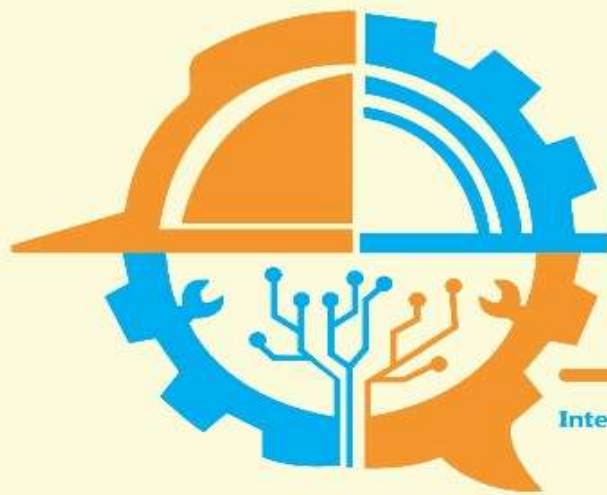


# PROGRAMME BOOK



# 2019

# IC2SE

International Conference on Computer Science and Engineering

## Proceedings International Conference on Computer Science and Engineering

**INDUSTRIAL REVOLUTION 4.0  
OPPORTUNITIES & CHALLENGES**

**26-27 April 2019  
UPI Convention Center,  
Universitas Putra Indonesia "YPTK"  
Padang, Indonesia**

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## DETAILS SESSION PROGRAMME

**Friday, 26<sup>th</sup> April 2019**

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2	Exploring the interaction's quality attributes of Mobile Government services	Abdulla Jaafar Mohamed, Mohd Khalit Bin Othman, Suraya Binti Hamid
6	Design of Bicycle's Speed Measurement System Using Hall Effect Sensor	Ratna Aisuwarya, Muhammad Azmi Riyan, Rahmi Eka Putri
54	Prediction of Corn Productivity in Indonesia as Anticipation Efforts to Import Using Backpropagation Neural Network	Anjar Wanto, Dedy Hartama, Risma Nurhaini Munthe, Pawer Darasa Panjaitan, Elfina Okto Posmaida Damanik, Agus Perdana Windarto
22	The Framework Accommodation of Systems Recommendation Via Social Media	Doni Ariyanto, Lukito Edi Nugroho, Adhistya Erna Permanasari
37	Practicality of E-Learning as Learning Media in Digital Simulation Subjects at Vocational School in Padang	Monica Fransisca, Yuliawati Yunus, Aminda Dewi Sutiasih, Renny Permata Saputri
Session 2, 04.00 – 05.30 pm Room 1, Ground Floor Session Chair : Billy Hendrik		
Paper ID	Title of Paper	Author
58	Designing a Multimodal Graph System to Support Non-Visual Interpretation of Graphical Information	Deni Setiawan, Bagus Priambodo, Mila Desi Anasanti, Al Hamidy Hazidar, Emil Naf'an, Inge Handriani, Asama Kudr Nseaf, Zico Pratama Putra
42	Breast cancer classification using digital biopsy histopathology images through transfer learning	Ghulam Murtaza, Liyana Shuib, Ainuddin Wahid Abdul Wahab, Ghulam Mujtaba, Ghulam Mujtaba, Ghulam Raza, Nor Aniza Azmi
49	Enhancement of OTP Stream Cipher Algorithm Based on Bit Separation	Arisman, Mahyuddin K M Nasution, Syahril Efendi
53	Online Management System of Praktik Lapangan Kerja (PLK) UPI YPTK Padang	Astri Indah Juwita, Muhammad Ikhlas
60	Implementation and Design User Interface Layout Use Leap Motion Controller with Hand Gesture Recognition	Billy Hendrik, Fauziah, Mardhiah Masril, Yunan Fauzi Wijaya, Silfia Andini.

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Paper ID	Title of Paper	Author
12	Supplier Selection by Using Analytical Hierarchy Process (AHP) and Techniques for Order Preference Methods with Similarities to Ideal Solutions (TOPSIS)	Ikhsan Siregar
39	Prediction of Canal Erosion on Tidal Swamp Delta Telang I, Banyuasin Regency, South Sumatra	Achmad Syarifudin, Henggar Risa Destania, Yunan Hamdani
64	Disaster risk management strategy in the environment and disaster mitigation-based school (SWALIBA)	Sindhung Wardana , Herdis Herdiansyah , Adam Wicaksono
68	Smart IoT Flood Monitoring System	Shahirah Binti Zahir, Phaklen Ehkan, Thennarasan Sabapathy, Muzammil Jusoh and Mohd Nasrun Osman, Mohd Najib Yasin, Yasmin Abdul Wahab, Hambali and N. Ali, A.S. Bakhit, F. Husin, M.K.Md.Kamil and R. Jamaludin
73	Shallow Well Water Salinity Viewed from Distance Of Well To CoastLine And Ground Water Level Elevation In Purus Padang Village	M Chairi, W Purba, W Boy, R Imani, J Melasari
54	A Flexible UWB Antenna for 5G Applications	Syuhaimi Kassim, Hasliza A Rahim, MohammedFareq AbdulMalek, Soh Ping Jack, Muzammil Jusoh, Wee Fwen Hoon, Nur Syahidah Sabil, Nurulisma Ismail
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Paper ID	Title of Paper	Author
75	Face Recognition and Age Estimation Implications of Changes in Facial Features: A Critical Review Study	Rasha Ragheb Atallah, Amirrudin Kamsin, Maizatul Akmar Ismail
81	Standard Operational Procedure Fund Distribution System of Zakat Infaq and Shodaqah for Zakat Foundations	Inge Handriani, Bagus Priambodo, Al Hamidy Hazidar , Mardhiah Masril, Zico Pratama Putra , Asama Kudr Nseaf, Emil Naf'an
77	Automatic System to Fish Feeder and Water Turbidity Detector Using Arduino Mega	H Hendri , S Enggari , Mardison , M R Putra, L N

67	The Application of Data Mining in Determining Patterns of Interest of High School Graduates	Dedy Hartama, Agus Perdana Windarto, Anjar Wanto
36	Model Development Measurement of Interests Based on Expert System	Erdisna, Ganefri, Ridwan, Rice Novita, Wanayumini

Session 1, 1.30 – 03.30 pm Room 3, Ground Floor Session Chair : Halifia Hendri		
Paper ID	Title of Paper	Author
43	Bandit algorithms in information retrieval evaluation and ranking	Sinyinda Muwanei, Hoo Wai Lam, Sri Devi Ravana, Douglas Kunda
38	Analysis of Multiple Channel Multiple Phase System for Priorities Queuing Model (N-P) with Simple Adaptive Weighting	Herman Putra Rajagukguk, Muhammad Zarlis, Sutarmam
28	Application Of Ahp Analysis To Increase Employee Career Paths In Decision Support Systems	Julius Santony, Faisal Amir, Sumijan, Rice Novita
23	Text Mining For Hotel Classification Using Naïve Bayes Algorithm	Ahmad Afif, Lukito Edi Nugroho , Adhistya Erna Permatasari
79	Design Of Expert System For Diagnosis Damage Computer Hardware	Retno Devita, Eva Rianti , Sri Rahmawati
Session 2, 04.00 – 05.30 pm Room 3 Ground Floor Session Chair : Dr. Azah Anir Norman		
Paper ID	Title of Paper	Author
19	Electronic Health Cloud as Service to Improve Collaboration in Healthcare Organizations	Shady Gomaa Abdulaziz, Norizan Mohd Yasin, Zeinab AlGamal, Asmaa Hateem and Kalaimagal Ramakrishnan
35	Expert Systems Diagnosing Of Banana Pests And Diseases Use Case-Based Reasoning Method With Android	Hezy Kurnia, Vicky Ariandi, Heriyanto, Yesri Elva
11	Technology Acceptance Among Older Adults With Mild Cognitive Impairment	Nita Rosa Damayanti, Nazlena Mohamad Ali, Ely Salwana Mat Surin



1	Decision Support System In Determining Structural Position Mutations Using The Simple Additive Weighting (Saw) Method	Aulia Fitrul Hadi, Randy Permana, Havid Syafwan
21	Design Chipless Textile Tag For RFID Application	Mirza Anuar, Lee Yeng Seng, M. S. Shakhirul, F.H. Wee, Hong Seng Gan, Muzammil Jusoh, Thennarasan Sabapathy, M.N. Osman

Session 1, 1.30 – 03.30 pm Room 4, Ground Floor Session Chair : Dr. Norizan Mohd Yasin		
Paper ID	Title of Paper	Author
03	A comparative analysis of detection mechanisms for emotion detection	Vimala , Marian Cynthia Martin, Wandeep Kaur, Amir Javed
55	Determination of the Shortest Route Towards the Tourist Destination Area Using the Ant Algorithm	Ni Luh Wiwik Sri Rahayu Ginantra , T , Gita Widi Bhawika , Ida Bagus Ary Indra Iswara , Anjar Wanto
18	Multiple Thresholding Methods For Extracting & Measuring Human Brain And 3d Reconstruction	Sumijan , Pradani Ayu Widya Purnama , Syafri Arlis
44	A Comparative Review of ISMS Implementation Based on ISO 27000 Series in Organizations of Different Business Sectors	Zaidatulnajla Hamdi , Azah Anir Norman , Nurul Nuha Abdul Molok
85	Improving the modelling of Robot Bunker with camera	Emil Naf'an , Riza Sulaiman , Nazlena Mohamad Ali , Bagus Priambodo , Al Hamidy Hazidar , Asama Kudr Nseaf , Zico Pratama Putra , Harry Theozard Fikri, Inge Handriani
Session 2, 04.00 – 05.30 pm Room 4 Ground Floor Session Chair : Rahmatul Husna Arsyah		
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66	The Impact Analysis Of Flood Disaster In DKI Jakarta: Prevention And Control Perspective	Adam Wicaksono, Herdis Herdiansyah
08	Minimization of Palm Oil Losses on Sterilization Process by Optimization Boiling Pressure and Boiling time	Wetri Febrina , Yusrizal

13	Application of Theory of Constraints in Bottleneck Work Stations Optimization	Ikhsan Siregar
30	Designing Engineering Data Management System in Research and Development Company	Muhammad Nur, Luciana Andrawina
31	Risk Assesment of Housing Reconstruction Project Community-Based Construction after The Earthquake	Wendi Boy, Rafki Imani , Mayozi Chari
48	Industrial Revolution 4.2 Oppourtunity Challenges and Way Forward	Erry Yulian T. Adesta, Rudi Kurniawan Arief

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**Room 5, Ground Floor**  
**Session Chair : Dr. Nor Liyana Shuib**

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46	How Online Media and Technology Inovation Influence Consumer's Purchase Intention	Sitti Rizki Mulyani , Larissa Navia Rani , Dharma Syahrullah Ekajaya , Marta Widian Sari , Vivi Nila Sari
47	Development Database E-Costal For Fishermen's Assistance Program At Terengganu	Dara Aisyah Ali Puteh, Al Hamidy Hazidar , Muhammad Sontang Sihotang
52	Assessment for Seismic Activities in Pesisir Selatan West Sumatra in 2018	R Imani , W Boy , U Dewi , A Sari , W Purba , M Chairi, J Melasari
41	Interactive Map Model of Flat Design for Istano Basa Pagaruyung Tourism Development	T Wiraseptya , R Imani , H Yanto
29	Behavioural Intention to Use MYOB Accounting Aplication Among Accounting Students	Dwi Fitri Puspa, Desi Ilona, Zaitul

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**Room 5 Ground Floor**  
**Session Chair : Dr. Vimala Balakrishnan**

Paper ID	Title of Paper	Author
17	The utilization of learning analytics to develop student engagement model in learning management system	Shahrul Nizam, Suraya Hamid , Haruna Chiroma

57	Backpropagation Neural Network Prediction For Cryptocurrency Bitcoin Prices	Rini Sovia, Musli Yanto ,Arif Budiman
62	Control System Of Microcontroller Based Automatic Milk Coffe Drink	Nofriadi ,Herman Saputra ,Juna Eska , Adi Prijuna , Nuriadi Manurung
24	Factors Influencing The Use Of M-Government Services From The Citizens' Perspective: Examining The Characteristics Of Adopters And Non-Adopters	J. Al-awj , N. Yasin , M. Khalit , S. Al-ammari ,N Kassim
98	Expert System For Disease Diagnosis In Cocoa Plant Using Android-Based Forward Chaining Method	Vicky Ariandi, Hezy Kurnia, Heriyanto, Hilda Mary
20	The Design of Sharia Housing Application In Padang City with CRM Concept	Hadi Syahputra, Raja Ayu Mahessya, Annisak Izzaty Jamhur, Ikhsan

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27	Social Entrepreneurship Learning Model in Higher Education using Social Network Analysis	Muhammad Hamirul Hamizan Roslan, Suraya Hamid, Mohamad Taha Ijab, Sarah Bukhari
14	Media Effectivity e- module Of Object-Oriented Programming II Based On Problem Based Instruction (PBI) Informatics Engineering Education Program, University Of Putra Indonesia YPTK Padang	Yulawati Yunus, Silky Safira, Monica Fransisca, Renny Permata Saputri, Aminda Dewi Sutiasih
61	Towards Data-driven Education with Learning Analytics for Educator 4.0	Salimah Mokhtar, Jawad A. Q., Ghassan O. A. Shahin
76	The Understanding of Lecturers about The New Literacy in Industrial Revolution Era 4.0: A Study case of University of Putra Indonesia YPTK Padang	Muharika Dewi, Yulia Retno Sari, Shally Amna, Rasmita, Rina Susanti
80	Impact of Learning Motivation, Cognitive and Self-Efficacy in Improving the Quality of Online Learning in the Industrial Age 4.0	Ramdani Bayu Putra, Elfiswandi, Muhammad, Sitti Rizki Mulyani , Dharma Syahrullah Ekajaya, Rio Andhika Putra

Session 2, 04.00 – 05.30 pm Room 6 Ground Floor Session Chair: Dr. Hoo Wai Lam		
Paper ID	Title of Paper	Author
26	The Impact of Age, Gender, and Educational level on the Cybersecurity Behaviors of Tertiary Institution Students: An Empirical investigation on Malaysian Universities	F B Fatokun, Suraya Hamid, Azah Anir Norman, J O Fatokun
77	Automatic System to Fish Feeder and Water Turbidity Detector Using Arduino Mega	Halifia Hendri, Sofika Enggari, Mardison, Muhammad Reza Putra Larissa N Rani
32	Digital Medical data protection compliance among medical staffs	Uning Pratimaratri, Desi Ilona, Zaitul
16	Internet of Things in Monitoring and Notification of Industrial Security Systems	Alkhairunas Riyuska, Julius Santony, Sumijan
15	Identification of Variables in Predicting Trends in Social Entrepreneurship	Nur Azreen Zulkefly, Norjihhan Abdul Ghani, Wajdi Alquliti
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70	Application Of Promotion, Map And Existing Tourism Information Systems In Solok Selatan District Using Androidjava Programming Language	Hari Marfalino, Larissa Navia Rani, Mardison, Ichsan Pribadi
10	The Kindness Behavior Management in Kindness Service Application Using Tree Structure	Luxfy Roya , Lukito Edi Nugroho , Adhistya Erna Permatasari
82	Expert System and Rule-Based Knowledge Based in Analyzing Vitamin Deficiency in the Human Body	Ruri Hartika Zain, Elmi Rahmawati
59	Predicting GDP of Indonesia Using K-Nearest Neighbour Regression	Bagus Priambodo, Sarwati Rahayu , Ahmad , Al Hamidy Hazidar , Emil , Mardhiah masril , Inge , Zico Pratama Putra , Asama Kudr Nseaf , Deni Setiawan
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Paper ID	Title of Paper	Author
5	Prediction of Malaysian stock market movement using sentiment analysis	Low Cheng Kuan ,Maizatul Akmar Ismail , Tasnim M. A. Zayet , Shuhaida Mohamed
56	Decision Support System For Mapping Types Of Timber And Number Of Products For Furniture Handling In The Main Work Service Using Ahp (Analytical Hierarki Process) Method In Increasing The Profits Of Production	Firdaus , Ade Saputra , Mondra Neldi , Ritna ,Novia Yolanda , Usman
80	Impact of Learning Motivation, Cognitive and Self-Efficacy in Improving Learning Quality Elearning in Industrial Era 4.0	Ramdani Bayu Putra, Elfiswandi , Muhammad Ridwan , Sitti Rizki Mulyani , Dharma Syahrullah Ekajaya , Rio Andhika Putra
50	Convergence Analysis of Acceleration and Generalization of E-Learning in the Manifestation of Globalization Education Readiness 4.0	Sitti Rizki Mulyani, Agung Ramadhanu , Desi Permata Sari , Rahmatul Husna Arsyah , Neni Sri Wahyuni Nengsih
97	Expert System Of Intrauterine Insemination	Firna Yenila, Yogi Wiyandra

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7	Exploring Topic Difficulty in Information Retrieval Systems Evaluation	Wei Ting Pang , Prabha Rajagopal , Mengjia Wang , Shuxiang Zhang , Sri Devi Ravana
71	The Effect of Lego Mindstorms as innovative educational tool: To develop students' creativity skills for Creative Society.	Mardhiah Masril , Billy Hendrik , Harry Theozard Fikri, Al Hamidy Hazidar , Bagus Priambodo , Emil Naf'an , Inge Handriani, Zico Pratama Putra , Asama Kudr Nseaf
78	Learning Satisfaction Analysis of Online Learning Readiness with Learning Culture and Character Strength as Antecedent Variables	Agung Ramadhanu , Ramdani Bayu Putra, Hadi, Rahmatul Husna Arsyah , Desi Permata Sari
33	Technology Context and Social Media Adoption Among Small-Medium Enterprise	Desi Ilona, Zerni Melmusi , Hanna Pratiwi, Padang, Indonesia), Zaitul
34	Statistical Software Adoption Behaviour Among Undergraduate Students	Zaitul , Sitti Rizki Mulyani , Muhammad Ridwan , Desi Ilona

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04	Startup Learning Path (SLP): A Learning Model for Startup Employees Using Agile Learning Approach	Egi Endeska Putra, Ridi Ferdiana, Rudy Hartanto
84	Fuzzy Logic Applications To Predict Total Production PKO (Palm Kernel Oil) In PT AAI Pasaman Method Using Web Based Tsukamoto	Devia Kartika, Mutiana Pratiwi, Rima Liana Gema
51	Strengthening Character Education with the Implementation of Machine Learning in the Millennial Era Industrial Revolution 4.0	Ulya Ilhami Arsyah , Rahmatul Husna Arsyah , Mutiana Pratiwi , Novia Lestari
83	Analysis of the Factors Affecting the Quality of Palm Oil Using the Analytical Hierarchy Process Method	Nugraha Rahmansyah , Shary Armonitha Lusinia, Rima Liana Gema
95	Analysis Of Electronically Reconfigurable Beam Steering Antenna Array Using Phase Shifter Technique	Soh Jen Neei, Muzammil Jusoh, Thennarasan Sabapathy, Samir Salem Al-Bawri, M.N. Yaasin, Tariq Abd Latif, Mahmud A. M. Albreem
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86	A Compact MIMO Planar Inverted-F Antenna	Najwa , Mohamed Nasrun Osman , Muzammil , Thennarasan Sabapathy, Thennarasan Sabapathy , M.M. Azizan, Tarmizi Ali
87	Transparent Encryption Technique for Trusted Computing	Gushelmi, Abdullah Mohd Zin
89	University Student Satisfaction Analysis on Academic Services by Using Decision Tree C4.5 Algorithm (Case Study : Universitas Putra Indonesia “YPTK” Padang)	Febri Aldi, Anita Ade Rahma
90	Analysis System of Occupational Health and Safety In coal Underground Mining	Heri Prabowo, I Prengki, A Amran
91	OLAP Approach in Searching Manufacturing Industries in West Sumatera	Eka Praja Wiyata Mandal, Dewi Eka Putri, Dede Wira Trise Putra, Dio Prima Mulya
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<b>93</b>	Model Of Artificial Neural Networks In Predictions Of Corn Productivity In An Effort To Overcome Imports In Indonesia	Anjar Wanto, Dedy Hartama, Gita Widi Bhawika, Deswidya Sukrisna Hutauruk, Pinondang Hotria Siregar, Ricard Fredrik Marpaung, Salim Efendi, Rusmin Saragih, Imeldawaty Gultom, Agus Perdana Windarto
<b>94</b>	Radiation Pattern Reconfigurable Fm Antenna	Barath, Thennarasan Sabapathy, Muzammil Jusoh, Samir Al-Bawri, M.N. Yaasin, Mohamed Nasrun Osman, Hasliza Abd Rahim
<b>96</b>	Expert System Delayed Walking In The Toddler	Yogi Wiyandra, Firna Yenila, Hezy Kurnia, Suci Wahyuni, Ratih Purwasih
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# Standard operational procedure fund distribution system of zakat infaq and shodaqoh for zakat foundations

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**Abstract.** The management of zakat, infaq and shodaqoh funds is a very crucial activity for each zakat institution, in which two processes are carried out, namely the receipt and distribution of zakat infaq and shodaqoh. This article is the result of further research on the zakat receipt system that was previously published. This fund distribution system is the responsibility of all receipts of funds received so it is very crucial even compared to the ZIS acceptance system itself. This is because there is accountability for the receipt of funds received by the institution and must be submitted to certain parties in accordance with the provisions of Islamic Sharia. Problems that often occur in the process of fund distributing zakat, infaq shodaqoh is a entry data that accountability reports can not be made, the accountability report also can be made, besides that there is also an inaccurate target of the intended recipient distribution object. So that it is necessary to regulate how the right procedures in funds distributing of zakat infaq shodaqoh. The analytical method used by PIECES (Performances, Information, Economics, Control, Efficiency, Services). The standard operating procedure in the ZIS fund distribution system is made with internal control parameters (COSO).

## 1. Introduction

The use of information technology itself is implemented in various fields, one of which is the management of zakat. Zakat is the third pillar of Islam which is one of the important foundations in Islam. The implementation obligations are explained in various verses in the Al-Qur'an. The obligation of zakat has various strategic functions in the study of Islam [1]. Zakat not only functions as a form of vertical worship to Allah Subhana Wata'ala and a moral obligation for Muslims but also functions as an alternative instrument of fiscal policy to realize equal distribution of income among Muslims [2]. Zakat is a very important thing in society [3] so that it requires special attention in its management.





Many discussions about the management of this zakat fund [4], there is even research that reveals that zakat is a solution in dealing with social problems [5].

Management of zakat in Indonesia has been carried out since the beginning of Islam entered and developed in Indonesia [6], both individuals and certain groups or institutions. As a country with a majority Muslim population, Indonesia has a huge potential of zakat. However, due to various factors, the potential of the zakat cannot be utilized optimally to eradicate poverty and realize social justice in Indonesia [1]. Existing of OPZ (Organisasi Penerima Zakat/ Receipt Zakat Organization) those which grow like mushrooms in the rainy season can not be separated from various problems that arise such as the form and institutional structure that is not yet clear because the low professionalism of Human Resources (HR) zakat manager because it does not make his job a profession or career choice, and the low transparency of financial statements and institutional activities because Laws (UU No. 38 of 1999) does not provide adequate rules for transparency and accountability of OPZ [1].

The concern about this development, the managed zakat receipt system is important to note, because the management of zakat starts at this stage. In an organization of zakat institutions, the most important must be considered is to cooperate with the system of receiving and distributing zakat itself as proof of accountability [7]. Distribution of zakat funds is given to poor people to improve their quality of life [8], by promoting transparency and accountability [9]. A bad system that will destroy the overall management of zakat itself, where zakat management is required to provide accountability reports to the community as funders. Problems with zakat management are not only in Indonesia but also experienced in the other countries [5], which requires efficiency in its management to account for it [10] the results of the management of zakat, infaq, and shodaqoh received. To expedite the process of distributing ZIS funds, the first stage of the procedure needs to be set to become a standard. Basically, this Standard Operational Procedure can not only for ZIS fund distribution but also used by many companies or agencies in general such as in the health sector [11], business, government, even related to handling nature and animals [12]. All these things indicate how important the Operational Procedure Standards are in the management of a process within an agency/institution. This can even provide motivation to improve outcomes from these agencies/institutions [13].

## 2. Research Method

The research method used in the results of this study took research sources using library research method based on the results of research and information spread from zakat institutions in Indonesia. The results of the data obtained were analyzed by using qualitative methods and the results of the research were presented in detail using descriptive methods. In addition the results obtained from the data that have been concluded are ready to be made in the stages of making information systems using the SDLC system development method (system development life cycle) which will begin at the needs analysis stage until the design of the system at the operational standard procedure of the infaq distribution system and shodaqoh for zakat institutions especially in Indonesia. Based on the stages of research to be carried out, with stage; Analysis and Design Receipt Fund ZIS System (first research), Process Business Fund Distribution System of ZIS, Analysis Fund Distribution System of ZIS (Using PIECES Method), and finally the last stage Making Standard Operational Procedure.

## 3. Result

Based on the data in the field of the business process of the ZIS distribution system that occurs at the Amil Zakat Institution with the lower middle level, the average has stages in the process flow that is passed by the distribution and operational managers. The following is a set of procedures ;

- The division of distribution gets the mustahik data documents from the archives previously collected, then the data will be entered into the computer to make mustahik classifications by region, then a list of proposed proposals that are stored in the proposal submission list file and printed in the document in two copies for submitted to operational manager.
- The operational manager receives a list of proposed distribution documents from the distribution department and then checks the distribution proposal. If the proposal is deemed to be fulfilling, it will be returned to be repaired first and returned to the operational manager. If it is in accordance

with the proposed distribution results, the operational manager gives approval by giving approval to the distribution proposal document. The second list of proposed double distribution proposals will be filed with the operational manager and the first copy will be given to the Division of distribution.

- The division of distribution will receive the first document that has been approved in the list of proposed distribution from the operational manager. The distribution section conducts distribution activities, after the activity, the results are recorded in the realization of the distribution and stored in the data file for the distribution of funds. Then the accountability report for all distribution activities is made. The accountability report data is stored in the accountability report file and printed in two copies of the ZIS distribution accountability report document submitted to the operational manager.
- The operational manager receives the accountability report document and checks if the report is assessed as having an error or something needs to be confirmed, the operational manager will contact the distribution department and return the document to be repaired first. If the liability report document has no errors, then approval will be given and the first double copy will be returned to the distribution section and the second duplicate will be archived.
- The division of distribution receives documents from operational managers and then creates data to publish ZIS accountability reports to the public through magazines, newspapers- and others.

Based on the business processes that occur on the average amil zakat institution, there are several things that need to be known to work together with problems that occur from various aspects and what are the appropriate solutions to overcome them. To see the problems that exist in the system requirements as a solution, an analysis was carried out using the PIECES method.

Based on the results of the PIECES analysis, it can be seen that the problems faced by most of the ZIS institutions, especially those of medium to small scale. Problem solving that is seen according to their needs can be assembled not only from the system side but also from the management and organization side. So that the solutions obtained are presented in the form of an operational system procedure presented below.

Based on internal control, there are several things that must be considered, including the segregation of duties, which is to minimize the possibility of fraud. Besides having to pay attention to the internal control in the form of access restrictions from each part or division. Next is the operational procedure for the ZIS fund distribution system.

#### **Standard Operational Procedure :**

In this system based on internal control, it will divide it into several parts, namely; part of the program, division of distribution, Operations manager and program manager. The following is a series of procedures for the distribution of ZIS funds :

- The Division a program will conduct field research to ensure that the person who will receive the distribution of ZIS funds which are classified based on Islamic jurisprudence works with those who are entitled to ZIS funds. The results of the research are presented in the form of documents and then inputted into the computer for the process of making any distribution program data that will be given to the community (mustahik). The data is stored in the distribution program data file and then a distribution plan per program is made which is stored in the Distribution Plan file per program and is printed in one copy of the Distribution Program Plan document given to the division of distribution.
- The division of distribution receives the Distribution Program Plan document from the Program Section and reconciles with the ZIS funds to be distributed. The results will be issued in the form of a Conformity Document Distribution Program Plan of 4 (four) copies. The document is given to the operational manager.

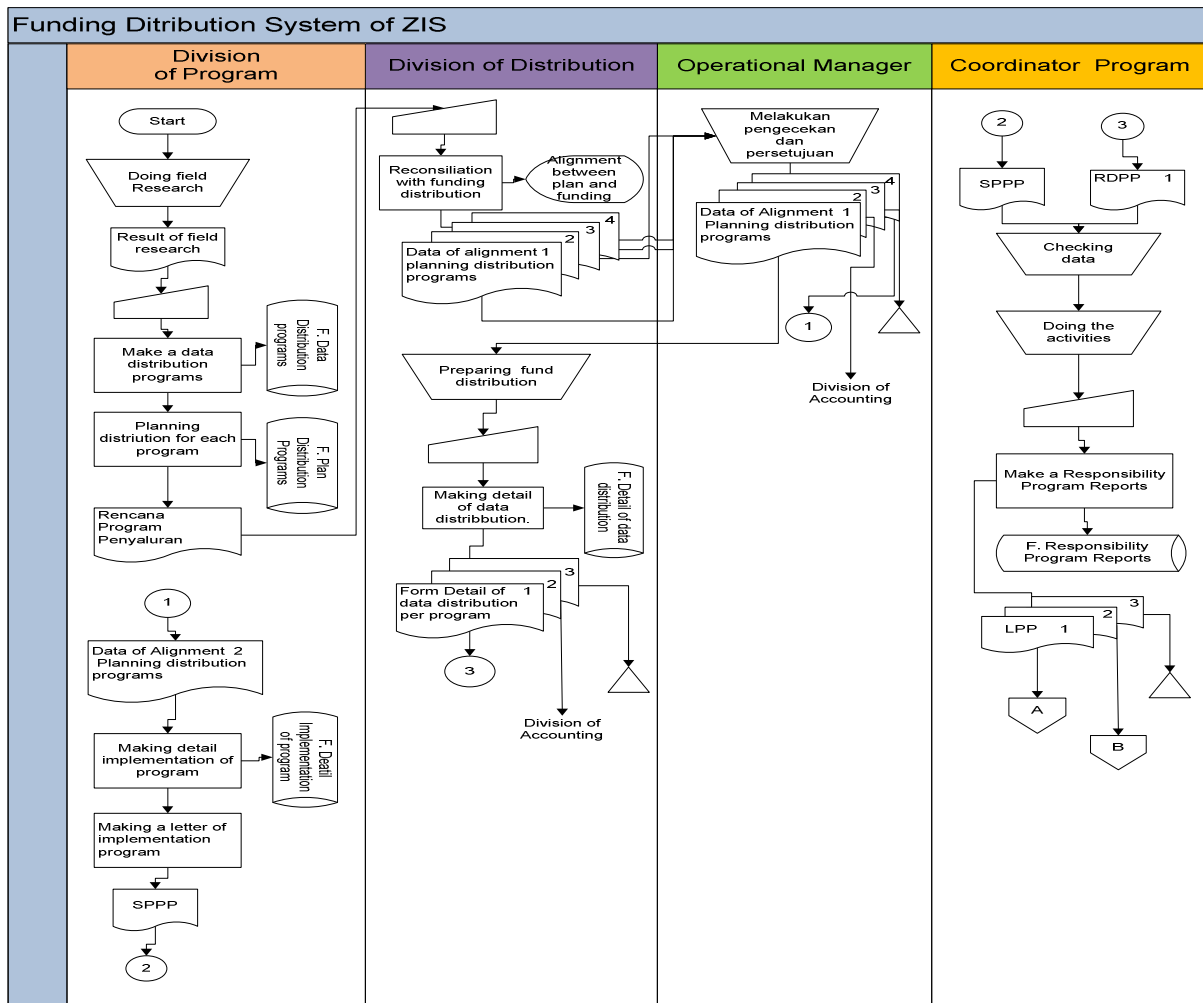


Figure 1. Design SOP Fund Distribution of ZIS System

- The operational manager receives 4 copies of the Conformity Plan Distribution Program document from the distribution and execution section. If it turns out that an error occurred when the document will be returned to the distribution section and if it is deemed appropriate and appropriate, the operational manager will provide an approval in the form of a sign on the document. The document for the fourth copy will be used as an archive by the operational manager, the third copy will be given to the accounting department to be known because it relates to the budget for recording financial expenditures, the second duplicate to be given to the program part and the first copy to the division of distribution.
- The division of distribution receives a document of Conformity for the Multiple Distribution Program Program that has been approved by the operational manager, then prepares the distribution funds and is input into the computer by recording the distribution data stored in the Distribution Data Details file and creating a document. (three) copies. The third copy is stored as an archive, the second copy is submitted to the accounting section to find out the details of the funds that will be issued/distributed based on per program and the first double submitted to the division in charge of each program along with the number of funds planned.
- The division a program receives a Conformity document for the planned 2 Channeling Program from the approved operational manager. The division a program makes details of the implementation of the program in accordance with the program plans that have been made previously and saves them in the Program Implementation Details. Subsequently, a Program Implementation Order with details of the implementation of the program was printed and

submitted to the person in charge of each program as an order to carry out the program activities in the field.

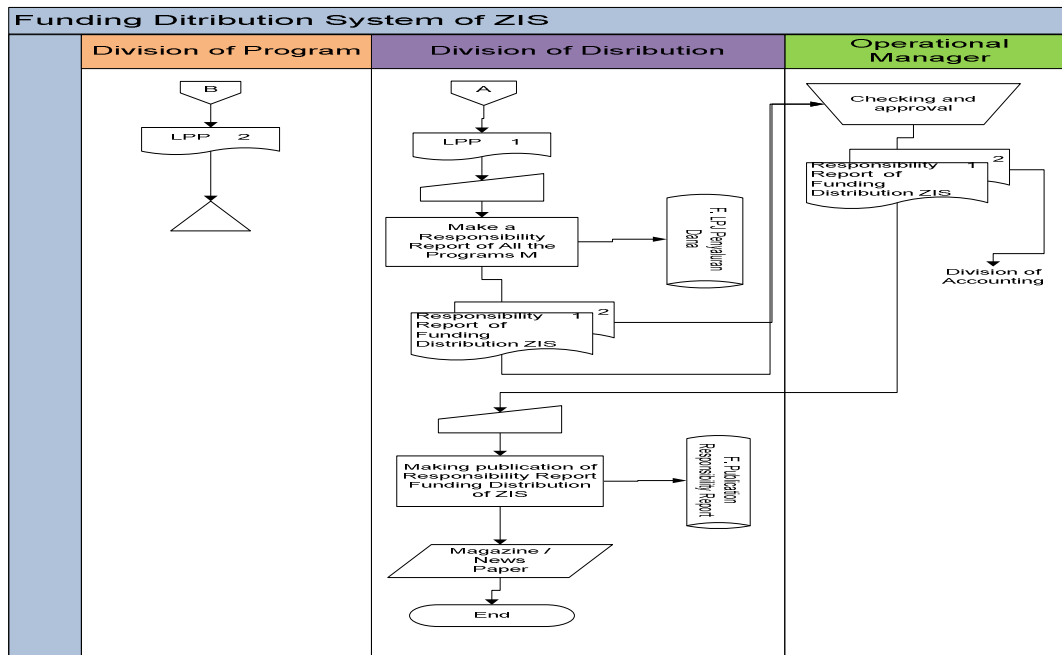


Figure 2. Design SOP Fund Distribution of ZIS System (further)

- The division responsible for each program will receive the data document details of the distribution per program from the distribution section and receive the Program Implementation Order document from the program section. The person in charge of the program will match the two documents so that they are not mistaken in accepting documents and implementing the program in the field. The next step is to implement the program in accordance with the details that have been blinded. After the activity is carried out, then the computer comes in to create a program accountability report which is stored in the Program accountability report file and printed in three copies. Accountability Report The third duplicate program will be filed by the person in charge of the program as evidence, the second copy is submitted to the program part and the first copy is submitted to the division of distribution.
- The division a program receives program accountability reports from the division in charge of each program, then files the document as proof of program implementation.
- The division of distribution receives the first duplicate program accountability report document from each program responsibility then is entered into the computer and an accountability report for all programs that have been carried out and stored in the LPJ file is distributed. This report is printed in three copies and submitted to the operational manager.
- The operational manager receives the ZIS Fund Distribution Report document from the distribution section, then checks it, if the document is incompatible with data or there is misstatement of data it will be returned to the distribution section, if the document is deemed appropriate and there is no misstatement then an approval is performed in the report. LPJ Distribution of the third ZIS fund will be filed by the manager as proof of the implementation of the fund distribution program, the second copy will be submitted to the accounting section to make a financial payment reference for the distribution of ZIS funds, the first duplicate will be given to the division of distribution.
- The division of distribution receives LPJ Distribution of ZIS Funds which have been approved and then made a report to be published on the media stored in the LPJ Publication file and submitted to the media magazine/newspaper for publication.

- Procedures for the distribution of ZIS funds are completed after being published to the public as a form of accountability.

#### 4. Conclusion

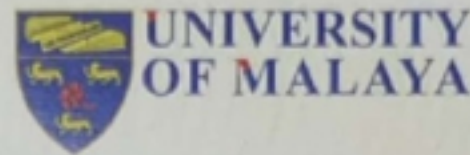
The results showed that in several large-scale amil zakat institutions in Java, the ZIS fund distribution system was in accordance with the existing internal control, but the middle and lower scale institutions had several problems where there were still things that needed to be repaired in connection with no the existence of internal control. This can be seen by using the PIECES method which can be found in the problems of each aspect except on economic and efficiency. Based on these problems, the appropriate standard operating procedures are needed and contain internal controls to maintain the accuracy of the data, restrictions on access, and especially accountability to the community for the mandate (responsibility) they receive.

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# CERTIFICATE

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