

# Web-based Information System Services in a Textile Industry

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## Abstract

This purpose of this study is to rebuild a website in a major office of textile industry and be able to build a system which can be used there. The research method used in this paper was qualitative descriptive method, which is an actual or accurate systematic description or writing about facts, as well as the relation between phenomena in detail. This research method was used since the process of scientific research conducted was interpreting and explaining the data concerned with the situation that is happening in the Central Textile. The goal is to create a new system using that major office of textile industry website. And customers will find it easier and faster to perform business processes.

Introduction in Indonesia the Central Textile was established in 1922 under the name Textile Inrichting Bandoeng (TIB). The Center has the task of conducting research, development, cooperation, standardization, testing, certification, calibration and development of textile industry competence in accordance with the technical policy stipulated by the Head of Industrial Research and Development Agency. The need for information for customers is often a constraint, because information services through online media such as websites are still using the old web, old school and also less attractive in terms of design. The development of technology can give a big influence to the waiter system in various fields, especially in the field of business. The adoption of information technology (IT) in organizations has been growing at a rapid pace. The use of the technology has evolved from the automation of structured processes to systems that are truly revolutionary in that they introduce change into fundamental business procedures [1]. According to Gary, Summaries The Internet is still in the early stages of its development, but its impact on global value chains is already evident. While it may be premature to try to identify lasting changes on producer-driven and buyer-driven chains, several possible scenarios are emerging and they are not mutually exclusive. The first scenario is that electronic commerce will lead to the emergence of infomediary-based value chains that privilege direct on-line access to consumers. A second scenario is that the Internet is really just extending the logic of buyer-driven chains as both information and power continue to shift inexorably from manufacturers, marketers and retailers to consumers. A third scenario is that the impact of the Internet will be captured and integrated into the practices of large established companies, thus reinforcing power relationships in existing producer-driven and buyer-driven governance structures. Although there is evidence to support all three scenarios, the third model currently seems to be dominant [2]. With general manufacturing system engineering (MSE) knowledge representation scheme, called an MSE ontology

Model, to facilitate communication and information exchange in inter-enterprise, multi-disciplinary engineering design teams has been developed and encoded in the standard semantic web language [3]. This prompted one of the researchers on the development of textile-based transparent technology is Danny et al., The recent rapid commercialization and adoption of Internet

technologies has driven a process of supply chain virtualization, transforming conventional work practices across organizations. In an effort to provide a better understanding of this emerging phenomenon, this paper presents three key elements of supply chain virtualization, including: the formation of virtual trading communities; the emergence of virtual knowledge communities; and the relocation and integration of inter-organizational business processes in the cyberspace. The transformations and consequences of virtualization are illustrated in the context of the Hong Kong textile and clothing industry. The experience of Hong Kong suggests that supply chain virtualization has propelled a structural change in buyers-intermediaries-sellers relationships, called for a novel approach to knowledge management, and accelerated internationalization of small- and medium-sized enterprises. Managers and policy makers are advised to adopt new mind sets and practices in the face of these challenges [4]. Rapid advances in industrial information integration methods have spurred tremendous growth in the use of enterprise systems. Consequently, a variety of techniques have been used for probing enterprise systems [5]. Then the method that can be done can be through a system described by Ufuk that an enterprise resource planning system (ERP) is the information backbone of a company that integrates and automates all business operations. It is a critical issue to select the suitable ERP system which meets all the business strategies and the goals of the company. This study presents an approach to select a suitable ERP system for textile industry. Textile companies have some difficulties to implement ERP systems such as variant structure of products, production variety and unqualified human resources. At first, the vision and the strategies of the organization are checked by using balanced scorecard. According to the company's vision, strategies and KPIs, we can prepare a request for proposal. Then ERP packages that do not meet the requirements of the company are eliminated. After strategic management phase, the proposed methodology gives advice before ERP selection. The criteria were determined and then compared according to their importance. The rest ERP system solutions were selected to evaluate. An external evaluation team consisting of ERP consultants was assigned to select one of these solutions according to the predetermined criteria. In this study, the fuzzy analytic hierarchy process, a fuzzy extension of the multi-criteria decision-making technique AHP, was used to compare these ERP system solutions. The methodology was applied for a textile manufacturing company [6]. Seeks to the current situation and challenges of China, textile industrial clusters are analyzed. Then, the application of IT service (ERP and E-business) is studied. It is proposed that the IT enabled producer service can be used to ensure the structural upgrading of the textile industrial clusters. Moreover, IT service platform based on cloud computing and SaaS is presented to enhance the competitiveness of the textile industrial clusters, and even to change the business models [7]. Wei et al elaborated that the fashion industry's supply chain is full of uncertainty and unpredictability. Thus, building an intelligent system to effectively capture the requirements of customers and help manage the supply chain is very important. Typical quick response (QR) systems have

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been broadly used in the fashion industry to serve as a way of maintaining an efficient supply chain management (SCM). The original functions of a QR system cannot, however, completely overcome the challenge of quickly satisfying the requirements of customers with effective customer relationship and quality of service [8]. Margaret et al explained that the textiles and apparel industry has been neglected in terms of supply chain management research. Recently, the industry has undergone a great deal of change, particularly with global sourcing and high levels of price competition. In addition, textiles and clothing has market characteristics, such as short product lifecycle, high volatility, low predictability, and a high level of impulse purchase, making such issues as quick response of paramount importance. This article discusses characteristics of the textiles and apparel industry and identifies the perspectives of lean, agile and legality (a combination of these) within existing supply chain literature, which have been proffered as solutions to achieving quick

Response and reduced lead times. Through case studies of textile and apparel companies, different approaches to supply chain management are illustrated [9]. This caused Capriano and Andrea to focus the importance of quick response strategy in the textile-apparel industry chain and presents some considerations concerning the organizational, management and technological conditions necessary for its achievement. Provides examples of the utilization of telecommunications in the textile-apparel industry, and highlights what changes have been made and the advantages gained. Analyses the role played by information technology in the interaction between the actors in the chain. Examines the conditions and elements which make quick response possible in the chain. Concludes that quick response is a time-based strategy which requires greater collaboration along the whole textile-apparel chain [10]. From various references that have been in the search, there are still shortcomings. Therefore, research on Web-based Information Systems Services in a Textile Industry explains explicitly to rebuild a website in a major office of textile industry and be able to build a system which can be used there. And the research method used was qualitative descriptive method, which is an actual or accurate systematic description or writing about facts, as well as the relation between phenomena in detail about Web-based Information System Services in a Textile Industry.

## Method

The research method used was qualitative descriptive method of actual or accurate systematic description or writing about fact facts, as well as the relationship between phenomena in detail. This research method is used because the process of scientific research conducted to interpret and describe the data concerned with the situation that is happening in the Central Textiles. Data collection methods can be obtained directly from the research objects and references that have been obtained to build applications using Waterfall Modified Pressman. Design or steps taken during the research can be seen (Figure 1).

## Results and discussion

### Analysis stage

In the development of this application using Waterfall Modified Pressman. As the stage of software development because it offers a systematic and sequential approach in the development of software that suits the needs. Here's a systematic approach in software development: Planning: Design stage is done by modeling using object-based programming method with

- Unified Modeling Language (UML), and apply the code igniter framework on information system application development. Modeling: Stages of analysis and design of the development of information systems dig lab
- Center for Textiles to be created for the identification and set of classes in the concept of Object Oriented Programming (OOP). Construction: Convert the system design into the programming language code used is the PHP
- programming language, after passing the testing stage, then refactoring is

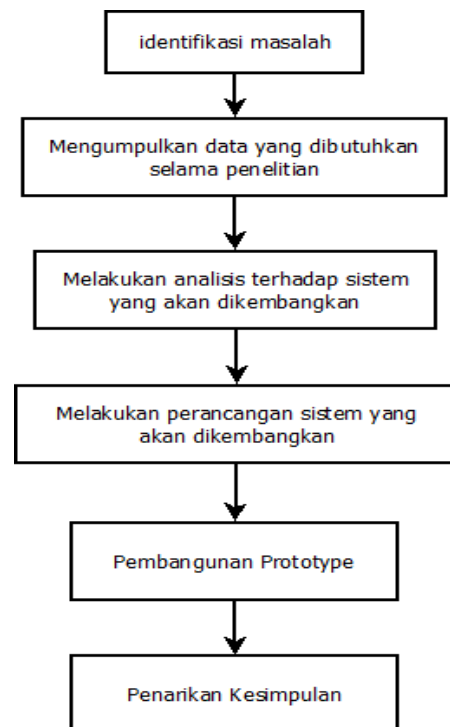


Figure 1. Stage of research.

done, that is to review again all the code of the program, see the effectiveness, if there is ineffective code will be done re-writing the program code without changing the work of the module. System Testing: After performing the analysis, design and coding, then the finished system

- Will be tested by testing the application functionality and interview to the user.

### System performance

During the research in Central Textile the writer found several problems in the business process that took place where every business process is still manual. The recording of each transaction data in the physical document causes the loss of documents and also frequent occurrence of errors so that it can hamper the process of distributing the data causing the duration of service to consumers. Here are the processes found on the website (Figure 2). Proposing system

The design will begin after the analysis phase is completed. Design can be defined as the application process of various techniques and principles for the purpose of defining a device, a process or system in sufficient detail to enable its physical realization. Design is described as a Multi-step process in which the representation of data structures, program structure, interface characteristics and detailed biosynthesis procedures of the information requirements. The purpose of system design is to overcome the problems that occur in the old system, resulting in a website program that can be accessed online. Thus making this system is expected to help overcome the deficiencies that exist in the old system and can produce information quickly, precisely, and accurately. To achieve these objectives, the system must be able to achieve targets such as system design should be useful, easy to understand and easy to use, system design must be able to prepare detailed design for each component of the information system including data and information, methods and so forth. The proposed system is by using a website application. By using the application of each division website will be easy in doing their respective business processes. Application of this website is expected to be a liaison between the existing systems in the Central Textile. Broadly speaking, the proposed procedure is no different from the current procedure running, it's just that there is a change that is the old system still using file sheets or archives while the proposed computerized (Figure 3).



Figure 2. Processing system.

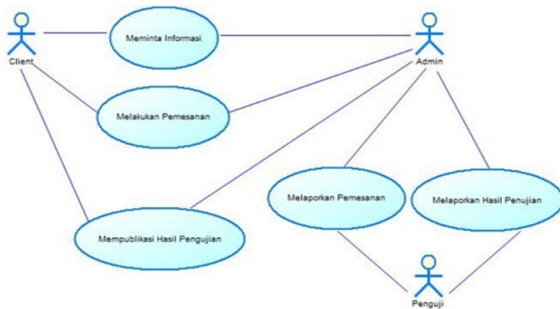


Figure 3. The system submitted for the website.

## Conclusion

With the creation of a new system using the BBT web and customers will be easier and faster to perform business processes, especially when customers register and when BBT publish test results.

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