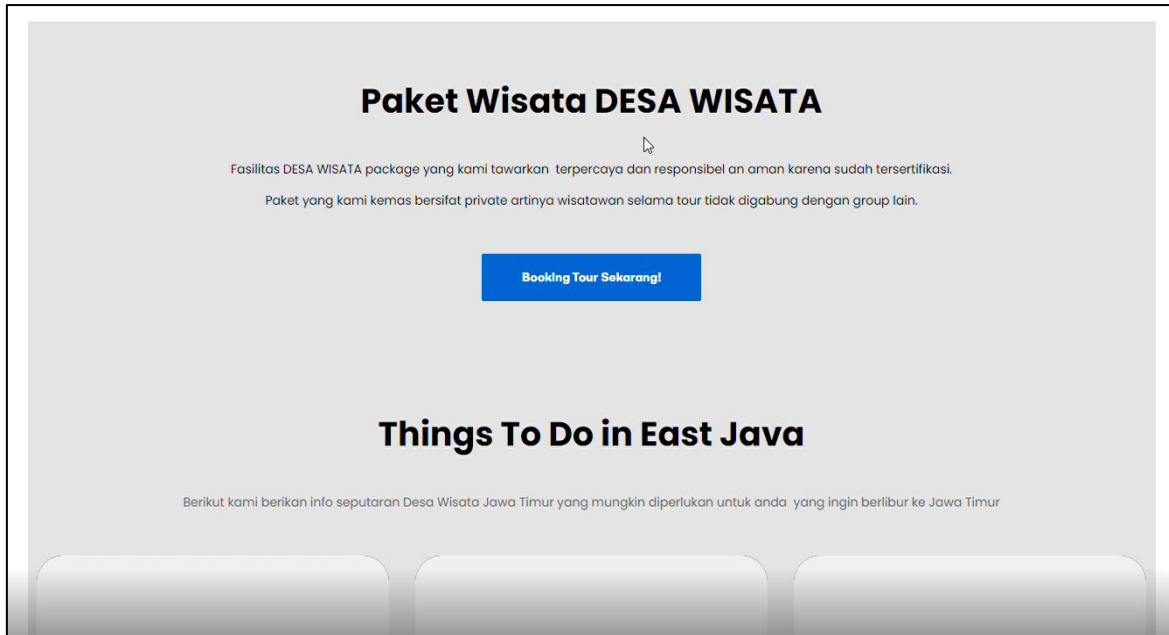


Figure 4: Information System Package Tours



Figure 5: Tumpak Sewu Lumajang Tourist Village Information System

## CONCLUSION

This CHSE information system significantly impacts the expansion of tourist market segmentation, given the growing need for suitable, conducive recreational areas that are not limited to specific locales. People outside the city of East Java have simple access to the information they require on leisure opportunities. Facilitate the establishment of relationships with buyers through online conversation. The capability of the digitization system to provide online CHSE simulation enables visitors (the general public) to acquire information about the payment system without

requiring third- party services. The achievement of its implementation necessitates the availability of human resources and information technology infrastructure to facilitate transactions and develop personal relationships between sellers and consumers (customers). Future research must supplement the e-payment payment system to facilitate transactional convenience. Complementing the security system with Secure Socket Layer (SSL) and Secure HTTP (S-HTTP) can enhance the security of online transactions and raise public confidence.

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