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***Sustainable Technology
and Innovation:
Opportunities and
Challenges***

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PREFACE

WELCOME NOTE FROM INCITE 2017 ORGANIZING COMMITTEE CHAIRMAN

Rector of University of Surabaya: Prof. Dr. Joniarto Parung,
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Fellow Participants, Distinguished Guests, Ladies and Gentlemen:

First of all, welcome to Bali, Indonesia, and welcome to the first International Conference on Informatics, Technology and Engineering (InCITE) 2017!

It is still vivid in my memory, one and a half year ago, when some colleagues and officials of our Faculty of Engineering discussed the possibility of organizing an international event, to substitute national seminars that some of our study programs held annually or bi-annually. The call for an international event is a necessity given 30 years of Faculty of Engineering's existence, and the dawn of University of Surabaya's Silver Anniversary next year. Such a level of maturity prompts us to contribute more to a larger scale. An international event will have greater exposure to international community, and consequently greater impact to us all.

The following process, however, was far from easy. We were inexperienced, but we were faithful to our mission. It took us some time until we were able to formulate the conference theme, found prominent scholars in the selected theme, and negotiated with them. We are very grateful that all four speakers whom we approached are here with us today, to deliver their insights on opportunities and challenges in sustainable technology and innovation. Let's give our big hands to them!

Sessions beyond those with our invited speakers will deliver four sub-themes, namely: *sustainable design & innovation*, *sustainable manufacturing & processes*, *sustainable energy & earth resources*, and *the role of IT in sustainable enterprise*. We are glad to inform you that our conference has attracted 67 papers from the first round of acceptance. After careful selection by a panel that consists of high-profile international reviewers around the world, we passed 50 papers. We are thankful to our international reviewers who worked very hard providing feedback to the submitted papers. We are indebted to such great service that they have given.

I sincerely hope that the exchange of knowledge throughout this event, be it from within the substance of academic papers or during the conference time, will enhance our professional network and benefit us in the long run. Thank you to all our speakers, reviewers, participants, and most of all my committee members who have been hand-in-hand with me in this long journey! You all have made our dream come true!

We hope you will have a wonderful conference and memorable stay in Bali thisweek. We are looking forward to seeing you again in the next two years!

Assoc. Prof. Eric Wibisono, Ph.D.

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The conference organisers would like to thank the following names who will serve as the:

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Table of Content

Preface	i
Conference Organizer	ii
Table Of Content	iv
A. Sustainable Design Innovation	
Loyalty Program for Local Tourism in Kediri Residency <i>M Meisa, I Hapsari, M A Hadiyat</i>	A-1
Affective Design Identification on Development of Batik Convection Product <i>H Prastawa, R Purwaningsih</i>	A-8
Estimating Life Cycle Cost for a Product Family Design: The Challenges <i>T J Suteja, A Karim, P K D V Yarlagadda, C Yan</i>	A-14
Reinterpretation of Pracimayasa interior in Pura Mangkunegaran Surakarta in Global Era <i>Sunarmi, Sudardi B, Sukerta P M, Pitana T S</i>	A-21
An Integrative Fuzzy Kansei Engineering and Kano Model for Logistic Service <i>M Hartono, T K Chuan, D N Prayogo, A Santoso</i>	A-28
The Impact of Expatriates Directors on The Indonesian Company's Performance <i>I M Ronyastra</i>	A-35
Survival Analysis for Customer Satisfaction: A Case Study <i>M A Hadiyat, R D Wahyudi, Y Sari</i>	A-41
Pattern Analysis of Frand Case in Taiwan, China and Indonesia <i>A H Kusumo, C-F Chi, R S Dewi</i>	A-47
Outdoor Altitude Stabilization of QuadRotor based on Type-2 Fuzzy and Fuzzy PID <i>H Wicaksono, Y G Yusuf, C Kristanto, L Haryanto</i>	A-54
Investigating The Role of Fuzzy as Confirmatory Tool for Service Quality Assesment (Case study: Comparison of Fuzzy Servqual and Servqual in Hotel Service Evaluation) <i>R D Wahyudi</i>	A-61

B. Sustainable Manufacturing Processes

Closed Loop Simulation of Decentralized Control using RGA for Uncertain Binary Distillation Column

R Agustriyanto, J Zhang B-1

An Efficiency Improvement in Warehouse Operation using Simulation Analysis

N Samattapapong..... B-7

A Simulation Method for Productivity Improvement Case study: Car Anti-Vibration Part Manufacturing Process

N Samattapapong..... B-13

A Service Queue Improvement by using Simulation Technique: Case Study in Suranaree University of Technology Hospital

N Samattapapong..... B-20

Modeling of The Minimum Variable Blank Holder Force Based on Forming Limit Diagram (FLD) in Deep Drawing Process

S Candra, I M L Batan, W Berata, A S Pramono B-26

Single-Tier City Logistics Model for Single Product

N I Saragih, S N Bahagia, Suprayogi, I Syabri..... B-32

Inventory Model Optimization for Supplier-Manufacturer-Retailer System with Rework and Waste Disposal

A R Dwicahyani, E Kholisoh, W A Jauhari, C N Rosyidi, P W Laksono..... B-39

A Periodic Review Integrated Inventory Model with Controllable Setup Cost, Imperfect Items, and Inspection Errors under Service Level Constraint

R S Saga, W A Jauhari, P W Laksono..... B-46

A Joint Economic Lot-Sizing Problem with Fuzzy Demand, Defective Items and Environmental Impacts

W A Jauhari, P W Laksono B-53

Development of Coordination System Model on Single-Supplier Multi-Buyer for Multi-Item Supply Chain with Probabilistic Demand

G Olivia, A Santoso, D N Prayogo B-60

Using Genetic Algorithm to Determine The Optimal Order Quantities for Multi-Item Multi-Period under Warehouse Capacity Constraints in Kitchenware Manufacturing

D Saraswati, D K Sari, V Johan B-66

Evaluation and Improvement The Performance of The Production Floor to Increasing Production Result with Simulation Approach (Case Study PT.B)

R Fitriana, P Moengin, F N Ontario B-74

Transition Guidance from ISO 9001:2008 to ISO 9001:2015 for an Organization to Upgrade Its Quality Management System to Become more Resilient and Sustainable

Y Sari, E Wibisono, R D Wahyudi, Y Lio B-81

Improving Delivery Routes Using Combined Heuristic and Optimization in a Consumer Goods Distribution Company

E Wibisono, A Santoso, M A Sunaryo B-88

The Effect of Different Concentrations of Tween-20 Combined with Rice Husk Silica on the Stability of o/w Emulsion: A Kinetic Study

L Sapei, I G Y H Sandy, I M K D Saputra, M Ray B-96

C. Sustainable Energy & Earth Resources

Effects of Glass Scraps Powder and Glass Fibre on Mechanical Properties of Polyester Composites

K Sonsakul, W Boongsood C-1

Phenol Hydroxylation on Al-Fe modified-Bentonite: Effect of Fe Loading, Temperature and Reaction Time

R K Widi, A Budhyantoro, A Christianto C-8

Equilibrium Study for Ternary Mixtures of Biodiesel

S Dongsri, T Sookkumnerd, A Wongkoblaph and A Nuchitprasittichai C-15

Galena and Association Mineral at Cidolog Area, Cidolog Distric, Sukabumi Regenct, West Java Province, Indonesia

H S Purwanto, Suharsono C-22

Identification, Measurement, and Assessment of Water Cycle of Unhusked Rice Agricultural Phases, case study at Tangerang paddy field, Indonesia

N Hartono, Laurence, H Putra J C-30

Performance test of a grid-tied PV system to power a split air conditioner system in Surabaya

E Tarigan C-36

Recycled asphalt pavement–fly ash geopolymer as a sustainable stabilized pavement material^{*)}

S Hopibulsuk, M Hoy, P Witchayaphong, R Rachan, A Arulrajah C-42

Controlled-Release Fertilizer Based on Cellulose Encapsulation <i>Savitri E, and AdiartoT</i>	C-53
Bioethanol Production from Whey Yogurt by <i>Kluyveromyces lactis</i> <i>YE Agustin, A Fatmawati, R Amalia</i>	C-60
Hydrolysis of alkaline pretreated banana peel <i>A Fatmawati, K Y Gunawan and F A Hadiwijaya</i>	C-64
D. The Role of IT in Sustainable Enterprise	
Food and Feeding Time Remainder System to Support the Fulfilment of Nutritional Standards for Infants <i>N Sevani, C M Budijanto</i>	D-1
Computer vision system for egg volume prediction using backpropagation neural network <i>J Siswanto, M Y Hilman and M Widiyasri</i>	D-7
MobKas, Decision Tools for Purchasing Used Vehicle <i>S Limanto and Andre</i>	D-13
Enhancing government employees performance and behaviour using e-Kinerja <i>D Prasetyo and R Bisma</i>	D-19
Development of Ubaya Tracer Study Website <i>D T Absari, S Limanto, A Cynthia</i>	D-27
Online Orchid Sales for Dimas Orchid, Trawas, Mojokerto <i>Njoto Benarkah, Adrian Djitro, Yoan Nursari Simanjuntak, and Oeke Yunita</i>	D-33
A Multi-hop Relay Path Selection Algorithm Considering Path Channel Quality and Coordinating with Bandwidth Allocation <i>Yuan-Cheng Lai, Riyanto Jayadi, and Jing-Neng Lai</i>	D-39
Leaf App: Leaf Recognition with Deep Convolutional Neural Networks <i>Tri Luhur Indayanti Sugata, Chuan-Kai Yang</i>	D-46
The Development of 3D Virtual Museum to Raise Indonesian Young People's Awareness of Endangered Animals in Indonesia <i>N M Angga, O Citrowinoto and Hariyanto</i>	D-52

Online Orchid Sales for Dimas Orchid, Trawas, Mojokerto

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Abstract. Dimas Orchid marketed their flowers manually and there was no information system they used before. Dimas Orchid has never taken note about customer purchase data and they cannot calculate the amount of profit they get. This activity was conducted to help develop the information system in a form of a web of online orchid shopping as a marketing strategy for Dimas Orchid. The online orchid marketing in a form of a web was built based on orchid farmer requirement analysis. The design of the web was analyzed by doing a benchmark among similar webs available online. The features implemented in the system are login, shopping cart, notification, searching, report, catalogue about orchid information, payment, and receipt features. The post-interview with Dimas Orchid gave acceptance of the system and satisfied with the web design, navigation, and the features of the web.

Keywords: orchid, web, marketing, sale

1. Introduction

The use of Internet and web for digital commercial transaction among individuals and organizations in a form of online business is increasingly promising in term of the profit it will gains [1]. Online selling or we may call as e-marketing according to Kotler [2] is the marketing side of E-Commerce, it consists of company efforts to communicate about, promote and sell products and services over the internet. E-Commerce is about the distribution, selling, buying, and market goods and services electronically through internet or television, web, or other types of computer network. The use of E-Commerce will benefit many, like customer, producer, and seller. For customer, using E-Commerce will make shopping time shorter, and the prices of goods offered through E-Commerce are usually cheaper than the prices they will find in regular shop because the distribution routes from producer to customer can be minimalized if we compare it with the conventional shop. The purchasing process is faster and it also provides many variations and choices of goods. Customers will have many benefits from using E-commerce. They can get important information of the products they want to buy.

Dimas Orchid is a trading business (Usaha Dagang, abbreviated as UD), focusing on orchid nursery and selling orchids from various Indonesian regions. Dimas Orchid has never classified their collections in a catalogue, but they are able to identify every orchid in the collection. They recognize the orchid based on their morphology characteristics, such as shape of the leaf, type and color of the flower, etc. Orchid collections are classified by the family based on morphological character. The marketer had difficulty to find orchid detail information when they wanted to sell the flower to the customer because there was no catalogue for the collection.

Customers can find information about the orchid by asking directly to the seller. There was no record of customers who buy the flower. A new customer usually asks detail information about the flower and its maintenance. Seller did not provide receipt for single purchasing. Seller took note in a piece of paper when there was a customer order flowers in a bulk.

Dimas Orchid never had been done promotion or online selling because the seller does not understand any foreign language nor technology. They sold the flower manually and did not have an information system. Because there was no purchasing record, the seller cannot calculate how much profit they gain this business. Because of this condition, an effort to increase sales and organize the data was performed by developing a web to market the orchids online.

2. Methodology

Case study was used to develop the information system of orchid sales. We focused on a particular case intensively and in detail. The type of the research is qualitative descriptive based on the research goal and the data that will be presented. Descriptive research is an effort to describe, record, analyze, and interpret the current conditions. The goal of this descriptive research is to get current information and association among the variables [3].

The objective approach of the research is using empiric method. The approach of research object using empiric method is a way approaching research subject naturally. It was conducted by observation and field visit to the orchid nursery owned by Dimas Orchid. The researchers observed the production process, result and the orchid nursery process at the Dimas Orchid.

The next phase was collecting data. Researchers used several steps to collect data, which were observation, interview, and documentation. Researchers used camera to support observation on the field to get pictures of orchids. These pictures were used to build the database. Researchers went to Dimas Orchid to get some pictures and observed the types of orchids collection available and how the marketing process to the customers was conducted. The interview was used to get detail information directly from Dimas Orchid in order to get features requirement for the web and the current marketing method. Researchers compiled interview guidance and list of questions before the meeting with Dimas Orchid. This guidance helped the researchers to do the interview effectively and to get a thorough information for developing the web. Facts were gathered for the documentation. The researchers collected daily activities, letters, photos archive, and so on. These data were used to get more detail information of how the business has been run. These data were analyzed using domain analyze and taxonomy techniques.

There are two steps for data processing. The steps are web content management process and the use of application to develop web [4]. Web content management was conducted by documentation and interviewing Dimas Orchid owner and marketing staff. The objective of the interview was to get information need for developing a complete website. Several data were collected such as orchid's names, ages, availabilities, prices, and delivery method to customers. The orchid price must be displayed to customers so customers can assess the value of the orchid and compare flower's prices. Quantity information provides the number of orchid's availability. Specification of the orchids provides detail information about the flower. Customer information provides information about customer's personal information who has been registered to the system and used to communicate to customers. Customer service information also provides a way to communicate between customer and seller. Customers can submit suggestions, critics, or enquiries. The information provided to the customer are cellular phone number, office phone number, email, office location. Google Map is used on the web to show the office location. Payment information provides instruction on how to pay the order and banks that can be used to transfer the payment.

3. Result

The development objective of making this website is to help selling orchids and to give information about orchids. The design of this website needs to be interesting and easy to use by the customers.

There are three websites used as benchmarks, i.e. jualtanamanhias.net, kebunbibit.id, and anggrek.id. Table 1 shows the observation on those websites.

Table 1. Observation on three similar websites used as benchmarks

Website	Observation
jualtanamanhias.net	Sells variety of flower plants
	Sells seeds and bloom flowers
	No login feature, customers need to give their profile information for each transaction
	Inconsistent detail of information about the flowers
	Text messages and emails are used as transaction confirmation
	Features: shopping cart, catalogue, list of prices, airway bill checking, articles
kebunbibit.id	Sells variety of plants
	No picture of the flowers on the front page
	Inconsistent detail of information about the products
	Features: login, shopping cart, search, compare, newsletter, catalog, gardening community, event calendar
	Email is used as payment confirmation
	Payment methods: bank transfer, credit card, Indomaret, Paypal, Western Union, cash (only for offline transaction)
anggrek.id	Sells orchids and fertilizers
	Interesting user interface
	No login feature
	Inconsistent detail of information about the orchids
	Features: search, newsletter, shopping cart, wish list, articles
	Payment methods: bank transfer, Paypal, Western Union

The farmer was interviewed to observe his needs about the website. There was no catalogue about the orchids, but the farmer knows all the orchids he has. Sometimes the farmer gets the seeds from friends and the seeds are originated from various places across Indonesia. The time needed by the orchids to grow from seed until bloom flower are different among the orchids. It can take 1.5 to 4 years. The farmer has his own technique to deliver the orchids to customers and he usually uses Indonesia Post Office or cargo at Juanda International Airport to deliver the orchids.

Figure 1 shows flow diagram for sales process design. Admin has to confirm customer's shopping order process. Notification will be send to customers' email after admin confirm the order. The notifications are total amount of purchase and shipping fee. Any shopping order will be cancelled if a customer does not give payment confirmation in two-days period.

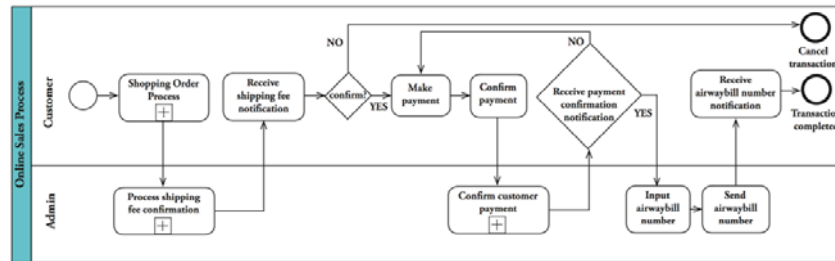


Figure 1. Online sales process design

The name of the website for Dimas Orchid is Angrek Nusantara under the domain name [angreknusantara.com](http://www.angreknusantara.com) and can be accessed at <http://www.angreknusantara.com>. The website front page is shown in Figure 2.

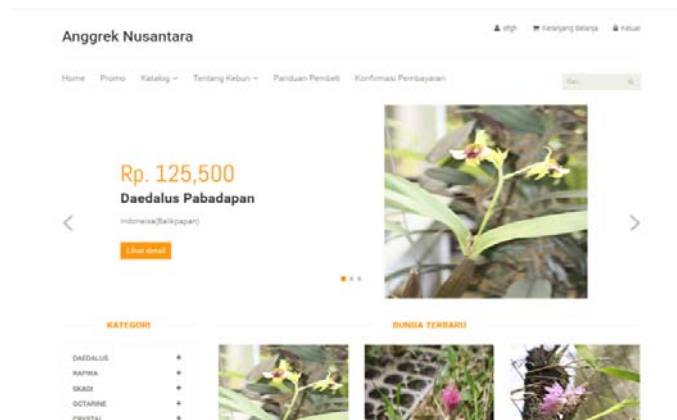


Figure 2. Front page of “Angrek Nusantara”

There are photos of the orchids and farm location. Customer have description in a form of photo about the place and the look of the farm. Features needed by the website are given below.

1. Login
There are two access privileges, at admin level and at customer level. If admin success login to the system, it will redirect admin to admin page. Admin page has features to manage the content of web pages. If customer success login to the system, it will display customer page and customer name at top right of the page. Customers can buy and order orchids by entering the system.
2. Shopping cart
Shopping cart is used to store customer’s purchases. Customers have to login to the system in order to use this feature.
3. Notification
Notification system provides information about customer’s order and the stock of the orchid and newsletter information to customer who sign up for it.
4. Searching
This feature is used to search orchids listed in the catalogue. The information displayed to the customer are the orchid name with its Latin name, category name, and other information.
5. Report
Admin can print transaction report about purchases. Admin can choose the period of purchases to be print.

6. Catalogue

Admin can manage the catalogue list. This list contains information about the orchids according to their category. The orchids are categorized as seeds, ready to bloom, and blooming flowers.

7. Payment

Payment method is used by admin to identify customers who have paid the order. Customer can make payment after a notification is sent by the system. The notification is sent by the system after admin confirmed the order. Payment can be made by bank transfer.

8. Receipt

Customer can print the purchasing receipt after login to the system.

A new customer must register to the system using login or register feature located at the top right of the page. To register, a new customer must fill in personal information that will be store in the database system.

There are several menus on the website dashboard which are home or the main menu of the website, promo, catalogue, about the nursery, customer guide, and payment confirmation menus. All menus have been in accordance with Dimas Orchid's needs. Customer can give the orchid name, the Latin name of the orchid, category name, or other keywords to search information about orchids stored in the database. A new customer should open and read the how-to page first. This page contains guidance about how to buy, how to make payment, and delivery.

Shopping cart feature is one of the features that will be needed by customers to make an order. Customers can order orchids from the collection listed on the catalogue by choosing the orchid, tell the system how many orchids are ordered, and then confirm the order. Figure 3 shows the shopping cart page that has two types of orchids ordered by a customer. The customer can view the previous transactions by selecting transaction history menu. Dimas Orchid accepts bank transfer as the payment method. The customer can make payment after customer receive payment confirmation, and the customer also can print the purchase receipt from the website.

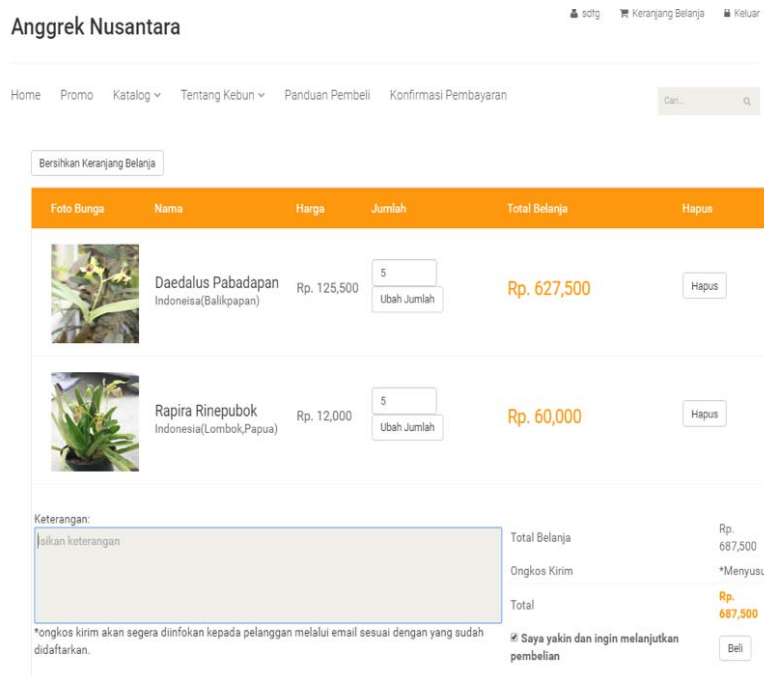


Figure 3. Shopping cart page of anggreknusantara.com

The farmer had been taught about how to use the website. It showed that the farmer needs more time to get used to the new system. He was accompanied by his staff when he was taught about the system. The farmer needed help to input all the information about the orchids to the system. The farmer satisfied with the final product of the system after using the system including all the features that have been implemented. One feature has been spotted by the farmer that need to be added to the system, that is the accountancy. We conducted post-interview with the farmer to check that the web has met the user requirements. The farmer accepted the system and satisfied with the web design, navigation, and the features of the web.

4. Conclusion

This research was a preliminary effort to develop information system for the farmer to reach out customers and promote the orchid collection. The system was built in a form of a website that provides online sales system and information catalogue about Indonesian orchids for Dimas Orchid collection.

The orchid sales can be increased by using an administratively order information system and monitoring the principles in the marketing mix strategy i.e. product quality, marketing location, pricing and regular promotion in various media. The sales records at Dimas Orchid have not been analyzed. We also looking for further support to conduct next step of this research. The difficulty about this research is not about implementing the system, but how to teach and make the individuals to get their hands on the system.

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References

- [1] Laudon K C and Traver C G 2015 E-Commerce 2015: Business, Technology, Society, Pearson, 11th ed (Pearson: USA)
- [2] Kotler P Keller K L Ang S H Leong S M and Tan C T 2012 Marketing Management, An Asian Perspectives 6th ed Pearson Education South Asia Pte Ltd (Singapore)
- [3] Mardalis 2009 Metode Penelitian : Suatu Pendekatan Proposal (Jakarta: PT. Bumi Aksara)
- [4] Robbins J N 2012 Learning Web Design 4th ed (O'Reilly Media Inc: Canada)
- [5] Stair R M and Reynolds G W 2016 Fundamentals of Information Systems 8th ed (Cengage Learning: USA)
- [6] Wibowo T H and Utami V 2013 Analisis dan Perancangan Situs Web Pemasaran Berbasis Intranet pada PT Radio Sonora *ULTIMA InfoSys* IV 1 5-10