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## Reshaping Research and Best Practices in Global Business Management

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**Paper #002**

**BUSINESS DEVELOPMENT USING BUSINESS MODEL  
CANVAS ON ERICK BATU-MALANG**

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**Abstract**

Erick Catering Batu-Malang is one of company that provides catering services in Batu City, Malang and surrounding. As new player in the business world, Erick Catering Batu-Malang needs business development so that its business can survive in the midst of the business competition. This research aims to map the business model of Erick Catering Batu-Malang by using Business Model Canvas approach. The method used in the research is descriptive qualitative through interviews and FGD with the business owner, chef and 3 companies as its customers. The result of the research indicated that Erick Catering Batu-Malang in terms of Customers Segmentation, have no special customers segments. The Value Proposition is by giving the best service, friendly service, easy-to-remember slogan, and special design that is Punakawan statue. Channels run by this company is by establishing good relationship with its customers that is built personally so consumers can experience maximum service. In addition, by giving promos or discounts. For distributing the goods, Erick Catering Batu-Malang have 4 family-type cars which converted into catering vehicles. For the Revenue Stream, is obtained from tour catering, hotel and wedding. For Key Partnership, limitation lies in supplier that sometimes dishonest in supplying raw materials. Cost Structure proved that the costs are most often issued by companies is the fixed cost and variable cost.

**Keywords:** Business Model Canvas, Focus Group Discussion, Catering Industry, Business Management, Business Development.

# **DELIVERY PERFORMANCE IMPROVEMENT USING SIX SIGMA METHOD: A CASE STUDY AT FMC AGRICULTURAL MANUFACTURING**

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## **Abstract**

Indonesian people are one of the biggest consumers who still have high community needs for Agricultural products, thus requiring farmers to maintain their production processes so that the quality of their products can be maximized. In a production process there will be several factors that can make farmers fail to harvest. And pests are one of the causes for some farmers to fail crops, so the proper use of pesticides will affect production performance in maintaining the quality of their products. PT. FMC is a company engaged in producing pesticides and pesticides and classified into 3 herbicides, fungicides and insecticides. Because the use of pesticides and pest drugs is very important to maintain the quality of the crop, the delivery of products may not be late because it will disrupt the consumer production chain. And now PT. FMC experienced a delivery performance problem, the definition of which is how companies are able to deliver products to consumers in a timely manner, this is an important metric because it influences the customer satisfaction. This research focuses on how companies are able to identify problems, analyze and solve these problems using the Six Sigma methodology. The method is used by researchers because the method has a cycle of how companies solve a problem that can disrupt business processes and also provide added value in terms of cost reduction, increased productivity, market share growth, reduced cycle time, customer retention, defect reduction, and also product and service development. And the results of research in finding problems in this business process are (1) problems triggered by delays in the arrival of material both raw material and packaging material. (2) the customer delays delivery several times (3) the Warehouse Leader is late in inputting data and Post Goods Issue.

**Keywords:** Agricultural, Manufacturing, Six Sigma Methodology, DMAIC, Delivery Performance.

# **THE EFFECTIVENESS OF ORGANIZATIONAL FACTOR TOWARD SAFETY PROGRAM IMPLEMENTATION AFTER MAHAKAM OIL & GAS FIELD TRANSITION IN 2018**

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## **Abstract**

Safety performance is often used as a one of key indicator to measure Oil and Gas (O&G) operator performance in the world. This indicator is also consistently implementing by Mahakam O&G Field operator in order to ensure the operational activities are operated in safely manner. A production and safety achievement in Mahakam O&G Field has become major stakeholder concerns after transition period in 2018. PT. CCC as new operator is assigned to continue the success story of previous operator specifically to maintain good safety performance. However, the journey to maintain safety achievement in Mahakam O&G Field is not an easy way. Statistically, until June 2018, 1 accident case categorized as lost time injury (LTI), 5 recordable injuries (RI) and 9 near-missed incidents with high potential category have occurred and recorded in company perimeter. Not only the incident case, two serious violation also reported involving several contractor workers who done smoking activity at offshore platform which categorized as hazardous area. Contribution of organizational factors toward safety performance of organization has a significant role to prevent and reduce serious accident case and unsafe behavior. An expert's knowledge to gain specific indicators to measure organizational factors is required. This research offers the model of effectiveness of organizational factors in implementing safety program with Data Envelopment Analysis (DEA) approach. Research result shown that 2 DMU's are efficient, namely Drilling (DRLL) and Exploration (EXPL) and 4 DMU's are inefficient, there are Production (PRO) with DEA score 0.32, Construction (CONS) with score 0.547, Logistic (LOG) with score 0.26 and Well Operations (WLO) with score 0.028. Inefficient DMU's mostly contributed by ineffectiveness of organizational level factor, safety management level factor and working group level to achieve safety outcome. The research result will guide management of organization to put more attention to reviewing ineffective organizational factor specifically during transition period of O&G block in Indonesia.

**Keywords: Organizational factor, Effectiveness, Safety Program, DEA.**

**THE EFFECT OF FINANCIAL AND NON-FINANCIAL  
COMPENSATION TO JOB SATISFACTION AND  
PRODUCTIVITY OF MILLENNIAL WORKFORCES**

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**Abstract**

Managing today's business faces more challenges in terms of managing their workforces which majority are millennials generation. While employers have offered financial compensation to boost their productivity, non-financial compensation may have greater effect. Using data from 208 survey of young workforces, this study examines how financial and non-financial affect the productivity of millennial workforces. The results confirm the hypotheses that, compared to financial compensation, non-financial has greater influence to the job satisfaction and productivity.

**Keywords:** Business Model Canvas, Focus Group Discussion, Catering Industry, Business Management, Business Development.

# **INVENTORY MANAGEMENT AND REORDER POINT (ROP) STRATEGY USING ABC ANALYSIS METHODS IN TEXTILE MANUFACTURE**

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## **Abstract**

Tight competition encourages textile companies to increase their competitiveness to efficient in all fields, especially by reducing material stock to its optimum figures without disrupting production operations. Currently this textile manufacture has implemented SAP as an enterprise resource planning (ERP) software. SAP is currently used as material resources planning (MRP), purchasing and inventory control software. Purchases are made automatically using reorder point (ROP) and inventory control using the ABC analysis method. In time being there is no relationship between the ABC analysis method to inventory control and ROP. With this condition, the purchase order for material is raised when the stock level is lower than ROP even these unnecessary, causing the stock to become slow moving and dormant when it reaches six months laying on the warehouse and causing excess inventory. This study aims to design and implement how the ABC method can be used to determine purchasing decisions and which ROP calculations should be used. The ABC multi criteria analysis in this study shows that ABC categorization is acceptable for deciding ROP determination. This method of inventory management has the potential to reduce inventory levels up to 17% and eliminate dormant and slow moving.

**Keywords:** reorder point (ROP), ABC analysis method, AHP Method Multicriteria ABC, SAP enterprise resource planning (ERP) software, Purchasing, Inventory control.

**THE ANALYSIS OF DOOSAN S500-LCV EXCAVATOR  
MAINTENANCE PLANNING TO REDUCE DOWNTIME  
USING RELIABILITY CENTERED MAINTENANCE (RCM)  
METHOD**

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**Abstract**

PT X is a company engaged in construction field and heavy machinery services. PT X uses excavators as a tool to mine rock sand. In 2018, the company has planned to increase production capacity. The increase of production capacity will be directly related to the operational capability of the unit which must always be maintained. The problem in this study is the occurrence of unit downtime that cannot be predicted and occurs in a relatively long time. The components damage of the excavator causes the unit to be unable to operate to increase production. The maintenance of the Doosan S500-LCV excavator at PT X is currently not optimal because the downtime that occurs in the unit is still relatively high. Standard maintenance procedure of excavator units need to be evaluated in order to minimize the occurrence of downtime so that the unit can be used for maximum production. The method used in this analysis is the Reliability Centered Maintenance (RCM) method with evaluating maintenance carried out and giving the right maintenance suggestion. From the results of the analysis and discussion, the critical components of the S500-LCV excavator in PT X are Bucket, Control Valve, Radiator, Alternator and Hydraulic Breaker. Proposed maintenance based on the RCM method and the consideration of S500-LCV maintenance costs at PT X are bucket with preventive maintenance, control valve with a combination of preventive and corrective maintenance, radiator with preventive maintenance, alternator with a combination of preventive and corrective maintenance and hydraulic breakers with preventive maintenance.

**Keywords: Downtime, Excavator, Maintenance, RCM**

**DEVELOPMENT OF PERSONAL SELLING STANDARD AND  
IMPROVEMENT OF MSME X'S WEDDING PROMOTION  
MATERIAL**

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**Abstract**

Currently, the type of industry that still growing is the wedding industry. The increasing number of marriages in Indonesia contributes to the need for wedding services. MSME X owners seek the opportunities needed to provide services and various options for the needs of marriage. MSME X is currently held in Jakarta and Bekasi. This study discusses the business coaching process report MSME X personal selling and improving promotional materials in the form of brochures to attract consumers. The challenge in selling wedding services is that consumers cannot feel or touch services first. Preliminary analysis shows that salesperson use brochures as sales aids, there are differences in the level of sales competency among marketing employees, so personal selling activities are not optimal and affect the company's sales targets. Primary data collected through in depth interviews and observations, while secondary data is obtained from owners, the internet, and management books. The collected data will be analyzed using qualitative methods. This research focuses on the formulation of personal selling standards, and improvement of promotional materials as a tool for salesperson in conducting sales of wedding services. The results of this business coaching process explain the steps that can be used to conduct wedding service sales and the effect of improving promotional materials that help resolve limitations in the marketing aspects of MSME X.

**Keywords: Business Coaching, MSME, Personal Selling Standard, Promotional Materials, Wedding Industry.**



**DEVELOPING PERSONAL SELLING SOP, IMPROVING  
WEBSITE AND IMPROVING COMPANY PROFILE OF  
MSMES OF PT SELULA DWIPHALOKA TEKNOLOGI**

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**Abstract**

The increasing number of MSMEs (Micro, Small and Medium Enterprises) in Indonesia has had a positive contribution to Indonesia's economy, but many MSMEs unable to manage their business well. PT Selula Dwiphaloka Teknologi is an MSME, a family business located in Bekasi City, Indonesia, that sells a custom-design machine for B2B customer. The data were collected using business coaching methods, a qualitative research that used to mapping MSME's condition and problem, then take a corrective action to implement solutions for improvement. The result shows that the MSME don't have a written SOP that can be used as guidance so the personal selling activity can be done consistently, and also the website and company profile of MSME don't look very interesting. So, the solution is by developing SOP of personal selling, improving the website and company profile to support marketing activities. Surveys were also conducted to support evidence of the improvement result. As the results, there was a significant increase in the respondents' assessment of the visual aspects, information and overall appearance of the new website and company profile compared to the old ones. This study aims to help PT Selula Dwiphaloka Teknologi manage their marketing activities by creating SOP of personal selling, designing new website and company profile proposal.

**Keywords:** B2B, business coaching, company profile design, machine maker MSMEs, personal selling SOP, website design

**Paper #010**

**STRATEGY TO INCREASE MARKET SHARE FOR  
MEDICAL DEVICES: A CASE STUDY OF A SOLE  
DISTRIBUTOR COMPANY**

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**Abstract**

The objectives of this study is to evaluate marketing strategies that hit directly at market leaders in the goal of getting a marketing strategy to increase market share and become a market leader. This study applies a qualitative and quantitative approach. The analysis applied was descriptive analysis using EFAS, IFAS and SWOT analysis instruments. Data sources and types of research data consist of primary data and secondary data. Primary data obtained from the results of focus deep discussion, in deep interviews and questionnaires. Whereas secondary data is obtained from financial reports and relevant articles and literature. The results of this study resulted in the value of Opportunity: 2,07 Threat: 0,60 and Strength: 0,52, Threat: 1,5 so that in quantitative SWOT analysis entered the turnaround strategy, namely changing strategy. And from the SWOT matrix, it was found that the W-O strategy, that is company must change their marketing strategies from direct hit to market leaders by improving after-sales services, improving the their quality products, conducting brand equity, support from top management and placing units in the Teaching Hospital. This research can provide an overview to practitioners in marketing strategic decision making.

**Keywords: -market challenger, IFAS, EFAS, SWOT, marketing strategy**

# **ENERGY EFFICIENCY OF COOLING LOAD THROUGH THE GLASS FACADE OF OFFICE BUILDINGS IN SURABAYA**

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## **Abstract**

The aims of this article is to obtain an alternative type of glass on the envelope buildings of full glass (WWR 100% with spandrel) and to obtain energy efficiency of cooling load through the glass facade of office buildings in Surabaya. The shape of the building in this article uses a simulation of regular form (squares) and differences in building orientation. The calculation method is uses the OTTV method (Overall Thermal Transfer Value) for the value of heat gain through the building envelope and the CLTD method (Cooling Load Temperature Difference) to calculate the cooling load affected by the glass facade. The results obtained in this article simulation show that the most efficient value is double glazing with using  $SC \leq 1.9$  and U value glass  $\leq 2.6 \text{ W} / \text{m}^2\text{K}$ , so that the energy efficiency of the cooling load obtained can decrease until 6%. The savings were obtained at the value of OTTV is 25.60 W/m<sup>2</sup> with the price of glass facade in the amount of Rp. 4,005,333/m<sup>2</sup>.

**Keywords:** Energy Efficiency, Cooling Load, Façades, Office Building.

**THE SUITABILITY EVALUATION OF PROCUREMENT  
INFORMATION SYSTEMS TO THE NEEDS OF USERS AND  
MANAGEMENT USING HUMAN, ORGANIZATION,  
TECHNOLOGY-FIT (HOT-FIT) FRAMEWORK**

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**Abstract**

Management Information System (MIS) in government institutions was a very crucial thing in supporting good services to the community. The established MIS often provided less optimum benefits since the MIS development did not go through a good planning and was not supported by a clear IT masterplan so that an evaluation of the MIS implementation is needed, especially from 3 (three) main aspects, including aspects of Human, Organization and Technology. The procurement unit of Malang City has a MIS for procurement of goods / services called SiBaja which has been established since 2016 and since then suitability evaluation has never been performed. This study aimed to evaluate the suitability of SiBaja to the needs of users and management using Human, Organization, Technology-Fit (HOT-Fit) framework with some modifications adjusted to the characteristics of the application of MIS in the government institution area. To obtain the data, a survey method was used by distributing questionnaires to the application users. The data analysis model used was Structural Equation Modeling Partial Least Squares (SEM-PLS) by using SmartPLS 3.0 software. This study found that the implementation of SiBaja application was not fully fit for the relationship between Human-Technology that was indicated by the absence of a significant effect between User Satisfaction (US) variable and System Quality (SQ) variable with a significance value of 0.899 at  $\alpha = 0.05$ . and was not fully fit for the relationship between Organization-Technology factor which was characterized by the absence of a significant effect between Service Control (SC) variable and Information Quality (IQ) variable with a significance value of 0.221 at  $\alpha = 0.05$ .

**Keywords: Management Information System, Suitability Evaluation, HOT-Fit, SEM**

**Paper #013**

**INFLUENCE OF GAME DESIGN AND PLAYABILITY  
TOWARD CONTINUANCE INTENTION USING TAM  
FRAMEWORK**

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**Abstract**

As the growth of game industry, only few Studies in mobile games, and also focused on pre-adopting while ignoring post adoption behaviors. One intrinsic factor considered affecting gameplay is enjoyment. Some research has already conducted to understand what is enjoyment driver. Enjoyment is an external factor that influenced perceived usefulness. where perceived of usefulness is variable proposed in TAM. This study aims to examine impact the game design attribute that fit and influence enjoyment while play game and as a motive of continuance mobile game use in MOBA genre. This research adopts game design attributes of challenge, variety, novelty, design aesthetics, social interaction, playability attributes consist of perceived of use and interactivity. Structural Equation Modeling (SEM) is used for data analysis. The model is tested with 206 actual users. The findings put Novelty, design aesthetic and interactivity under observed. This research concluded that continual mobile game use is strongly driven by perceived of usefulness. The implications are discussed in the paper

**Keywords: Mobile games, MOBA, Enjoyment, Continued use, TAM**

**Paper #014**

**INVESTOR ATTENTION ON STOCK RETURN AND  
LIQUIDITY : EVIDENCE ON EMERGING MARKET**

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**Abstract**

The research examines the evidence of search intensity toward stock return and liquidity in emerging market country. The sample consist of 9 emerging market country classified as MSCI EM Index. Search intensity is measured by Google Trends named Google Search Volume Index (SVI) as a direct proxy for individual investor's attention and Abnormal Trading Volume (ATV) as proxied for liquidity. We use Fama-French Three Factor Model to explain stock return variability in emerging market. We obtain weekly data for the period from July 2014 – June 2018 and currency depreciation as attention-grabbing event. We classified the sample into 3 portfolio which are low currency depreciation, medium currency depreciation and sharp currency depreciation. The result showed that the SVI has tendency to explain stock return variability in certain portfolio even though in general SVI insignificant toward stock return and liquidity. Additionally, we find that in low and sharp currency depreciation, investor tend to invest in small stock with high book to market meanwhile in medium currency depreciation investor tend to invest in big stock with high book to market. Overall, we conclude that in emerging market investor behave on their rationality compared with behavioral aspects.

**Keywords: Fama-French Three Factor Model, Emerging Market, Investor Attention, Behavioral Finance**

**PERFORMANCE ANALYSIS OF RSUD IBNU SINA GRESIK  
USING INTEGRATED PERFORMANCE MEASUREMENT  
SYSTEM AND OBJECTIVE MATRIX METHODS**

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**Abstract**

The quality of excellent health services encourages hospitals to continue to improve their performance. Hospitals as health care providers must extend their quality checks with a customer-oriented perspective, because of the increasing awareness of patients who expect quality health care. In line with the performance measurement method, RSUD Ibnu Sina Gresik has carried out performance appraisal using only service quality indicators and financial indicators so that it does not reach other activities that should be measured and evaluated to improve overall organizational performance. This study aims to analyze the assessment of performance and efforts applied in improving the performance of inpatient services at RSUD Ibnu Sina Gresik using the method of Integrated Performance Measurement System and Objective Matrix. Performance measurement by determining the criteria and sub-criteria in the Focus Group Discussion stakeholders to build a structure for evaluating inpatient performance. To measure the level of achievement of business objectives, a Key Performance Indicator is needed that reflects the observed business unit performance and performance rating scoring using Objective Matrix to determine the value of overall performance. The results of the measurement of inpatient performance with the Integrated Performance Measurement System method can identify 18 Key Performance Indicators and scoring systems with the Objective Matrix method obtained achievement of a performance value of 7,3727 which means the performance of inpatient units is in a good category. Increasing the competence of nurses through education and training is a priority recommendation that can be done in an effort to improve the performance of inpatient care.

**Keywords: Performance Measurement, Integrated Performance Measurement System, Key Performance Indicators, Objective Matrix.**

**PERFORMANCE IMPROVEMENT STANDARDS AND SLA  
DESIGN OF SIAKAD BASED ON CMMI-SVC AND ITIL V3  
FRAMEWORK**

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**Abstract**

Maulana Malik Ibrahim Malang State Islamic University is a university in the Ministry of Religion. Have a vision to apply and develop information technology to realize a university as Cyber Campus and Cyber Community and misi which is to provide services to academic community in the utilization of Information Technology to implement Tri Dharma Program for higher education programs and realize Management Information Systems in the university to support academic and administrative activities. One of the information system services that plays an important role is Academic Information System. So far the services of Academic Information System have not fully met the criteria from vision and mission made by the party of PTIPD UIN Malang. Technical related problems often happens repeatedly and job description is not organized. The problem above more or less shows that the quality and performance from Academic Information System service has not met the standard to support vision and mission of PTIPD UIN Malang. The researcher uses work method which is CMMI-SVC related to capability measurement, then related to technical problem and Service Level Agreement (SLA) design based on ITIL V3 framework and FMEA method in weighing the value of SLA component. This thesis research produces Service Level Agreement (SLA) draft document framework.

**Keywords:** CMMI-SVC, ITIL V3, FMEA Method, Service Design, Service Level Agreement



## **CASE STUDY OF OMNICHANNEL MARKETING IN PT ARWANA CITRAMULIA TBK**

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### **Abstract**

Omnichannel marketing is a marketing method that integrates marketing channels to target specific target markets. This research is a case study of the use of omnichannel marketing for B2B activities at PT Arwana Citramulia Tbk, the largest company of many companies in the ceramics industry in Indonesia. PT Arwana Citramulia Tbk targets the middle to lower market segments throughout Indonesia. To be able to dissect how PT Arwana Citramulia Tbk manages its channel, this research will use qualitative methods by conducting unstructured interviews with various stakeholders in PT Arwana Citramulia Tbk. In addition, technology acceptance models are also used to measure revenue from the distribution chain line of PT Arwana Citramulia Tbk, which conducts B2B marketing activities towards the use of online channels to support the use of omnichannel marketing. The technology acceptance model will be used to analyze quantitatively, which is also equipped with results of unstructured interviews regarding the implementation and management of omnichannel marketing by PT Arwana Citramulia Tbk. This research shows that the integration between channels used by PT Arwana Citramulia Tbk is inseparable from the existence of vision, mission, strategy and adequate resources from the top management level to the frontliners.

**Keywords: omnichannel marketing, technology acceptance model, marketing channel, B2B marketing, PT Arwana Citramulia**

**APPLICATION OF LEAN PRODUCTION / CONSTRUCTION  
TO REDUCE WASTE IN PIPE GAS CONSTRUCTION (CASE  
STUDY OF SEMARE-TIE IN KM 19 PIPA PORONG GRATI  
GAS DEVELOPMENT PROJECT PT PERTAMINA GAS)**

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**Abstract**

The lean approach, which was initially used in manufacturing industry, now is widely adopted by the construction industry called lean construction, in order to reduce waste and to optimize the value. This study was conducted to see the suitability of the lean construction approach on the EPC project of gas pipeline installation. This study is viewed from the Company side as the owner particularly in engineering aspect which is carried out by the company itself. Engineering work is deemed as a key to the next activity which is effective and efficient procurement and construction phase. Almost all similar projects show the same symptoms such as: low quality of engineering work (amendment value above 10%), target and realization lagging of its progress, re-work, weak coordination and residual materials. Therefore, the urgency to make improvements occur with the Lean Construction approach described in Big Picture Mapping, Value Stream Analysis Tool, Pareto Diagram, Fishbone Diagram at each stage of the engineering work EPC gas pipeline. Value Added (VA) activities were obtained at 39.35% and Non-Added Value (NVA) activities at 60.65%, engineering work quality classified as poor (amendment value 12.81%). The application of a lean construction approach is suitable to be applied in Company for gas pipe installation projects but with some notes. Then a comprehensive evaluation is required to evaluate man power, load, and skills needed and eventually to be standardized in an acknowledged company standard in order to make every project to be done punctually. The dominant root cause of the problem is the engineering g's contract form (a lump-sum engineering contract) and company policy as the reference to identify the contract form itself.

**Keywords: Waste, Lean Construction, Big Picture Mapping, Value Stream Analysis Tool, Pareto Diagram, Fishbone Diagram, Value Added (VA), Non Value Added (NVA)**

**THE READINESS OF NAHDLATUL ULAMA SURABAYA  
UNIVERSITY (UNUSA) TO BE THE CENTRE OF  
DEVELOPMENT OF RAHMATAN LIL ALAMIN  
ENTREPRENEUR (ENPLUS)**

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**Abstract**

Brush (2014) states that to make the student having the spirit of entrepreneurship they have to develop start-ups in term of realizing a university venture and also to give benefit for the society, therefore, an ecosystem that is called Entrepreneurship Education Ecosystem is needed. UNUSA is one of the universities in Indonesia that has a strong vision to prepare a generation having spirit of Rahmatan Lil Alamin entrepreneurship based on Islamic values. The objective of this paper is to describe the readiness of UNUSA to be a university with Islamic values under the Nahdlatul Ulama organization to be the Entrepreneurship Ecosystem from the aspect of Brush's theory (2014). From the result of this discussion it is find out that in spite of only six years old in age UNUSA has some breakthroughs to develop the entrepreneurship education ecosystem. However, it is urgent for Unusa to develop Business Incubator seeing that the number of UNUSA students are more and more from years to years. Such fact can not be separated from the mission of UNUSA to be the centre of entrepreneurs development and building in Indonesia. It can be concluded that UNUSA is ready to become the centre of Rahmatan Lil Alamin entrepreneur development and building and will support the government program of One Pesantren One Product (OPOP)

**Keywords:** Entrepreneur Rahmatan Lil Alamin (Enplus), Entrepreneurship Education System, One Pesantren One Product (OPOP).

# **ANALYSIS OF SONG POPULARITY IN BUSINESS DIGITAL MUSIC STREAMING FOR INCREASING QUALITY USING KOHONEN SOM ALGORITHM**

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## **Abstract**

Consumption of digital music services has grown dramatically in recent years. There is an increase in music streaming consumption from 2015 to 2016, which is 76.4%. One of the most popular music streaming services, Spotify, has experienced an increase in customers from year to year. This increase enables businessmen / music producers to increase their business profits by analyzing music / songs to find out the audio attributes that make the song enjoyable for many people. Processing and analysis data are using Kohonen SOM Algorithm. The function is to find out which audio attribute groups are most liked by Spotify users where a good music is a music that can be used as a therapy. The result is LR = 0.1, PLR = 0.9, and epoch = 70 - 500, it can be concluded that cluster 2 is the cluster that has the most number of streams with 27 songs where the smallest DBI value is obtained at epoch = 200. Thus, with the statistic analysis, the obtained information is; it is expected that businessman / music producers can increase their business profits by improving their music quality that focus on songs with modes = 0 (Minor) and loudness features.

**Keywords:** Spotify Audio Features, Clustering, Kohonen SOM, Multiple Linear Regression.

**THE INFLUENCE OF HARDWARE, SOFTWARE, DESIGN,  
AND PERCEIVED VALUE ON INTENTION TO PURCHASE  
SMARTWATCH**

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**Abstract**

Although the wearable devices are popular and growing rapidly in technology development, the market share of the smartwatch is still low. Yet is little known about why some people are not interested to adopt smartwatch. The aim of this research is to investigate the influence of software, hardware, and design, related to perceived value and attitude toward intention to purchase a smartwatch. This research examined purchase intention by applying the construct from the Theory of Planned Behavior (TPB). Hypotheses were tested and collected from 330 sample data among Indonesian people. From the factors affecting purchase intention, the attitude using smartwatch is the only factor with significant and positive effect. Perceived value, consist of social, emotional, price, and performance quality, which affected by software and design aesthetics, has a direct effect on consumer's attitude, along with hardware factor. In this research, the author found that hardware doesn't have an effect on perceived value, while software and design aesthetics are didn't affecting attitude, and perceived value doesn't have a direct effect on purchase intention. The results from this research will provide the smartwatch manufacturer with practical guidance for optimizing competition and marketing strategies of the smartwatch, especially for first-time buyer in Indonesia.

**Keywords:** Wearable device, Smartwatch, Smartwatch adoption, Purchase intention, Theory of Planned Behavior

**STRATEGY SELECTION OF PROPERTY BUSINESS IN  
TRANSIT ORIENTED DEVELOPMENT AREA  
(CASE STUDY OF PT XYZ)**

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**Abstract**

The property business in 2018 did experience a downward trend because of a high backlog caused by oversupply. But the prospect of the property business in 2019 is quite promising and is believed to continue to prosper. The research base is a case study at PT XYZ, one of the subsidiaries of BUMN Construction Services which is engaged in the development of property in the integrated Light Rail Transit (LRT) TOD area in Jakarta. This study aims to obtain a superior strategy in the competition of the property business in the Transit Oriented Development (TOD) area which makes added value for PT XYZ so that it can compete with other developers. The company's strategy for PT XYZ is formulated using David's comprehensive strategy formulation model, which consists of input stages, matching stages and decision stages. Analytical Hierarchy Process (AHP) is used to determine the weight of internal and external strategic factors and Quantitative Strategic Planning Matrix to obtain the highest TA (Total Attractiveness) score. The expected result is that an appropriate business strategy can be obtained by PT XYZ to be applied in property development in the TOD area.

**Keywords:** Analytical Hierarchy Process, Strategy Management, Property, Transit Oriented Development.

**STUDY OF COMPANY X MINERAL WATER PRODUCTION  
SYSTEM BY USING HAZARD ANALYSIS CRITICAL  
CONTROL POINT (HACCP) METHOD**

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**Abstract**

Drinking water is human essential need. However, there are so many contaminants contained in drinking water sources. One of the solutions to overcome this issue is using technology to produce clean drinking water which called mineral water. Mineral water industries come to understand that maintaining quality is the fundamental principle to increase sales. One of the mineral water industries in Indonesia is company X. Yet it does not have a thorough management and supervision method to control the product quality. The quality management and supervision method is used only on several aspects of production and after acquiring customer complaints. This emerges the need of company x to form an applicable, comprehensive, and standardized management system. To produce high-quality mineral water, company X can apply HACCP method. HACCP (Hazard Analysis Critical Control Point) is a system used for measuring risks and determine the control system that focused on prevention. There are five primary principles in HACCP method. Accordingly from HACCP method analysis, there are discovered about 19 critical control points and critical limits which can affect the company X production system along with the monitoring procedures and corrective actions towards the critical control points. Therefore, HACCP is a suitable method to monitor company X production system and increase the product quality.

**Keywords: Mineral Water, Management, HACCP Method, Quality, Production System.**

# **REQUIREMENT ENGINEERING ANALYSIS BASED ON RISK ASSESSMENT (CASE STUDY DEVELOPMENT OF MANAGEMENT INFORMATION SYSTEM FOR DOMESTIC WASTEWATER MANAGEMENT IN GRESIK DISTRICT)**

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## **Abstract**

Public services and the provision of proper and sustainable sanitation infrastructure is one of the basic needs of the community, according to the 2030 Sustainable Development Goal (SDG's) and the 2015-2019 Medium-Term Development Plan (RPJMN), the Government of Indonesia has determined that by 2019 achieving 100% Universal Access in the sanitation sub-sector service in order to accelerate infrastructure development to encourage economic growth and equity. This emphasizes the importance of optimizing water supply and sanitation services and especially the domestic wastewater sector. In the implementation of these services the operator operators often experience obstacles in integrating all business processes due to the limitations of the management system they have. The purpose of this study was to analyze the requirements engineering process with risk analysis and then to integrate the system with the concept of enterprise resource planning with a case study of the development of domestic wastewater management information system in the Public Works and Spatial Planning Office of Gresik Regency. This study uses the stages of preparing Requirements Engineering documents in accordance with ISO/IEC/IEEE 29148-2011 standards and Risk Assessment Analysis with ISO 31000 standards. Software Requirement Specifications (SRS) are then used as a reference in developing systems with an Enterprise Resource Planning (ERP) approach. The expected results of this study are to identify stakeholders needs and risk analysis appropriately in getting the concept of developing software requirement modules into an integrated system through enterprise resource planning.

**Keywords:** Requirement Engineering (RE), Risk Management, Risk Assessment, Software Requirement Specifications (SRS), Enterprise Resource Planning (ERP), Faecal Sludge Management (FSM), Gresik Regency.



**STRATEGIC PLANNING OF INFORMATION  
SYSTEM/INFROMATION  
TECHNOLOGY (CASE STUDY: GRESIK REGENCY  
GOVERNMENT ENVIRONMENT)**

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**Abstract**

Using IS (Information System)/IT (Information technology) has become the organization's need to carry out its operational activities and services. The government has also used IS/IT in carrying out its activities and services considering the benefits that are get, efficient, effective, and transparency to support good and clean governance. Gresik Regency does not yet have a master plan for implementing IS/IT so that what it needs cannot be managed. Gresik Regency needs a planned information technology-based system that can produce correct and prompt information. purpose of this study was to identify data and information needs in policy formulation and to develop an information system strategic plan in Gresik Regency. Basic concept used in compiling this research is the method proposed by John Ward and Joe Peppard. stages carried out start from analyzing the internal and external business environment of the organization, analyzing internal and external organization IS/IT, followed by identifying strategies and designing future portfolios. Method of analysis carried out uses several methods, among others, SWOT, Critical Success Factors, Value Chain, PEST, and Mc Farlan Strategic Grid. The results of this study is a blueprint of strategic planning that refers to the organization's business plan based on data obtained through the analytical methods used. It will integrate the information produced for administrative and public service needs. organization's strategic objectives in the form of superior prime service will be achieved by implementing an optimal improvement of data processing functions with the support of Information Technology. preparation of IS / IT strategic planning according to the resulting portfolio is expecting to be using in future strategic planning so it can give priority to the activities needed to get optimal results and based on its contribution to the objectives to be achieving.

**Keywords: Information System Strategic Plan, Ward & Peppard Framework, SWOT, CSF, Value Chain, Mc Farlan Matrix.**

## **TRAINING NEED ANALYSIS FOR CONTRACT EMPLOYEES (STUDY CASE AT PT. SCI LABORATORY SURABAYA)**

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### **Abstract**

PT. Sucofindo (SCI) is a company engaged in the fields of inspection, supervision, testing and assessment. There are a lot of services offered by PT. SCI, the role of human resources needs to be put in concern given the increasingly widespread challenges of competence. The company's efforts in that employees have the ability and good performance, namely by conducting training for employee self-development. To be able to understand the importance of training for contract employees of PT. SCI Laboratory Surabaya, this study used the theory of Training Need Analysis (TNA), an analysis of training needs for contract employees. The research sample was taken in a survey of 97 employees of PT. SCI Surabaya laboratory. With the method of Focus Group Discussion (FGD) and Training need assessment-tools (TNA-T) to analyze the training needs for contract employees at PT. SCI Laboratory Surabaya. The results of the study using the TNA-T method were PT. SCI Surabaya Laboratory's contract employees still need training. The design of TNA for 2019 is the training of Chemical AK3 as many as 34 people for Office Operations using the off job training method, 27 people need method validation training, and 15 people need training in analysis according to the santart method. TNA for 33 field operations employees needed method validation training and 17 people needed draft survey operation training. Training other than AK3 Chemistry is recommended to use the on job training method.

**Keywords:** Training Need Analysis-Tools (TNA-T), Focus Group Discussion (FGD), On Job Training, Off Job Training.

**OPTIMIZATION OF IRRIGATION WATER AT BARU  
IRRIGATION AREA BANYUWANGI REGENCY  
EAST JAVA**

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**Abstract**

Baru irrigation area at Bangorejo with 5,981 hectare of rice fields gets water from the Karangdoro dam. The potential availability of water and the large of rice fields cause this research to develop and implement an optimization model of the use of water Karangdoro dam using a stochastic dynamic program to fulfill irrigation water needs optimally during certain seasons. Optimization is performed with the state variable is the volume of irrigation water needs and decision variable is a benefit of the availability of water. In the settlement, made the table expected value that contains the value of the stage return as a function of decision variables. Furthermore with the values in the table of Expected Value, performed the procedure on the program as recursive deterministic dynamical. Recursive procedures, the results obtained from the initial stage will be transformed into the next step, and so on until the final stages. With back tracking, will line up with the maximum value. Maximum benefit on the final stage is the mean value of benefits when the optimal allocation policies applied in the long term. By applying a stochastic dynamic program, the pattern of water distribution during rainy season from the previous total amount of 20.956 m<sup>3</sup>/sec increased to 21.403 m<sup>3</sup>/sec. At the first dry season with a total amount of 14.022 m<sup>3</sup>/sec, it increased to 31.359 m<sup>3</sup>/sec. And at the second dry season, the total increased from the previous 10.396 m<sup>3</sup>/sec to 29.718 m<sup>3</sup>/sec. The maximum profit obtained from water availability atrainy season is Rp. 70.086.138.338,55, at first dry season is Rp. 89.404.917.362,88, and at second dry season is Rp. 53.114.043.658,29.

**Keywords:** Irrigation Optimization, Baru Irrigation Area, Dynamic Programming, Stochastic.

**ANALYSIS ACCEPTANCE OF USE INTERNET BANKING  
AND MOBILE BANKING. CASE STUDY: STANDART  
APPLICATION IN XYZ COMPANY**

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**Abstract**

Financial Technology (Fintech) is a technology that connects financial sector and user. Fintech is solution for problem that exist in society that is user those who live far from city to be able access transact financially by making non-cash transactions. This non-cash transactions are important component in world economy and also one of the program that Bank Indonesia wants to improve. This study will be analysed what factors that influence customer behavior in acceptance of using Internet Banking and Mobile banking for transactions using the Technology Acceptance Model. In this study, the author takes a case study at standart Internet Banking and Mobile Banking developed by XYZ Company and the scope population of the sample collection is one of the Banks in Bandung that has used the application developed by XYZ Company. This research uses Partial Least Square Structural Equation Modeling (PLS-SEM) method in analyzing. The results obtained are the most significant factors on customer acceptance use of Internet Banking and Mobile Banking applications for transactions is the subjective norm, experience, result demonstrability, perceived enjoyment, computer playfulness, computer self-efficacy, perception of external control, perceived usefulness, perceived ease of use, behavioral intention, and use behavior.

**Keywords: Technology Acceptance Model, Partial Least Square, Structural Equation Modeling, Internet Banking, Mobile Banking.**

**MEASUREMENT OF POWER PLANT EFFICIENCY USING  
TWO-STAGES MODELING DATA ENVELOPMENT  
ANALYSIS  
(CASE STUDY PT X)**

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**Abstract**

This paper evaluates the thermal power plant efficiency in 19 power plants of PT X the year 2009-2018 using Data Envelopment Analysis (DEA) which dividing into three power plant categories depending on their type – steam turbine, combine cycles, and open cycles. DEA has capabilities to evaluate relative technical efficiency, which is non-parametric linear programming that effectively identifies production limits for each Decision Making Unit (DMU). Business process of power plant is divided in to two business process which are asset investment for production stage as first stage and energy sales capability for sales stage as second stage. First stage and second stage are sequential processes when output in first step will become input to second stage. This DEA methodology applies Envelopment Model with CCR input (CCR I) using two stage model to identify asset production limit in the first stage and sales limit in the second stage. First stage input variables are asset value, number of employee and power plant capacity and output variables are input energy, internal energy consumption and availability factor. Second stage output is electricity sales. Efficiency measurement using Two Stages DEA modeling describes power plants in to four quadrants. Each quadrant will explain power plant efficiency categories and describe power plant efficiency map to set up strategy and policy for investment budget allocation to keep, invest, or demolish the power plant.

**Keywords:** Data Envelopment Analysis, Efficiency, Two-Stages, Power Plant.

**Paper #031**

**ANALYSIS OF THE EFFECT OF EMPLOYEE SERVICE ON  
CUSTOMER SATISFACTION AND WOM INTENTION AT  
CASUAL DINING RESTAURANTS IN JAKARTA**

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**Abstract**

The increasing of restaurant numbers every year has affected the intensity of competition in the restaurant industry. In order to be stand out among competitors, the good perceived image of the restaurant is needed and could be maintained by positive word of mouth spread in the community. The present study examines if employee behavior comprising of personal and functional service aspects in casual dining restaurant has an impact on customer satisfaction and word of mouth intention at casual dining restaurants. Using a survey approach, the questionnaire was distributed to 198 respondents of age 17 years and above which were already been to one of the particular casual dining restaurants in Jakarta. The data were analyzed using structural equation modeling. Based on the results of the study, both personal and functional aspects can significantly predict customer satisfaction, although the functional aspects have contributed more significantly than the personal aspects. In addition, the result revealed that customer satisfaction will eventually affect word of mouth positively. Limitation and future research directions are also discussed.

**Keywords:** Employee Behavior, Customer Satisfaction, Word Of Mouth Intention, Restaurant Industry, Casual Dining Restaurants.

## **FACTORS AFFECTING REUSE INTENTION ON MOBILE SHOPPING APPLICATION**

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### **Abstract**

Mobile apps have become a game changer in retail business. Consumers can shop anything through their smartphones anytime and anywhere. In Indonesia, various of online marketplaces such Tokopedia, Lazada, and Shopee have emerged giving customers many options to shop and they tend to switch channel easily to another shopping apps. This study tested a conceptual model describing the relationships among Technology Acceptance Model (TAM), flow, attitude towards mobile shopping apps and intention to reuse mobile shopping apps. The sample of this research is consumers who have experienced online shopping using mobile shopping apps. The data were collected from 181 respondents via online questionnaire survey. Structural Equation Modeling (SEM) was used for data analysis using AMOS version 22. The results show that perceived usefulness is significantly has a positive impact to flow while perceived ease of use is not significantly related to flow. Flow is positively related to attitude. In addition, the results indicated that attitude is one of the main predictors of consumers reuse intention towards mobile shopping apps and has a greater impact than the direct relation of perceived usefulness to reuse intention. This study extends the research scope of mobile shopping behavior and provided implications for mobile app retailing.

**Keywords:** Perceived Usefulness, Perceived Ease of Use, Flow, Reuse Intention.

# **EMPTY CONTAINERS INVENTORY DETERMINATION AND REPOSITION STRATEGY: CASE STUDY AT NATIONAL SHIPPING COMPANY**

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## **Abstract**

National Shipping Company (NSC) is a national shipping lines servicing domestic routes and a logistic key player of sea transport in Indonesia. Focus of this research is to determine total containers inventory for all routes, containers safety stocks at primary ports as well as optimum empty containers reposition strategy based on market's requirement, all with purpose to avoid potential empty containers shortage. Unbalanced container turnover between inbound and outbound is a global issue in the shipping industry. A very common method applied by shipping operators in balancing supply and demand is repositioning excess containers to deficit areas. Determination of total container inventory begins with the calculation of safety stock of container inventory in Surabaya and Jakarta as a demand location port. Main parameter forming the calculation model is forecast cargo at home base port per route, service schedule as well as swiftness of cargo stuffing and stripping. Furthermore, determining the best routes combination shall reduce amount of container inventory. Calculation model of producing total container inventory which should be provided in 2018 is 46,382 TEUs while total existing NSC's inventory in 2018 is 48,567 TEUs. From the total existing inventory, 2,516 TEUs turned out to be inactive (idle) for more than 30 days, meaning the active ones were 46,051 TEUs. From this comparison, calculation model is able to describe existing condition at 99.3%. Using the same model, a change in route combination with a pendulum service was carried out, which resulted in 968 TEUs reduction of container potential and reduction of one vessel allocation. This leads to potential efficiency of IDR 40,624,648,190 (forty billion six hundred twenty four million six hundred forty eight thousand one hundred and ninety Rupiah) for operational of year 2018.

**Keywords:** Inventory, Calculation Method, Empty Containers, Pendulum, Reposition.



**THE INFLUENCE OF PRICE BUNDLING, PRODUCT BUNDLING, AND COMPLEMENTARY PRODUCT ON PURCHASE INTENTION**

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**Abstract**

This research aim to examine the affects of price bundling, product bundling on purchase intention and complementary product as moderating variable in convenience store. Sample was taken with purposive method as much 160 sample in questionnaire survey with closed question and 5-point likert scale. the collected data was processed using SmartPLS02. As the result of hyphoteis test are H1 accepted, which means that the price bundling variable has a significant on purchase intention. H2 is accepted, which means product bundling variable has a significant on purchase intention. H3 is accepted, which means complementary product has moderating effect on on relationship of price bundling to purchase intention. H4 is rejected, which means complementary product can't be moderating variable on relationship of product bundling to purchase intention. Based on the result, price bundling and product bundling has a significant effect on purchase intention, because price is one of main point in consumer decision, and the related product can influence purchase intention. Another variable is complementary product, consumer feel the complementary product has moderating effect while price bundle program, but if complementary product paired with product bundle, consumer not feel any moderate effect. The suggestion to another researcher is to examine the other variable such as, hedonic motive, and substitution product to revealed purchase intention in retail business

**Keywords: Price Bundling, Product Bundling, Complementary Product, Purchase Intention.**

**THE MAIN DETERMINANTS IN THE DISTRESS / FAILURE  
OF THE PUBLIC-PRIVATE PARTNERSHIP FINANCING  
SCHEME IN INFRASTRUCTURE DEVELOPMENT**

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**Abstract**

This study analyzes the Main Determinants in the Distress / Failure of the Public-Private Partnership Financing Scheme in Infrastructure Development. Based on the processed data, namely the Private Participation in Infrastructure Project Database (PPI) World Bank Project Database from 1990 to 2017 that there were 364 projects out of 7050 projects that were canceled or depressed from 128 countries. In terms of data processing, this empirical study uses probit regression with instrumental variable on types of projects that are canceled / distressed. Furthermore, this study also determines instrumental variables where project results are influenced by independent variables which also have variations between independent variables. Another advantage of identifying instrument variables is to minimize the effect of bias on independent variables on the dependent variable, namely PPP failure. The purpose of this research is to determine the main determinant in the performance of the PPP Project. From the results of the study it was found that independence in Government and Government quality significantly affected the failure of PPP projects and the level of government corruption had a significant effect in increasing the potential failure of PPP projects. In addition, macroeconomic stability also has an effect by showing that GDP growth has a significant effect in reducing the potential failure of PPP projects. The involvement of debt providers has an effect on reducing PPP project failures but is not significant due to other factors that have an effect before a debt provider chooses the project or not, such as project bankability.

**Keywords: Public-Private Partnership, Distressed, Cancelled, World Bank Database, Infrastructure, Probit Regression.**

# **STUDY OF DRINKING WATER PRODUCTION IN WATER TREATMENT PLANT USING HAZARD ANALYSIS CRITICAL CONTROL POINT METHOD**

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## **Abstract**

Water Treatment Plant (WTP) consists of intake, aerator, pre-sedimentation, coagulation, clearator, filter and reservoir. In the production of drinking water, several problems are encountered that threaten the process. These constraints affect the production target in regard to quality. Minister of Health Regulation No. 492 of 2010 about Requirements for Quality of Drinking Water stated every drinking water provider is obliged to guarantee the drinking water it produces is safe for human health, meeting the quality standards of physical, chemical and biological parameters. This study used Hazard Analysis Critical Control Point method. Hazard Analysis is an analytical method to identify the presence of hazards and risks in the supply production chain so the control management can be established. The existence of hazards in production process will cause losses in terms of economics and also customer trust. This method reviewed based on laboratory results of water quality and the existing conditions of operational in production process. Based on the results of analysis with HACCP, organic matters contained in reservoir's effluent exceed the quality standard. Then it can be known the critical control points that must be a concern are macrodebris that passes to the processing unit, turbidity, organic matter, period of filter media usage, removal efficiency, water quality testing, dosage optimization, drainage method, and detention time of each unit.

**Keywords:** HACCP, Hazard Analysis Critical Control Point, Process, Drinking Water Production, Water Treatment Plant, Organic Content.

**UNDERSTANDING THE INTENTION OF HIGHER  
EDUCATION STUDENTS IN INTERNATIONAL CLASS E-  
LEARNING FOR FACING GLOBAL EDUCATION**

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**Abstract**

The globalization forces many aspects of education to adjust their standard into internationalization. The present research measures how the international class will affect the students as the customer in higher education. The extended theory of reasoned action (TRA), is used as the measuring instrument for reasoning model. The respondents come from the Taiwan public University, in which the students are classified into local and international. Furthermore, a total of 160 local and 160 international students are involved in this measured research. The ages of the respondents in this study range from 19 to 45 years old, which varies from undergraduate and graduate programs. The student was asked to express their thought through the questionnaires. The questionnaires consist of demographic questions and construct variable questions. As for the construct variable questions, four factors are employed. A structural equation model is used as the analysis tool. This research adopts the confirmatory factor analysis approach to justify hypotheses statements, and eight hypotheses are formed. The result indicates the 38 percent of local student in using the E-learning for international class, while the international students depict the 43 percent intention. Eight hypotheses are all accepted. Most importantly, the study reveals the suitability of TRA model in measuring the students. These results can be used as the reference for other international class programs in understanding their students better.

**Keywords: International Class, E-learning, Local Student, International Student, Extended TRA Model.**

**ADMISSION ANALYSIS OF APPLICATION BASED ON  
CLOUD COMPUTING IN BANKING INDUSTRIES IN  
INDONESIA USING TECHNOLOGY ACCEPTANCE MODEL  
(TAM) 2 METHOD CASE STUDY FROM ONE OF THE  
NATIONAL PRIVATE BANKS IN SURABAYA AND BALI  
AREA**

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**Abstract**

Cloud computing applications remain rarely used in the banking industry in Indonesia. X is one of the national private banks in Indonesia, which is the first bank to use cloud computing application in their operations. Since it is the first bank to use such technology, the the researcher aims to measure the acceptance and ease of use of cloud computing-based applications, and to measure the level of user satisfaction with the TAM 2 method (Technology Acceptance Model 2). The researcher used the TAM 2 method because it is the development of the TAM 1 method which adds social influence and external perspective variables. Variables in TAM 2 are subjective norms, image, result demonstrability, job relevance, voluntariness, perceived usefulness, perceived ease of use, intention to use and usage behavior. Distribution of questionnaire samples was conducted to 90 respondents in Surabaya and Bali. Data from the questionnaire were tested in terms of validity and reliability, correlation and regression, variable descriptive analysis, and hypothesis. From the results, it was found that the twelve hypotheses in TAM 2 were all acceptable and the most significant effect was the outcome quality variable towards the benefits of using cloud computing applications at 41.2%. Therefore, it can be concluded that the greater the quality of the result of cloud computing applications, the greater the benefits of the technology.

**Keywords:** Cloud Computing, TAM 2, Banking Industry.

**PROFITABILITY ENHANCEMENT STRATEGY THROUGH  
CAPACITY EXPANSION AND MARKET EXPORT  
DIVERSIFICATION (CASE STUDY: ACQUISITION OF  
THANG LONG CEMENT COMPANY VIETNAM BY PT  
SEMEN INDONESIA TBK)**

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**Abstract**

Cement industry is expected to be grow respectively high due to demand for house building and infrastructure needs. Indonesia and Vietnam, as part of Southeast Asia region, are facing different kind of market condition. PT Semen Indonesia Tbk is Indonesia's top leader in cement industry, who had invested major investment by acquiring major shares ownership of Thang Long Cement Company Vietnam, back in late 2012. This acquisition strategy was intended to enhance profitability and reach Southeast Asia market. One year after the acquisition happened, this strategy needs to be analyzed whether it already goes perfectly as what expected or needed some improvement regarding company's profitability growth. By doing Discounted Cash Flow valuation with three different scenarios; first is when each companies standalone independently (before acquisition), second scenario is PT Semen Indonesia Tbk acquired Thang Long Cement Vietnam (current condition) and third scenario is post-acquisition analysis after acquisition with proposed strategy on capacity expansion and market export diversification; and also Relative Valuation as comparable analysis with another cement companies, such as Indocement Tungal Prakarsa and Holcim Indonesia. This final project suggested Thang Long Cement Vietnam to expand capacity from 2,3 mt/year to 4 mt/year, to improve sales and also doing more exporting market. Vietnam's cement industry is having excess supply, that's why exporting cement products to another country is important. Indonesia can also fulfill its massive demand of cement from Vietnamese cement product, which it related to PT Semen Indonesia revenue and inventory availability. Thang Long Cement Vietnam was acquired undervalued with price of US\$157million, but it doesn't mean the company suffered loss from the transactions. PT Semen Indonesia Tbk did major improvement on management structure, business process and debt refinancing for Thang Long Cement Companies. Due diligence was also done before choosing Thang Long Cement Companies as the targetted company, based on its financial ratio analysis which also calculated in this final project. Generally, this acquisition between PT Semen Indonesia and Thang Long Cement Vietnam is a right decision and still possible to reach optimality in profitability enhancement through proposed strategy in expansion and market export diversification. Both companies also proved having synergistic relationship on this acquisition.

**Keywords: Semen Indonesia, Thang Long Cement Vietnam, Acquisition, Profitability, Expansion, Market Export, Financial Analysis.**

# **THE EFFECT OF COMPANY PERFORMANCE TO RISK – RETURN RELATION**

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## **Abstract**

Finance theories assume that relationship between risk and return is always positive due to human behavior of risk aversion. However Reflection Effect in Prospect Theory predicts that human tends to be risk averse in situation of gain, and tends to be risk seeking in situation of loss. Based on this, it is hypothesized that relationship between risk and return can be negative in loss situation. In this study, it was found that risk taking behavior of companies with high performance is different from companies with low performance. This difference in behavior gives rise to the difference in risk – return relationship, with companies with low performance shows negative risk – return relation. The result supports Reflection Effect in Prospect Theory and casts doubt in assumption that relation between risk and return is always positive.

**Keywords: Risk, Return, Reflection Effect, Prospect Theory, Risk Aversion.**

# **STUDY OF KARANGPILANG II WATER PRODUCTION QUALITY CONTROL USING STATISTICAL PROCESS CONTROL (SPC)**

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## **Abstract**

IPAM Karangpilang's water quality has fluctuated and there are several parameters whose quality is not in accordance with the quality standard. Therefore, IPAM Karangpilang II needs to carry out quality control to maintain the quality of drinking water products according to the applicable quality standards. This research aims to analyze the application of the quality control system for drinking water products at IPAM Karangpilang II and look for the causes of decreasing production water quality at IPAM Karangpilang II. So that alternative improvements can be determined to maintain drinking water quality at IPAM Karangpilang II. Quality testing in this study using Statistical Process Control (SPC). Measurements were made using primary data on drinking water quality starting from March to April 2019. Measurement parameters used include pH, Total Dissolved Solid (TDS), Turbidity, and Organic matter. Determination of a process controlled using control chart and then implemented using a fishbone diagram to determine the factors that result in decreased production of water quality. Control charts are in a statistically uncontrolled condition on the pH parameters in the clearator and filter units, Total Dissolved Solid (TDS) parameters on the clearator unit, turbidity parameters in the pre-sedimentation unit, clearator and filter, and organic matter parameters in pre-sedimentation and filter units. While in the production of water control chart in a state of uncontrolled statistically in the turbidity. Based on the fishbone diagram, the factors that cause uncontrolled conditions can be divided into production units, methods, humans and decreases in the quality of raw water.

**Keywords:** IPAM Karangpilang II, Quality Control, Control Chart, Drink Water Production, Statistical Process Control.



**IMPLEMENTATION OF INTEGRATED MARKETING  
COMMUNICATION BY SPECIAL LOCAL FOOD MICRO,  
SMALL AND MEDIUM ENTERPRISES IN LUMPUR VILLAGE  
OF GRESIK**

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**Abstract**

This study aims to know the implementation of integrated marketing communication for special local food products by Micro, Small and Medium Enterprises (UMKM) in Lumpur Village, Gresik Sub-district, Gresik Regency. The study used three informants as research objects. They are from the owner of special local food Micro, Small and Medium Enterprises in Lumpur Village and supporting informants such as Lumpur village officials, cooperative agency, UMKM, industry and trade, and consumers. This study used descriptive qualitative method with primary data from the subject and the data analysis uses Miles and Huberman model. The result of the study explains the implementation of integrated marketing communication by special local food UMKM in Lumpur Village Gresik District Gresik Regency uses advertising strategy, sales promotion, events and experiences, public relations, direct marketing, and word of mouth. The effective strategies of integrated marketing communication for practitioners of special local food UMKM are the advertising and word of mouth strategy.

**Keywords: Marketing, Integrated Marketing Communication, Micro, Small and Medium Enterprise, Lumpur Village**

**ANALYSIS OF RELATIONSHIP BETWEEN CUSTOMERS  
CHARACTERISTIC AND LATE PAYMENT BASED ON  
BILLING PAYMENT**

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**Abstract**

The increasing number of internet usage affects Internet Service Provider (ISP) companies. The customer's obligation is to pay bills on time in accordance with company terms and conditions that have been agreed upon at the beginning of the internet installation. However, late payments still occur at least once a year. This affects the company's business processes and finances. While on the customer side, this causes internet isolation. The purpose of this study is to analyze the relationship of variables based on customer bills that affect late payments. The analytical method used is the Chi-Square test correlation. The number of samples used is 400 customers with purposive sampling. In addition, an analysis of the pattern of customer characteristics in bill payments is done to determine whether there are dependencies based on regional mapping in Surabaya using the Moran's I and LISA indices. As the result, there is a significant relationship between address, the level of income, employment, and payment status with late payment. There is no significant relationship between the level of education, the subscription package, and level of education with late payments. Whereas, the results of mapping by region show that the pattern of characteristics of customers in the East Surabaya area tends to make late payments with a percentage rate of 46% and there is a significant dependence between sub-districts in Moran IV Scatterplot Quadrant. So, it is necessary for a more attractive customer marketing strategy to reduce the level of late payment especially in the Surabaya area.

**Keywords:** Chi-Square, Internet Service Provider, late payment, LISA, Moran's I.

## **ITIL V3 AND VAN GREMBERGEN FRAMEWORK FOR SYSTEM TRANSITION PROCESS**

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### **Abstract**

Recently, PT XYZ replaced their old ERP system into the Microsoft Dynamics AX 365. PT XYZ has twenty branch offices. The system transition process uses direct conversion and pilot conversion models. This study reports on how ITIL v3 and Van Grembergen Framework can work together in developing guidelines for system transition processes. This study was conducted by mapping the organizational structure, processes, and relational mechanisms in accordance with the Van Grembergen framework. The results obtained from this mapping will be used as material for consideration for the preparation of governance using the ITIL v3 framework. This research will only use the Service Transition domain on ITIL. The questionnaire was taken in part from the template issued by UCISA. As a result of the study, we present that ITIL v3 and Van Grembergen are able to be used to rebuild structures, processes, and relational mechanisms after the system transition process is done. And also to improve how to do the next transition process in another branch offices. Organizations must adapt and adapt to changes that means, Organizations cannot only carry out practices that have been done and hoped for get success like what happened in the past, because the practices in the past that have been done may not be valid now because the environment has changed. Therefore, in this case if organizations wants to achieve and gain a competitive advantage, it must focus and make changes to the goal strategic, having a far-sighted future

**Keywords: Information Technology Governance, ITIL v3, Van Grembergen, System Transition Proces.**

**RISK ANALYSIS OF COMBUSTION FAILURE IN GAS  
TURBINE START PROCESS IN PLTGU UNIT  
PT.X**

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**Abstract**

The peaker power plant is a power plant that is operated when the network is at peak load. Being a peaker power plant has an impact more often start- stop for operation of gas turbine. So, the readiness of the gas turbine to start any time is the core business of the peaker power plant. But in reality, start failure still occurs in the generating unit. Start failure can be caused by combustion failure. In 2017 and 2018 years, there was a start failure caused by combustion system failure total 10 out of 19 cases internal start failure. A lot of disadvantages of start failure for the company like very much loss of potential production revenue, loss of fuel consumption, electricity usage for supporting equipment, materials of gas turbine, failure to achieve KPI's company, decrease in customer satisfaction and much more. So, it must be minimized or eliminated. Until now, maintenance for start failure still corrective maintenance. Corrective maintenance is an unscheduled, unpredictable, unplanned or unprogrammed maintenance action based on an event at a certain time so the potential loss of company's income large. One effort to reduce corrective maintenance activities with preventive maintenance. However, to do preventive maintenance, it is necessary to conduct in-depth studies and analysis so that preventive maintenance is carried out effectively and on target. For this reason a risk analysis of the combustion failure with Failure Mode and Effects Analysis (FMEA) method need to do, so the preventive maintenance steps can be obtained to mitigate the risk of start failure in gas turbine power plant. From the result of FMEA, there are two extreme risk from combustor system, igniter and fuel valves. So, preventive maintenance applied to them. It can provide a large potential revenue for industry and company reputation.

**Keywords: Combustion Failure, Gas Turbine, Failure Mode and Effects Analysis (FMEA), Preventive Maintenance.**

# **MITIGATION OF FIRE RISK USING HIRARC METHOD IN THE FLEXIBLE PLASTIC PRINTING PART OF PRINTING COMPANY**

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## **Abstract**

Fires are incidents and must be considered in all types of industrial production activities. In the last 2 years there were some incidence of fires on PT. XYZ, plastic printing company, 6 cases of small fires and 3 cases of large fires. The fire incident caused big losses, machine stop for a long time and paid the employees fee who kept coming to work when the machine was being repaired. Main objective of this research is how to prevent fires and its causes and how to mitigate the fire using the HIRARC method. The research was carried out in three main stages: The hazard identification stage, The risk assessment stage, and the risk control. The risk control was carried out based on 5 hierarchical risk control analysis to minimize the high risk of fire that can disrupt production activities in the company. The result of focus group discussion, the main cause of fire incident is the static electricity. Due to routine maintenance of the machines that currently have not been maximized, a maintenance strategy have been developed and inserted into the company risk management system.

**Keywords:** HIRARC, Hierarchy of risk control, Fire Mitigation, Risk Management.

## **ANALYSIS OF THE KEY SUCCESS FACTORS (KSF) FOR COMMERCIALIZING INNOVATION**

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### **Abstract**

Development and commercialization of new technologies have inherent uncertainties and associated risks. Many research activities conducted by Indonesian R&D only reached the alpha test stage (prototype development, replication and laboratory test) and beta (field test and further development) but not yet stages of diffusion. In other words, the main problem is on the commercialization process. Therefore, Indonesia needs more strategy to translate promising technologies into a stream of economic returns for their founders, investors and employees. This paper objective is to analyze the key success factors (KSF) for commercializing innovation. This study using new product development literature and TOE (technology–organization–environment) framework and develops a research model to investigate the determinants of commercialization of innovation. In the process of choosing the selected key success factors, a hierarchy of KSFs is defined first by a combination of a literature review and a focus group discussion with experts to choose which factors are the most suitable for innovation commercialization. The expert from two companies in Indonesia; Pertamina and Bio Farma are selected in this study to represent successful high-tech industries in Indonesia. This study uses the Analytic hierarchy process (AHP) to help expert rank the importance of identified KSFs. The KSF hierarchy is constructed with two levels: a top-level consisting of 3 dimensions and a detailed-level consisting of 9 individual factors. Result shows, the expert from two companies believe that in the top-level, Technology is the most critical dimension followed by Environment and Organization. Technology that has relative advantage and compatibility with the market is the main consideration for the company before launching their product to the market. From the environment dimension, market demand has the highest rank which refers to the needs of the consumer. Lastly from the organization dimension, expert suggests that the organization network is the most significant to grasp investors and also potential market so that the technology can be commercialized successfully. This study result hopefully can bring more insight into technology-based company in Indonesia to elevate their technology and bring it successfully to the market.

**Keywords: Commercialization, Innovation, Technology, KSF, Analytic Hierarchy Process.**

**MEASUREMENT OF COST & BENEFIT FOR  
IMPLEMENTATION OF RISK MANAGEMENT IN THE  
PRODUCTION PROCESS**

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**Abstract**

The paper aims to measure the overhead costs and economic benefits of risk management activities in the production process - a manufacturing company. This research uses Activity Based Management (ABM) approach to allocate and track overhead costs in risk management activities. The overhead costs of risk management activities include the costs of identifying, analyzing, evaluating and controlling risks in order to achieve the quality objectives of the production process. The company obtains economic benefits, first, from reducing overhead costs incurred per period from the results of improvements to non-value-added or high-cost activities; second, cost savings obtained from the achievement of quality objectives per period. The results of this study indicate that the ABM approach used is appropriate in measuring the overhead costs and economic benefits of risk management activities in a business process.

**Keywords:** Activity Based Management approach, risk management, cost and benefits.

**OPTIMIZATION OF TENSILE STRENGTH AND TIME CURING IN RUBBER STRAP PRODUCTION PROCESS USING RESPONSE SURFACE METHODOLOGY**

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**Abstract**

The tight competition in flip flop industry makes every manufacturer of flip flops have to maintain the quality, price and availability of goods well. One way that can be chosen in winning the competition is to minimize production defects. flip-flops consist of 2 main constituents, namely sole and strap. Process of making strap of sandals are divided into 2 main raw materials, namely PVC and Rubber base. Rubber base has the most important physical properties namely Tensile strength and curing time. The problem that always arises in rubber strap production process is the fact that tensile test value is below the standard set, this implies the breaking of rubber strap during assembling process and it occurs in the range of 9 - 11% of the total production. This results in material, time and labor losses. Combination of optimum response for Tensile strength and Time curing is obtained by combining elastomer, filler and co-accelerator at optimum level factors is the best way to overcome defect products. Data from this study will be obtained from 15 direct experiments based on Response Surface Methodology by using box-behnken design, processed and analyzed using Minitab 18 and response optimization was performed to get optimal response value combination from the expected target response. The analysis shows that all factors including elastomer, filler and co-accelerator have significant effect on tensile strength and time curing responses. The best composition to get the optimal combination of responses from certain response limits is elastomer = 70PHR, filler = 30PHR, and co-accelerator = 1.47PHR. The optimum value for tensile strength response is 15 kg/cm<sup>2</sup> and time curing is 3.5 minutes. Beside as a solution for this problem, this optimization will increase production capacity of rubber strap 12.5% more.

**Keywords:** Flip Flop, Rubber Strap, Tensile Strength, Time Curing, Response Surface Methodology, Box-behnken.



# **IT GOVERNANCE FOR INFORMATION AND NETWORKING SYSTEMS IN SUPPORTING UNIVERSITY ORGANIZATIONAL INTEGRATION**

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## **Abstract**

IT governance is a key requirement that can increase the success of a university. Information technology is an integral part of most universities now and will certainly become more critical in the future. Data collection was carried out at the University of General Achmad Yani Yogyakarta. The transition from high school to university made Yogyakarta General Achmad Yani remodel all information systems and networks. The arrangement of information systems and networks that are good and in accordance with standards is nothing but to achieve the vision, mission and support for organizational integration of the University of General Achmad Yani Yogyakarta. The method used in this study is COBIT 5. COBIT 5 is one of the Best Practices on IT governance that describes the main role of information and technology to create "value." COBIT 5 separates the process of governance and the scope of management. data using structured interview method and questionnaire to the University of General Achmad Yani Yogyakarta. From the data collection, there were 2 IT Goals and 16 COBIT 5 domains, namely EDM03, EDM04, APO1, APO3, APO4, APO7, APO12, APO13, BAI04, BAI06, BAI09, BAI10, MEA01, DSS01, DSS03 and DSS05. Universitas Jenderal Achmad Yani Yogyakarta received level 2 Managed for 10 domains, namely EDM03, EDM04, PO01, APO07, APO10, APO12, BAI06, DSS03, DSS05 and MEA01 and level 1 Performed for 6 domains, APO03, APO04, APO13, BAI09, BAI10 and DSS01. The COBIT 5 domain is to help the University of General Achmad Yani Yogyakarta achieve the vision, mission and goals of the university.

**Keywords:** IT Governance, COBIT 5, IT Framework, EDM, APO, BAI, DSS, MEA.

**Paper #052**

**ANALYSING THE RELATION OF OPERATIONAL AND  
ECONOMIC PARAMETERS TO TOTAL SHAREHOLDER  
VALUE OF LISTED GOLD MINING COMPANIES IN  
INDONESIA AND FIVE OTHER COUNTRIES**

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**Abstract**

Even though Indonesia was famous due to its mineral resources, only few gold mining companies is listed in the Indonesia stock exchange. In the other hand, there is a need to increase investment in the mining sector from stock market as reserve has been stagnant while production keeps going. To understand the nature of published gold mining companies, this study is conducted to analyze the effect of published operational parameter: ore processed, gold production, mining grade, process recovery, as well as external factors such as gross-domestic product and gold price to the share return of public listed gold mining companies. From panel data regression of quarter reports of eighteen (18) world mining companies in the period 2012 to 2017, it shows that process recovery and gold price is significant to the change of share price. Furthermore, the study finds that when operational parameter of existing mines can be good and positively increase, mining companies still need to look at their reserve to ensure sustainability of the business in the long run.

**Keywords:** Public Listed Gold Company, Share Return, Panel Data Regression, Operational Parameters.

# **ENVIRONMENTAL POLLUTION IMPACT ANALYSIS ON FAECAL SLUDGE PROCESS USING LIFE CYCLE ASSESSMENT AND ANALYTIC HIERARCHY PROCESS**

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## **Abstract**

The processing of faecal sludge in the IPLT is an advanced processing activity because the sludge in the septic tank has not been properly disposed into the environment because it still contains high organic loads. IPLT Kota Batu is the object of research and aims to determine the environmental impact caused by the treatment of sludge in the IPLT Kota Batu with Life Cycle Assessment Method then provide an alternative in reducing the impact with the Analytic Hierarchy Process Method. Life Cycle Assessment is a method for analyzing the environmental impact of a product throughout the life cycle. Stages of life cycle assessment (LCA), namely goals and scope, life cycle inventory, life cycle impact assessment, interpretation data. Then an alternative selection is done to reduce the environmental impact using the Analytic Hierarchy Process (AHP) Method. AHP is describing a complex problem into a result that is representation in a multi-level structure. AHP stages are input goals, criteria, and alternatives; weighting and priority scale; and produce the recommended answer or decision. From the LCA method, it was found that the emission load released into the environment in the treatment of sludge was in the form of CO<sub>2</sub> emissions, energy emissions, and potentially disappearing species fractions of 3.948,935 kg CO<sub>2</sub>/year, 1.100.334,84 MJ, and 3.624,647 PDF.m2.y. The use of this method can find out that the treatment of sludge in the IPLT Kota Batu has an environmental burden and has an impact on the phenomenon of global warming, non renewable energy, and aquatic eutrophication. The best alternative to reduce emissions that occur in the treatment process of sludge in the IPLT Kota Batu is perform maintenance treatment on a scheduled basis.

**Keywords:** Analytic Hierarchy Process (AHP), environmental impact, faecal sludge, IPLT Kota Batu, Life Cycle Assessment (LCA).

**USER AWARENESS DESIGN FOR ELECTRONIC MONEY  
USER USING PROTECTION MOTIVATION THEORY AND  
NIST 800-50 FRAMEWORK**

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**Abstract**

Electronic money has emerged as the payment method. It becomes more popular because it is convenient and ubiquitous. However, the popularity has caused new security threats for the the user of electronic money. Personal data and financial information are the main target of the threats. Individuals need to protect and have certain responsibilities regarding their personal data and financial information used for electronic money services. Technology alone is unable to prevent the threats. Human behavior also becomes crucial factor to protect people against the threats and plays essential role in safe guarding personal data and financial information. This study uses Protection Motivation Theory (PMT) as a theoretical framework to empirically test why people do precautionary behavior on electronic money transaction. PMT is a social-cognitive model to predict and explain prevention behavior. Empirical research is conducted using survey methodology and collecting data from 186 respondents using online forms. Partial Least Square structural equation modelling provides support for factors influencing protection motivation in electronic money context. The results provide support for the use of threat and coping appraisal, in particular perceived security vulnerabilities, perceived security threat and perceived response efficacy to influence precautionary behavior in the context of electronic money. Those results contributes to the design of user awareness programs using NIST Special Publication 800-50. The awareness programs aimed at precaution behavior, thereby empowering electronic money user to protect themselves.

**Keywords:** Electronic Money, Information Security, NIST 800-50, Partial Least Square, Protection motivation Theory.

**OPINION ANALYSIS OF TRAVELER BASED ON TOURISM  
SITE REVIEW UTILIZE SENTIMENT ANALYSIS USING  
SUPPORT VECTOR MACHINE METHOD**

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**Abstract**

Technology development nowadays make it easier for people to access information through internet media, one of them is to find information regarding a place. Many prospective tourists will read reviews from other travelers who have visited a variety of tourist sites to find out how they rate a place. Comments from other tourists usually used as a reference for potential tourists whether they should visit that place or not. Opinion from tourists is very influential in influencing the decisions of others in assessing a place they want to visit. Opinion analysis can be done by doing a sentiment analysis of the tourist reviews on tourist sites. The data used are traveler reviews of hotels in East Java on the Tripadvisor site. Traveler reviews data was taken by crawling on tourist sites and the unstructured reviews data will be pre-processing and weighted term from reviews using TF-IDF method. The classification process is done by using a support vector machine to find out opinions from traveler reviews, which are positive or negative reviews. The results of the study are reviews of tourists whose types of opinions are known. From 255 data, sentiment classification in the location aspect resulted in 49 reviews with positive sentiment and 1 reviews with negative sentiment, in the cleanliness aspect resulted in 66 reviews with positive sentiment and 3 reviews with negative sentiment, in the service aspect resulted in 117 reviews with positive sentiment and 19 reviews with negative sentiment. With the results of the opinion analysis, it is expected to be able to help local governments and tourism managers in evaluating and developing in order to increase the number of tourist visits.

**Keywords: Sentiment Analysis, Classification, TF-IDF, Support Vector Machine.**

## **STRATEGY FOR ACCELERATING INDONESIA SKILLS DEVELOPMENT FOR INDUSTRY 4.0**

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### **Abstract**

The industry has evolved, and businesses need to respond to the new industrial revolution, industry 4.0. It is a cyber-physical industrial system, where the real and virtual world is interconnected. The ability of labor force to adapt and survive in this new industrial revolution is critical for employment, the economy of the country as well as social stability. Vocational Training Centers play an important role in this transition, to equip human resources with new knowledge, skills, and attitude. In Indonesia, Unit Pelaksana Teknis Ketenagakerjaan (UPT-TK) is the government vocational training centers, that train job seeker and businesses' current employees with new skills. This study aims to assess the readiness of UPT-TK to response to industry 4.0 and develop a strategy on how to accelerate Indonesia skills development, considering its potentials and challenges to support the industry in competing for the global market and to support the job seekers in entering the global labor markets. East Java UPT TK is used as a sample for the study. East Java, is the second largest populated province in Indonesia, with 16 UPT TK, that deliver training for various sectors. Its UPT condition varies from low to high technology involvement, which may represent Indonesia vocational training situation. This is work in progress research, that examine 5 UPT TKs in East Java. A desk review of current regulation, a demand and supply survey, that involve representation of industry and UPT will be conducted, and a participatory skill development strategy will be conducted with business, government, training providers and jobseekers stakeholders.

**Keywords: Industry 4.0, Indonesia, Skills development, Vocational Training Centers**

**EFFECT OF GREEN MARKETING BY BUYING DECISIONS  
IN THE BUYING INTEREST INTERVENING VARIABLES  
INDOMARET**

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**Abstract**

This study aims to determine the direct effect of green marketing to customer purchase decisions on Indomaret. Indomaret using environmentally friendly plastics in which to press the plastic bags that harm our health. The use of environmentally friendly plastic bags Oxium (Oxi Degradable) are easily biodegradable. This study was a survey research. The population in this study were all Indomaret customers. The sampling technique used purposive sampling method with a sample size of 150 people. Data collection techniques using questionnaires that have been tested for validity and reliability. Data analysis techniques used to answer the hypothesis of this research is path analysis test.

**Keywords: Green Marketing, Purchasing Decision, Interests Buy.**

## **E-VOUCHER COMPULSIVE BUYING: AN IDENTIFICATION OF MOTIVATIONS AND CONTEXTUAL ELEMENTS**

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### **Abstract**

Vouchers or deals are no longer distributed offline only, but online. Since 2013, e-commerce in Indonesia offers e-voucher or online daily deals. They stress limited time and quantity e-voucher offering. E-commerce includes Fave, Dealjava, Raja Voucher, and Lakupon.com. The introduction of e-voucher changes our understanding of Indonesian consumer buying behaviour. Online e-vouchers may trigger spontaneously buying behaviour, in which the products may not needed. The literature on buying behaviour recognises this character as compulsive buying, which stresses a mandatory buying to reduce anxiety. The purpose of this research is to know the effects of compulsive buying tendencies on e-voucher towards motivations and contextual elements, classify respondents as compulsive and non-compulsive buying behavior, and to know a different motivation (if any) between compulsive and non-compulsive buyers. The research design is conclusive descriptive using an online questionnaire to collect data. The sampling technique is the panel recruited online sampling. Data are analyzed using SEM, Sobel test, Compulsive Buying Index (CBI), and ANOVA. Data from 225 valid respondents showed that compulsive buying tendencies are significantly affected by hedonic motivation, social norms, and social comparison, but not significantly affected by the number of coupons sold mediated by social norms, and limitation mediated by hedonic motivation. Furthermore, CBI analysis found that out of the 225 respondents, 60 of them are compulsive buyers. Interestingly, ANOVA test found that there is no significant difference between compulsive and non-compulsive buyers on their buying motivations. These findings indicate that e-voucher buying behaviour is affected by various motivations and contextual elements. As a consequence, businesses, especially the e-commerce business, need to find its unique voucher offerings to suit its targetted consumer. Further study may explore more about consumer behavior towards the offering of digital products.

**Keywords:** Compulsive Buying, Contextual Elements, E-Commerce, E-Voucher, Shopping Motivations.



**EXAMINING THE MODERATING ROLE OF SOCIAL  
ENTREPRENEURSHIP IN THE SME'S LEADERSHIP STYLE  
AND ITS EMPLOYEE TURNOVER**

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**Abstract**

SMEs play a significant role in Indonesia's economy and social wellbeing. High employee turnover is one of these SMEs' challenges. Previous studies have shown that leadership style relates to the employee turnover, and the leader's value may relate to the way the enterprise is governed. Studies on social entrepreneurship argue that social oriented and economic oriented entrepreneurs stress different goals, social and economic respectively. However, lack of studies examines the effect of employer leadership style on employee turnover that may be moderated by its social entrepreneurship value. This work in progress research examines the moderating role of social entrepreneurship in the SME's leadership style and its employee turnover. Three types of leadership style are assessed, transformational, transactional, and passive-avoidant. The study is conducted in the creative industry SMEs in Surabaya, the second largest city in Indonesia with a large number of SMEs in the creative industry, the industry that mostly adopt social entrepreneurship value. This study is in the data collection stage now. By the end of June 2019, a regression analysis will be employed to analyze the data, using SPSS software. The results of this study are expected to give insights to SMEs' owner on how to minimize employee turnover based on leadership styles and social entrepreneurship.

**Keywords:** Employee Turnover, Leadership Style, Passive-Avoidant, Social Entrepreneurship, Transactional, Transformational.

# **MULTI-CRITERIA DECISION MAKING OF MEGA PROJECT REFINERY DEVELOPMENT MASTER PLANT**

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## **Abstract**

In today's increasing global competition, it is very important for companies to make quick and accurate decisions in improving company performance. the decision to build a mega project requires the right selection of design, equipment quality, constructability, funding efficiency, which can optimally meet the quality, cost, time and performance targets. The process of multi-criteria decision making of mega projects is a complex process. there is rarely the same design used for multiple projects, which results in a series of one-off designs. From a project management perspective, the design planning process involves bringing together numerous pieces of information from multiple designers to form the final design. Coordinating the flow of information in the design process is further complicated when the design schedule needs to be compressed. Mega project management are characterized by a complex, elaborate combination of technical, and economical factors. The complex decision-making problems that need to be resolved, while also acting in consideration of the expectations of the different stakeholders involved in company transformation. In complex situations, decision-making processes are often used to solve multidisciplinary and multidimensional analyses, which support the choices of those who are making the decision. Multi-Criteria Decision Analysis (MCDA) methods are included among the examination and evaluation techniques considered useful by the project owner . Such analyses and techniques are performed using methods, which aim to reach a synthesis of the various forms of input data needed to define decision- making problems of a similar complexity. Thus, one or more of the conclusions reached allow for informed, well thought-out, strategic decisions. According to the technical literature on MCDA, numerous methods are applicable in different decision-making situations, however, advice for selecting the most appropriate for the specific field of application and problem have not been thoroughly investigated. The objective of this paper is to outline a procedure with which to select the method best suited to the specific queries of evaluation, which commonly arise while addressing decision-making problems. In particular issues of mega project management, representing the process of multi criteria decision making which impact to design of plant, construction cost and performance of project.

**Keywords: Engineering Design, Examination and Evaluation Techniques, Multi Criteria Decision Analysis, Mega Project Development.**

## **BUSINESS STRATEGY OF CHEMICAL COMPANY USING SWOT AND BUSINESS MODEL CANVAS APPROACH**

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### **Abstract**

Chemical business in water treatment has a potential growth in the future. Currently, PT A is a chemical company who leads market share in Indonesia compared to other competitors. Within next ten years, PT A should keep this level of competitiveness and improve the level of market share. Therefore, indispensable to analyze the business strategy in order to be ready to face upcoming competitiveness and opportunities. Analysis of strategy is conducted by SWOT approach. From this SWOT analysis, Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrix then took place to review this SWOT result. Furthermore, Business Model Canvas method is used to discuss more detail in every single block. During using Business Model Canvas, company representative is invited in Focus Group Discussion. Business Model Canvas is selected in this research due to it has comprehensive analysis about the nine variable that company running the business. From this research, it is known that company place at quadrant I of SWOT diagram. IFE and EFE score is 3.54 and 2.40, respectively. This score plots at zone IV, which means Grow and Build, in IFE-EFE matrix. These result then become an input for BMC mapping. Improvement of BMC then recommended for key resources, key partnership, key activities dan channels. Strategy generated from this research then will be a recommendation to the management. Besides, this research also become a motivation for the researcher because so far there is no particular strategy development for water treatment business in power plant based on academic point of view.

**Keywords: Strategy, SWOT, Business Model Canvas, Focus Group Discussion.**

## **RISK MANAGEMENT OF WASTEWATER TREATMENT IN THE WASTEWATER TREATMENT PLANT OF PT. X**

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### **Abstract**

The economic rise as much as 5.5% in East Java region in the first quarter of 2018 compared to the first quarter of 2017, was due to the main supporting factor of an increase in the number of industries. An increase in industry has the potential to cause environmental pollution, especially in water bodies as evidenced by an index of water quality conditions for East Java rivers that now stands on Class II.. Currently, PT. X in East Java is working on the expansion of its company. This study aims to identify the risks of wastewater treatment of PT. X using the fishbone analysis method and determine the priority of failures that must be handled using the FMEA method. For research purposes, two types of data are used, namely secondary and primary data. Secondary data includes flow chart of wastewater treatment, wastewater quality report and standard operating procedures. Meanwhile, the primary data for the quality of wastewater treatment was obtained through sampling, which was carried out at each wastewater treatment unit as well as the results of questionnaire with direct interviews. From those two types of data, an analysis of the potential occurrence of risk arises by using a fishbone analysis diagram. The risk results obtained through fishbone analysis are then processed using the Failure Mode and Effects Analysis (FMEA) method to obtain a Risk Priority Number (RPN). Then, the results of risk analysis from fishbone analysis are assessed into a priority of failures, expressed in Risk Priority Number (RPN). Based on the analysis of research data, it was concluded that the problem that occurred in wastewater treatment was inefficient wastewater treatment. The inefficient process was caused by the WWTP design conditions that were greater than the inlet discharge. Based on the results of data processing using the FMEA method, it was found that the largest RPN value was 125.

**Keywords: Industrial Wastewater, Risk Analysis, Fishbone Analysis, FMEA, Industrial Area.**

## **INTEGRATED RISK ASSESSMENT ON ARGON PURIFICATION UNIT BASED OF FMECA AND FUZZY- AHP**

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### **Abstract**

Argon Purification Unit is a processing unit to purify the crude argon using hydrogen gas through an automatic machinery process. Based on the hazardous material and its automatic machinery process, the argon purification unit needs to be assessed for risk control consideration and business performance. This research purposed risk assessment of argon purification unit based on the failure modes using Failure Modes, Effects and Criticality Analysis (FMECA) with Fuzzy Analytical Hierarchy Process (Fuzzy-AHP) approach to minimize the risks and losses. In this research, FMECA is used to identify the potential failure modes, failure mechanism (causes), potential failure effects for each component of the unit and to evaluate the risk by determining risk priority number (RPN). The RPN is the product of severity, occurrence, and detection variables. Then, Fuzzy-AHP is used to determine the weight of each variable based on its hierarchy. The fuzzy-AHP approach aims to increase validity and decrease expert judgment subjectivity in the risk assessment process for each failure mode by considering the weight of variables. The result of RPN is gained by multiplying the variables of each failure mode by considering the weight of variables. This research results weight of severity is 0.43 which is highest of all variables. The highest RPN is 8.76 shown by the leaked joint of argon compressor. This research shows that the application of the fuzzy-AHP approach in FMECA can identify and evaluate the potential risk of the Argon Purification Unit validly and objectively, which provides the different weight of RPN variables.

**Keywords:** Argon Purification Unit, FMECA, Fuzzy-AHP, Risk Assessment, Risk Priority Number.

# **THE EFFECT BETWEEN INNOVATION CAPABILITY AND INNOVATION TYPES TOWARDS MICROFINANCE INSTITUTIONS PERFORMANCE IN EAST JAVA**

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## **Abstract**

Microfinance institutions (MFIs) have an important role in alleviating difficulties in accessing formal finance and improve the welfare of low-income communities and Micro, Small and Medium Enterprises (MSMEs). However, in carrying out the dual mission has not been accompanied by the increase of the quality in order to improve competitiveness and relied on innovation capability. Innovation is a success factor to develop a competitive advantage, which will influence the increase in profitability of MFIs. An innovation will draw a clear picture of future opportunities. Research about the effect between innovation capability and innovation types towards company performance in the micro-financial sector in Indonesia is still limited. This study aims to determine the effect of innovation capability on innovation types including product innovation, process innovation, marketing innovation, and organizational innovation. In addition, this study was also conducted to examine the effects of these four innovations on different aspects of company performance including innovation, market, and financial performance based on empirical studies that include formal Microfinance Institutions in East Java. Data collection was carried out by survey method through distributing online questionnaires to 50 formal Microfinance Institutions namely Bank Perkreditan Rakyat-Syariah (BPR-BPRS) and Cooperatives in East Java. The data analysis technique to test the hypothesis is partial least squares structural equation modeling (PLS-SEM). This study provides evidence to confirm the existence of innovation capability, innovation types, and company performance, that innovation capability affects the four types of innovations and there is a positive effect of that existence of these four types of innovations which can improve MFIs performance. The results of this study can provide direction for Microfinance Institutions to continuously improve innovation capability which helps to deliver more effective innovations outcomes to generate better performance. In addition, the results of this study also provide advice to relevant Regional and Central Governments to create a conducive policy environment for the innovations of Microfinance Institutions, so they can realize the full benefits of adopting the innovation.

**Keywords:** Financial Performance, Innovation Capability, Innovation Performance, Innovation Types, Market Performance, Microfinance Institutions.

## **STRATEGIC PLANNING FOR SYSTEM AND INFORMATION TECHNOLOGY USING ANITA CASSIDY IN PT. XYZ**

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### **Abstract**

The management system has been one of the essential components of information technology that uses technology to support operations and management. PT XYZ has 11 departments namely Marketing, Purchasing, Human Resource, Finance, General Affair, Engineering, Warehouse, Meat Processing, Bakery, R & D, Quality Control, and Cafe divisions. The number of employees of the entire divisions is approximately  $\pm 800$  people. Applications has been used in operating the main business activity at PT XYZ on daily basis. However, the applications are still based on each division which will cause the business process to be out of control and the data disintegration in each division. It can be seen as a disadvantage to the product processing as the operation takes longer; hence, it consequently requires higher production costs. Moreover, PT XYZ still uses 3 of the 7 applications that have been developed, while it's also contributed by having limited number of staff who are able to operate desktop or web-based applications. In view of the above, this study aims to develop a suitable information system strategic plan for PT XYZ. The analysis was conducted by using Anita Cassidy's Strategic Planning, wherein the planning starts from upstream to downstream of the company's business process. Anita Cassidy's method consist of 4 (four) stages including visioning, analysis, direction, recommendation. The results obtained were IS strategy, IT strategy and IT management. Based on the results, it revealed that, at the visioning stage, PT. XYZ is located in quadrant I, in which quadrant 1 supports aggressive strategies. The strategy that must be determined in this condition is supporting aggressive growth policy. In the analysis, the IS trends used were device mesh, information of everything, advanced machine learning, adaptive security architecture, advanced system architecture, mesh app and service architecture. It was found 25 ITS solutions in the direction stage. For the recommendation stage, there were 4 classifications of costs: resource costs of Rp. 685,286,896, hardware costs projected at Rp. 18,400,000, license fees of Rp. 304,737,080, and miscellaneous fees to be Rp. 192,240,897.

**Keywords: Strategic Planning, Annita Cassidy, PT. XYZ, IT Strategy.**

**INVESTMENT ANALYSIS OF ESTABLISHMENT THE  
ARCHITECTURAL TECHNICAL DESIGN SERVICE AS A  
CREATIVE ECONOMY BASED ON BMC (CASE STUDY IN  
EAST JAVA PROVINCE)**

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**Abstract**

National GDP and East Java Province GRDP show an increasing trend. The increase occurred because it was supported by an increase in several macro-industries such as the creative industry, real estate industry, and others. This shows good economic conditions in East Java Province. While the increase in the number of new households continues to increase, the need for home ownership continues to increase and the backlog of homes in East Java is still high above around 1,000,000 housing units every year, so the need for architectural services to make the design of houses or buildings still exists. Therefore, further analysis is needed by analyzing the investment feasibility study in establishing an architectural design service business. Investment analysis is done by making the business model based on BMC and analyzing from several aspects such as financial aspects and non-financial aspects (market and marketing aspects, operational aspects, and management aspects). This study uses qualitative methods, where data collection is done by means of discussion (Focus Group Discussion), interviews, and through literature. By conducting an investment feasibility study based on the BMC business model, it is expected to obtain a feasible business model for Architectural services business in meeting the needs of the design of the house or building.

**Keywords: Feasibility Study, Business Model Canvas (BMC), Qualitative Methode.**



**Paper #069**

**FEASIBILITY STUDY, BUSINESS MODEL CANVAS (BMC),  
QUALITATIVE METHODE**

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**Abstract**

Aku Pintar Indonesia enterprise is one of the educational start-up industries currently developing an Android-based system. System errors could appear in various both the features and administrative processes. The system repair priority could be given to the easiest system error first without taking into account the risk that would arise. The company needed to change its risk management by providing the priority of system repair and considering the effects and frequency of the occurrences. This research aims to help Aku Pintar Indonesia enterprise in choosing the priority of system error repair in order to improve their services to their users. This research used FMEA which allows the risk level of each error modes being assessed. System errors and its frequency were identified by web-based Google Play Console. The disadvantage level appeared from each errors determined by utilizing expert judgment in a Focus Group Discussion (FGD). The risk level of each system errors determined by the frequency of each and the level of the disadvantages, then measure the value of the Risk Priority Number by multiplying the results of severity and occurrence so that the risk value is obtained. The next process of risk mapping based on the risk level uses a modification of the risk mapping table to obtain the error rate for making priority improvements. This research produced a complete document that contains the information needed to plan and prevent repetitive errors, and can reduce the initial system error rate by 4% to 2.4% according to reports from the Google Play Console system.

**Keywords:** FMEA, System Errors, Risk Management, Application System, Android.

## **APPLICATION SIX SIGMA METHOD IN GREEN LEAF THRESHING TOBACCO PLANT**

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### **Abstract**

Green Leaf Threshing (GLT) plant is an upstream company from the tobacco industries. The GLT main processing is separate the lamina from the stem and also dry out the tobacco into safe storage moisture content. One of the problems in the GLT factory is the high frequency of refeed / rework / reprocess on defective products. High refeed frequency increases production costs and eliminates customer trust. The aim of this study is to reduce refeed frequency. Six sigma is a methodology that can be used widely in manufacturing companies and services for continuous quality improvement. The Six sigma DMAI framework is used to find out the problems and solutions. The root cause of refeed are determined using fish bone diagrams and 5 Whys tool. The ranks for improvement are determined from the RPN using FMEA Analysis. The suggested program for improvement are investing tool, repairing tool and training worker. The results of identification indicate that defects due to inappropriateness moisture content are the highest cause of refeed. The results of the improvement indicate an increase sigma level from 3.72 to 3.97. The DPMO also declined from 13,220 to 6,823. Increasing sigma level provides benefit of Rp. 20.530.760.

**Keywords:** GLT Tobacco, Moisture Content, Six Sigma, FMEA.

## **SELECTION OF SHIPPING CONTAINER VENDORS USING ANALYTICAL HIERARCHY PROCESS (AHP)**

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### **Abstract**

This research was conducted on a service company in Surabaya engaged in forwarder/ logistic using containers. Customers from this company spread in East Java, such as Surabaya, Sidoarjo, Gresik, and Mojokerto. The chosen export destination is exporting to the Middle East, such as Saudi Arabia and Qatar. The problem faced by the company is the selection of container vendors for shipping exports to the Middle East. There are 3 shipping container vendors that are often used for shipping to the Middle East, namely vendors A, B, dan C. This research uses the FGD method and Analytical Hierarchy Process (AHP) method. The FGD method is a method used to find answers to each problem through expert forums or discussion groups. This method will produce relevant criteria. This FGD method will be combined with the AHP method which has a good structure. This is evidenced by the matrices produced until a consistency test. AHP method can solve problems that have multi-criteria up to sub-criteria. Systematic criteria assessment with the first rank in a row until the last rank is the Quality (22.6%), Cost (22.4%), Time (18.3%), Bankruptcy (7.6%), Long-term Cooperation (6.9%), Order Fulfillment (6.1%), Company Profile (5.6%), Standard and Environmental Certification (5.4%), and Exploitation Contract (5.1%). The chosen vendor is vendor B has the highest priority (36.8%), then followed by vendor A is ranked second (33.9%), and the last is vendor C (29.3%).

**Keywords:** Vendor Selection, Criteria, FGD Method, AHP Method, and Alternatives/Choices.

## **PERFORMANCE IMPROVEMENT FOR PORT LOADING AND UNLOADING PROCESS WITH PROCESS MINING**

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### **Abstract**

Port is one of the important things in trade and logistics. The major influence factor of port productivity is the cycle time for loading and unloading. The container activity in port logistics consists of several activities, such as discharging, loading, receiving, delivery, gate-in, and gate-out, among others. These activities using various equipment including container cranes, Rubber Tyred Gantry (RTG), trucks, and other related machinery. The availability of equipment is one of the factors the influence delays in container activities, which can negatively affect productivity. The productivity of the port will affect to Key Performance Indicator (KPI) of the port. The purpose of this study is to analyze the flow of containers that used process mining. Moreover, it provides a recommendation to increase the productivity at Terminal Nilam Multipurpose Port of Tanjung Perak. Process mining method includes many of other analysis, that is discovery, prediction and real-time, bottlenecks and deviation analysis. Disco program used to analyze container activity, besides this, the disco program also use to determine bottleneck mapping that effect to port productivity. The result show delivery and receiving are the cause of the bottleneck. Delivery cancel is known as an activity that inappropriate with the ideal process and indicates as an error in the flow of container activities. The improvement scenario carried out from the results of the analysis obtained is to minimize the occurrence of cancel loading delivery, to obtain a time reduction of  $\pm 11.6$  hours. This will affect the productivity of container activities.

**Keywords:** Cycle time, Process mining, Bottleneck, Loading, Receiving, and Delivery Cancel.

## **MULTI-CRITERIA SUPPLIER SEGMENTATION BY USING ANP (ANALYTICAL NETWORK PROCESS) METHOD**

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### **Abstract**

Manufacture industries spent more than 50% of budget to buy raw material from suppliers. Procurement and supply become concern of management. Furthermore, an effective management is needed in order to provide optimal results for the company. However, the company has tendency to be dependent on suppliers, hence, it caused some risks, such as limited control of the company on availability, delivery schedules and the quality of the products produced. Developing good relations is an idea to improve competitiveness to other companies. Supplier segmentation is grouping of some suppliers which are shared the common characteristics. It is important for companies that have many suppliers. Supplier segmentation leads to some segments which each requires a separate strategy for the management. The purpose of this study is to make supplier segmentation based on priority of the capability and willingness variables. Furthermore, the appropriate strategy for each segment will be determined. Supplier capabilities can be evaluated from product quality, price, monitoring technology, innovation and others. On the other hand, willingness can be evaluated from the criteria of communication openness, commitment to always make improvements to products and processes, long-term relationships and others. The variables will be weighted using ANP (Analytical Network Process). The results of this research are segmentation of the suppliers and strategy to increase performance of the suppliers.

**Keywords:** Analytical Network Process, Multi-Criteria Decision Making, Segmentation, Supplier.

# **STUDY OF THE APPLICATION OF THE RCA AND SIX SIGMA METHOD TO ACHIEVE THE QUALITY OF THE KALIMAS RIVER IN SURABAYA (PRESTASI PARK-PETEKAN BRIDGE SEGMENT) TO BE CLASS II**

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## **Abstract**

Kalimas River is a water body that passes through the city of Surabaya. The total length of the Kalimas River is 12 km. This river originates in the Ngagel Area and empties into the Madura Strait. In a study conducted by Maghfiroh (2016), who tested the quality of Kalimas River, it was found that there were several parameters that did not meet the Class II of water quality standards. According to the Surabaya City Regulation 2014-2034, the Kalimas River will be used as a tourist spot and river transportation service center, so the river water must meet the quality standards for water recreation areas, which is Class II water quality. Due to these problems, the research on controlling water quality is very important. This study uses the Six Sigma method with DMAIC concept. Six Sigma is a continuous improvement effort to determine variations in the process, in order to improve the capability of that process in producing products and minimizing defects. As a characteristic of Six Sigma, DMAIC consists of five stages, which are define-measure-analyze-improve-control. Some parameters that will be used are BOD, COD, DO, TSS, pH, nitrogen, phosphate and total coliform. The first stage is "define", in which the water quality of the Kalimas River will be measured in the form of BOD, COD, DO, TSS, pH, Nitrogen and Phosphate. Then the "measure" stage will be calculated as Defect per Million Opportunities (DPMO) and sigma levels. In the "analyze" stage, the Root Cause Analysis (RCA) method is used to determine the root of the problem. "Improve" stage will determine potential solutions or action plans that can be applied. Then the "control" stage is conducted by making a plan to control the implementation of the action plan. The results of analysis at the six points show that there are several parameters that do not meet the Class II water quality standards, namely DO, BOD, COD, TSS, phosphate and total coliform. After calculating the Defect per Million Opportunities in the "measure" stage, the value of the sigma level in the Kalimas River (Prestasi Park-Petekan Bridge segment) is 2.75. In the "analyze" stage, fishbone diagrams are used to find the root cause of the Kalimas River (Prestasi Park-Petekan Bridge segment) that does not meet Class II water quality standards, and the root cause found is siltation due to water flow and waste water entering into river. Besides that, the root of the problem is also because of the inclusion of pollutants in the river water, namely domestic waste water and solid waste.

**Keywords: Water Quality, Six Sigma, Kalimas River, Root Cause Analysis (RCA).**

**STUDY THE DURATION OF STEAM POWER PLANT'S  
MAINTENANCE TO IMPROVE THE EQUIVALENT  
AVAILABILITY**

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**Abstract**

The maintenance period of a power plant is classified as a project. When project's duration is faster than scheduled then the project signifies success. For electricity industry, faster operate can increase availability, so that increase the income. Standard jobs of maintenance from owner is prepared into a project's work breakdown structure. By using network technique to scheduling of project, also supported by data of work duration, it will get a critical path. All activities that are on the critical path can be crashed to speed up work in shortening the duration of maintenance. Crashing is done by utilizing the cost slope of critical activities. So that information can be obtained about the costs of several possible durations. The study of the power plant's maintenance using a cost slope gets an accelerated duration with the smallest cost, which is 28 days. With the duration of maintenance for 28 days the total cost is 3,854,670,611 rupiahs and with an additional income of 429,643,368 rupiahs from normal income of 21,404,712,886 rupiahs.

**Keywords:** Power plant, Availability, Work breakdown structure, Crashing cost slope

**EXAMINING THE ADOPTION OF MOBILE PAYMENT  
SERVICE BY SMES IN  
INDONESIA**

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**Abstract**

Mobile payment service is a growing industry in Indonesia. Go-Pay and OVO are two main providers of mobile payment, that are subscribed by 95 000 and 9000 SMEs merchants respectively. The previous study stresses the adoption of mobile payment from the users perspective and others discuss its relation to mobile banking. Unlike previous study, this study examines the adoption of mobile payment service from the merchant perspective, especially the small and medium enterprises (SMEs). SMEs contribute to 60% GDP in Indonesia and there are about 59,2 million SMEs in Indonesia. By understanding the factors that influence SMEs mobile payment adoption, this study can contribute to the digitalization process of SMEs. The purpose of this study is to analyze the factors that influence SMEs towards the intention to adopt Ovo and Go-Pay services. This work in progress is conducted in Surabaya, the second largest city in Indonesia, with the focus on Go-Pay and Ovo mobile payment service providers. This study adopts a research model from the theory of behavior reasoning to test the relative influence of both reasons for and reasons against adoption. 180 merchants that have been using Go-Pay or Ovo in the last one month will be surveyed, and the result of this study will be analyzed using Structural Equation Modelling (SEM) and Analysis of Variance (ANOVA).

**Keywords:** Adoption Intention, Behavior Reasoning theory, Go-Pay, Mobile Payment, OVO, SMEs.



**THE EFFECT OF CONSUMER VALUE ON ATTITUDE  
TOWARD GREEN PRODUCT AND GREEN CONSUMER  
BEHAVIOR IN ORGANIC FOOD**

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**Abstract**

At the moment the world market continues to change, sustainability pillars such as environment, economy and social justice have become part of marketing decision-making. Developing a marketing strategy in the midst of current environmental and economic issues has led to a focus on the importance of green marketing. Using the theory of consumption values and value-attitude-behavior model, this research proposes to explore the green consumer behavior for green products in Indonesia. Attitude toward green product and consumer values such as functional value (price and quality), social value, conditional value, epistemic value, emotional value, and environmental value were used to study the green consumer behavior for green products. This study developed a research model and empirically tested by collecting data from questionnaires that were distributed in Indonesia. Based on a sample of 200 respondents, the results indicate that only social value has a positive impact on green consumer behavior, functional value (price), functional value (quality), environmental value, conditional value, epistemic value, and emotional value do not influence green consumer behavior. As a mediator, attitude toward green product has a significant effect on epistemic value, environmental value, and emotional value. This confirms and significantly adds to the literature of green consumer behavior in a developing market.

**Keywords:** Green Products, Green Consumer Behavior, Value-Attitude-Behavior Model, Theory of Consumption Values.

## **WORKLOAD ANALYSIS AT BIRO HUMAN CAPITAL TO INCREASE PRODUCTIVITY**

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### **Abstract**

PT XYZ is a company in Indonesia engaged in manufacturing. One strategy to support these activities is to adjust the workload of the existing work to increase productivity in this company. Workload is very influential on employee performance productivity because the environment and work capacity are aligned with productivity. If the burden received is too heavy, then employee productivity will decrease, whereas if the workload is balanced then employee productivity will increase. Workload Analysis is a method used to determine the time, effort, and resources needed by an organization in identifying the actual needs of Human Resources (HR) in quality and quantity in accordance with the goals and strategies of the organization. Workload analysis with Full-Time Equivalent (FTE) is the allocation of the total number of personnel needed to work on the entire transaction in a system / process at a certain time / period. The staff allocated includes full-time, part-time and short-hour. While the National Aeronautics and Space Administration Administration Task Load Index (NASA-TLX) method is a method used to analyze workers 'mental workload by measuring workers' subjective perceptions. This study will combine both methods to get the expected conclusions. This study aims to measure workload analysis aimed at making the workload between the sections in the Human Capital Bureau to be equally. The calculation results from the FTE stated that the workload contained in the Human Capital Bureau is still not evenly distributed, the recruitment and assessments section has a workload that tends to be low while other parts have a workload that tends to be high. Subjective workload that most affects is on the effort index, which is 24.09%, followed by temporal demand of 21.64%, performance aspects of 21.17%, mental aspects of demand of 19.66%, frustration level of 13, 44%, and the physical demand aspect is 0%.

**Keywords: Workload, Workload Analysis, NASA-TLX FTE.**

## **RISK DEFECT ON DU BASE FRAME PRODUCT**

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### **Abstract**

Defects are imperfections or damage in the manufacturing process. To be able to remain competitive the company should provide products with the appropriate quality of customer specifications and free from defects. Defects occurring during the manufacturing process will also affect the cost and time of production in a manufacturing industry, so it is necessary to handle the defects that occur. Where the results of a defect-free product can prove the company is able to answer the challenges given by the buyer to gain long-term trust. One method that can overcome the problem above is to predict product defects with risk management methods. With risk management We can find out the possibilities of each manufacturing process that can cause defects in products and take action to avoid from defect products other than those with risk management can also support the effectiveness of Implementation of the production process in the company. There are also tools used in this risk management study are fishbone and FMEA. Fishbone is used to cause identification while FMEA is used in risk analysis to determine risk priority number (RPN). From RPN defects that have the highest value will be taken risk evaluation and risk treatment to prevent the same defect. With this research in hopes of the results of quality, cost and production time in DU Base Frame products can remain consistent and raises the awareness of the personnel involved in the manufacturing process of the product. From the observation, research and evaluation are found three risks that have the highest RPN or high-risk value of machining milling (RPN 144), blasting process (RPN 144) and on the painting process (RPN 128). These three risks have been carried out mitigation of the risk and the resulting defect decreases even eliminated. The importance of the detailed procedures and the awareness of each personnel involved becomes one of the keys to avoid risk in the production process of a product.

**Keywords: Risk Management, Defect, Product, Fishbone, FMEA.**

**DESIGN OF DECISION SUPPORT SYSTEM IN SELECTING CEMENT VEHICLES BASED ON DRIVER PERFORMANCE, EXPEDITOR PERFORMANCE, AND WAITING TIME**

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**Abstract**

Current logistics developments affect a process in any company using third party logistics. Third party logistics is a distribution service, warehousing carried out by third parties (outsourcing). Third party logistics in its business practices has been owned by many parties. PT Z is one of the companies engaged in the cement industry which has a lot of cooperation with third party logistics. PT Z has assessed the expeditor partners. The problem that occurs is the problem of each driver and expeditor in the field agreeing to the same. There are some expeditors who have good performance and vice versa. In the midst of tight business third-party logistics resulted in each expeditor competing with each other and providing the best service to his clients. This research makes a decision support system by examining aspects that make the consideration of the selection of drivers and expeditors to be used for the transport of cement in PT Z. The method used in this study is the analytical hierarchy process (AHP) according experts' opinion in cement industry. Research uses decision support systems based on web information systems as an application method. This research can determine the choice of the driver and expeditor who has the best performance to carry out the cement transportation process at PT Z by considering the driver's waiting time. Drivers who have better results will get greater opportunities (priority) chosen to transport cement.

**Keywords: Supply Chain, Third-Party Logistics, Decision Support Systems, AHP.**

## **BUSINESS DEVELOPMENT USING CANVAS BUSINESS MODEL IN LUCKY STAR DIGITAL PRINTING**

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### **Abstract**

Large amount of the demands for branding and spreading the information makes the business of digital printing dominate the market needs. Lucky Star located in Cepu has been operating for 5 years. Unfortunately, they do not have the right business model. To collect the data was obtain from Focus Group Discussion (FGD). Questions asked on FGD were directed to gain knowledge about the owner and employees' wants, also customers needs. Afterwards, the data were classified according to the categories of BMC. The researcher offered canvas business model hope that it can lead the business become market leader. The results of this study indicate that customer segments must be determined with STP (Segmenting, Targeting, Positioning) strategy. The additional value proposition is create a promo, bundling products, and add delivery services. the best channel is the "word of mouth" method. Lucky Star's additional revenue stream comes from supplier because offers products at wholesale prices. Additional key resources is give responsibility to employees for financial reports and promotion sections. In customer relation aspect, give member card for customers and providing after-sales services. Additional for key activities are Quality control, business evaluation, Promotion. In key partnerships aspect, must looking for suppliers of digital printing equipment at wholesale prices. For cost structure, need requires employees who are responsible for online financial management.

**Keywords: Digital Printing, Canvas Business Model, FGD, STP.**

**STRATEGIC PLANNING FOR SYSTEMS & INFORMATION  
TECHNOLOGY OF XYZ HOSPITAL USING WARD &  
PEPPARD METHOD**

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**Abstract**

XYZ Hospital is one of the busiest private hospitals in Badung, Bali which has implemented systems and information technology handled by its IT division staff. However, the implementation of systems and information technology has not been equipped with strategic planning so that it has not been directed and aligned with the company's business strategy, only based on demand. The impacts of there's no strategic planning systems and information technology is the companies are difficult to invest appropriately based on system requirements and information technology that can support the company's business strategy. Increasing the competitive advantage of utilizing systems and information technology still not optimal because the development of IS / IT lack directional and appropriate. Therefore, to overcome the problems, in this research is making strategic planning of systems and information technology of XYZ hospital, which carried out with Ward and Peppard method which serves to produce an IS /IT strategic plan that can help the company to run their process business more effectively as well as add its business value. The analysis techniques used are Value Chain, PEST, Porter 's Five Forces, SWOT, BSC, CSF, gap analysis and Mc Farlan's Strategic Grid. From the results of the analysis of the current condition of the company shows that XYZ Hospital is in the position of quadrant 1 which indicates the company should be focused on an aggressive strategy where reduce weaknesses and avoid threats to get maximum benefit. The recommendations for future application portfolios obtained are three applications in the high potential quadrant, one application in the strategic quadrant and two applications in the key operational quadrant. The results of this study aim to provide an overview to management in making decisions relating to investment, implementation and management policies of IS / IT that can support the company's vision and mission.

**Keywords: Strategic Planning, Information Systems, Ward & Peppard, Hospital.**

# **INVESTIGATING THE EFFECTS OF PSYCHOLOGICAL CAPITAL ON TURNOVER INTENTION**

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## **Abstract**

A high level of employee turnover in the company might cause negativity in this company such as decreasing productivity and might take a toll on financial budget. Companies will strive to minimize the level of voluntary employee turnover where possible. PsyCap was explored in many researches related to turnover intention and was positively proven. This study aims to investigate the effects of Psychological Capital (PsyCap) on employee turnover intention through three mediating variables. Quantitative methods were used, and this study extracted 257 samples from State-Owned Enterprises (BUMN) engaged in telecommunications in Indonesia. In order to better represent the company as a whole, stratified sampling was used. SPSS software was used to process the data with Process V 3.0 macro as an addition. The results of this study revealed positive & significant relationship of PsyCap towards mediating variables while significant & negative relationship between mediating variables and turnover intention. In addition, there is evidence of mediating effects of PsyCap towards turnover intention through job satisfaction, work engagement and psychological well-being.

**Keywords: Psychological Capital, Work Engagement, Job Satisfaction, Psychological Well-Being, Turnover Intention.**

## **STRATEGIC PLANNING OF IS/IT FOR TELECOMMUNICATION COMPANY**

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### **Abstract**

PT. XYZ is one of the leading Internet service providers in East Java, Bali and Lombok. As an IT company that has the motto "The Quality Internet Service Provider", of course the role of IT is a significant thing, because with the IT all processes that are initially manual can turn out to be well automated. However, in practice the demand for the development of IS / IT systems from various divisions tends to be only concerned with the interests of the division itself. So that in the end the system produced by the IT Apps division to help a division is not in line with the interests of other divisions. This happens because the IT division does not have a long-term work program plan for developing systems that are adapted to the PT. XYZ business goals and become a top priority in the development of the IS / IT system. In the preparation of the IS / IT strategic planning framework using the Ward and Peppard Model approach and in evaluating the elaboration of information systems strategic planning and business strategies using Balanced Scorecard and Critical Success Factors. Several analytical methods such as Value Chain Analysis, SWOT Analysis, PEST Analysis and Five Force Model Analysis are used to analyze internal and external business environments. Strategic Grid McFarlan Analysis is used to map application portfolios The result of this research is a blueprint of strategic plan IS/IT in PT. XYZ. Wich included recommendation for improvements in the network structure. While at the SI system is recommended for development id advanced ERP which affect the portfolio application to support the achievement of the vision and mission of the company.

**Keywords: Strategic Planning, Information System, Information Technology, Telecommunication Company.**



**PRESERVATION STRATEGY OF *PUTAR MIRING*  
TECHNIQUES FOR WOMEN (CASE STUDY: SENTRA  
GERABAH PAGERJURANG, KLATEN, CENTRAL JAVA)**

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**Abstract**

The Center of Pagerjurang Pottery Industry is one of the tourism villages in Klaten, Central Java, which is known for the existence of pottery production using *putar-miring* techniques and women craftsmen. The historical value of putar miring techniques for women makes traditional pottery products is unique and attractive to the market, so that economic income and community welfare have increased. However, based on the survey results, it was found that 76% of women craftsmen did not know the history of putar miring techniques and 73% did not realize that historical values (*putar-miring* techniques and women craftsmen) had a significant impact on people's welfare. This fact proves that the existence of *putar-miring* techniques and women craftsmen is threatened to disappear if the people's economic income decreases. Based on these problems, this study aims to formulate historical and cultural preservation strategies for *putar-miring* techniques and women craftsmen. This research is a type of qualitative research conducted by in depth interview, determining variables using Content Analysis, formulating strategies with SWOT analysis based on 5M (Man, Machine, Material, Method, Money) + 1E (Environment) aspect, applying Community Total Led Sanitation (CLTS), as well as selecting the best preservation strategies using the Multi Criteria Decision Making method. The results show that women craftsmen have an important role in contributing to family economic income through traditional pottery production compared to male craftsmen. This happens because the *putar-miring* technique can only be used by women, so 80% of the pottery production process is carried out by women craftsmen while the role of men is only as a support. Based on the CLTS concept, the preservation strategy is carried out by giving trust to community leader (*sesepuh*) to educate the community that the existence of *putar-miring* techniques and women craftsmen have a positive impact on the community welfare.

**Keywords:** Community Total Led Sanitation (CLTS), Multi Criteria Decision Making (MCDM), Preservation Strategy, *Putar Miring* Techniques, Traditional Pottery, Women Craftsmen.

**COMPARISON ANALYSIS OF THE EFFECT OF EWOM AND TRUST ON PURCHASE INTENTION. CASE STUDY: TOKOPEDIA, SHOPEE**

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**Abstract**

Technological developments affect various aspects of human life, even facilitating daily activities and activities. One of them is the increasing popularity of the Internet in the world, including in Indonesia. Based on the Annual Report by PT. Telkom said, Broadband Internet customers for Telkom products continued to increase from year to year. Since 2013 until 2017, Broadband customers in Telkomsel have increased by 90.816 million customers. This condition causes various groups, including entrepreneurs, to use the internet as one of the promotional strategies for marketing their products. One phenomenon and strategy that is currently popular is Electronic Word of Mouth. With the internet, various websites and e-Commerce can easily be accessed by the public. This makes it easier for people to make buying and selling transactions in a practical, easy and efficient manner. Many factors influence someone to shopping on an e-Commerce. Tokopedia and Shopee known as the most popular e-Commerce in Indonesia. Based on the Technology Acceptance Model (TAM) theory, the factors that influence a customer's Purchase Intention include Perceived Ease of Use, Perceived Usefulness, and Attitude. This research offers the development of a basic model of TAM, namely by adding trust variables with the eWOM independent variable, which is known to also affect dependent variable Purchase Intention. The method used to analyze the model is the Structural Equation Model (SEM). The tool used to collect data in this study is an online questionnaire that will be distributed through the google forms, Tokopedia has 159 respondents and Shopee has 200 respondents. The software used for processing data is SPSS 21 and AMOS 21. The results of 10 proposed hypotheses are received significantly, while Shopee has 1 hypothesis rejected, Tokopedia has 2 rejected hypothesis. The study revealed that Trust, Perceived Ease of Use, Perceived Usefulness, and Attitude influence on purchase intention.

**Keywords: E-Commerce, Ewom, SEM, TAM, Purchase Intention, Trust.**

**RISK MANAGEMENT USING RISK BREAKDOWN  
STRUCTURE AND HOUSE OF RISK METHODS IN SAMBU  
FLAT PROJECT**

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**Abstract**

Due to the staff housing demand, a national oil company planned for a flat construction project in Sambu Island. Cost overruns due to project delay demanding this project be completed on time. Considering historical factor in previous project and the geographical aspects of this island, which is an island far away from the nearest land, can cause the flat construction delayed due to the weather, the availability of the equipment, mobilization, design implementation and other factors. Therefore, risk management is needed to achieve the objective of the project. Risk management process refers to ISO 31000, an international standard for risk management. The risk management process comprises of contexts determination, risk identification, risk analysis, risk evaluation and risk handling. Using Risk Breakdown Structure method, 58 risk events have been identified. House of Risk (HOR) 1 was used to analyze the triggers of these risk events and found 58 risk agents. In evaluation process, using HOR 1 and focus group discussion with the expert, the study found 12 priority risk agent that have to be handled immediately. Next step, using HOR 2 method in risk handling process, the study found 12 preventive action that can handle the priority risk agent and rank them based on effectiveness to difficulties value (ETD). Using pareto method and interview with the management, the study recommend 6 risk preventive action that have to be implemented immediately.

**Keywords:** Project Management, Construction, Risk Management, Risk Breakdown Structure, Pareto, House of Risk.

**BERTH TIME PERFORMANCE ANALYSIS OF CARGO SHIPS  
IN THE PORTS OWNED BY PELINDO III**

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**Abstract**

This research will identify the factors and causes of ineffectiveness of the current berth time of cargo ships in the Ports managed by PT. Pelabuhan Indonesia III. Implementing a qualitative research method, interview, and observation with informants will identify the factors affecting berth time performance. Berth time performance was analyzed using productivity (Ton/Gank/Hour) and Effective time: Berth time (ET:BT). To get the root problem, we obtained five factors identified as the cause of ineffectiveness: man, facilities/machinery, environment, materials, and processes/services. These five factors are then described deeper using the cause and effect diagram tool. Once the causes can be identified, then the proposed improvements can be administered to improve the effectiveness of the cargo ship's berth time.

**Keywords:** Ports, Stevedoring, Berth time, Effectiveness and efficiency, Fishbone diagram

**IMPLEMENTING CPFR (COLLABORATIVE PLANNING,  
FORECASTING AND REPLENISHMENT) APPROACH IN THE  
FEEDSTOCK MULTINATIONAL FACTORY IN INDONESIA:  
A CASE STUDY**

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**Abstract**

The stockbreeding industry is an important industry in the Indonesia economy, and East Java province is a province of Indonesia that has the largest number of stockbreeding companies. They are nationals and multinationals companies. The Indonesia government stresses that multinationals need to develop good relationships with local companies, suppliers and customers. CPFR (Collaborative Planning, Forecasting, and Replenishment) is an approach that may help to strengthen the supply chain coordination in the company. It enhances cooperation, coordination, and information of related parties along the supply chain. This study aims to assess the implementation of CPFR in a multinational stockbreeding company in Indonesia. Using the history of 2015-2018 production records, observation, and interview, Minitab 17 Forecasting software is used to analyze the data. This is work in progress study. The result of this study is expected to improve forecasting management, production activities, inventory management, distribution management more effective and efficient than before.

**Keywords:** CPFR, Feedstock, Indonesia, Multinational, Supply Chain.

**ANALYSIS OF FACTORS AFFECTING PURCHASE  
DECISIONS OF BUYING GOODS IN SOCIAL MEDIA (CASE  
STUDY: XYZ STORE)**

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**Abstract**

The number of internet users worldwide has increased from year to year. Especially in Indonesia, in 2017 internet users have reached 143.26 million people or around 54.68% of the total population in Indonesia and on average use it every day. The growing phenomenon of internet use in Indonesia is widely used by businesses to run their businesses by selling online where social media is the most used place to sell online (64.9%). However, there are still many consumers who are reluctant to make online purchases, this is caused by many factors including the level of consumer confidence, information provided by the seller to consumers, consumer risk perceptions and others. In this study, the factors that influence the purchasing decision of goods on social media will be analyzed using the developed Theory of Planned Behavior. The case study used is the XYZ store that sells shoes, accessories and Muslim fashion on social media (Facebook and Instagram). Partial Least Square Method of Structural Equation Modeiling (PLS-SEM) is used to conduct research analysis, where the results of this study are the conclusions of significant factors that affecting consumer decisions in making purchases on social media and recommendations for improvements to XYZ stores to improve sales and increase consumers.

**Keywords:** Theory of Planned Behavior, Consumer Behavior, Purchasing Decisions, Partial Least Square, Structural Equation Model.

**ANALYSIS AND IMPROVEMENT OF GREEN SUPPLY CHAIN  
MANAGEMENT PERFORMANCE IN COMPANY (CASE  
STUDY: JOINT OPERATING BODY PERTAMINA-  
PETROCHINA EAST JAVA)**

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**Abstract**

Industrial activities, especially oil and gas companies, have a negative impact on the environment. In addition, increasing public and government awareness of environmental conditions requires businesses to pass regulations to apply the concept of caring for the environment in their business processes, including the supply chain. Communities around the P-PEJ JOB region feel anxieties about activities along the company's supply chain that have a negative impact on the surrounding environment and directly or indirectly affect people's lives. Although JOB P-PEJ received the Green PROPER award and has implemented an ISO 14001 environmental management system that indicates that the company has carried out its operations while maintaining the environment and the community around the operating area, the company still does not have a Green Supply Chain Management performance measurement system which is an operational activity which is dominant for the company so that the company does not know which activities in the supply chain need improvement to improve the company's GSCM performance. This study aims to provide information to the company regarding the latest performance conditions of environmentally friendly supply chain management through the design of Green SCOR performance measurement system model and assess the company's GSCM performance which formulates improvements using Modified House of Quality so that actions can be identified improvement of company priorities. The results of this study identified 25 performance indicators from 5 processes that are suitable for use in measuring the JCM P-PEJ GSCM performance. Overall, the GSCM performance of the company received a score of 83 in the category of "good". However, there are five indicators that have poor performance values and further formulation of improvements that produce priority corrective actions through asset management training that considers environmental aspects as a form of improving supply chain management and the overall and sustainable corporate environment.

**Keywords: Green SCOR, Performance measurement, Performance improvement, Green supply chain management, Oil and gas companies**

**THE APPLICATIONS OF MULTIPLIER ANALYSES  
IN ANALYZING THE ROLE OF THE MANUFACTURING  
SECTOR: THE CASES OF INDONESIA AND JAPAN**

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**Abstract**

The purpose of this study is to compare the role of the manufacturing sector in the national economies of Indonesian and Japan by using simple output and simple household income multipliers, the analysis devices in Input-Output (IO) analysis. The analysis period for the Indonesian case is 2010 while for the case of Japan is 2011. For the Indonesian case, the 2010 Indonesian IO table is used as data. On the other hand, the Japanese case utilizes the 2011 Japanese IO table. The former table consists of seventeen industries while the latter one has thirteen industrial sectors. In both cases, the analyzed sector is represented by the sector number 3, manufacturing. The results explain that the analyzed sector included in the top five sectors from the point of view of simple output multiplier on the analysis periods in both cases. By using another multiplier, the opposite phenomenon appears. More specifically, in both cases, from the point of view of simple household income multipliers, the manufacturing sector did not include in the top five sectors on the periods of analysis. For the Indonesian case, on the period of analysis, electricity and gas sector had the highest simple output multiplier value. For the Japanese case, on the period of analysis, manufacturing sector had the highest simple output multiplier value.

**Keywords: Manufacturing Sector, National Economies, Simple Output Multiplier, Simple Household Income Multiplier.**



## **MSMES FOCUS ON INSTAGRAM ACCOUNT QUALITY : KEY FACTORS TO PRIORITIZE IN INSTAGRAM POSTING**

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### **Abstract**

These days most of MSMEs have a quite good understanding of social media and how it works for their business. In Indonesia, Instagram is one of the best powerful tools to introduce and market their product instantly. However, social commerce face problems especially in customer trust. It is suspected by customer doubt to the key factors of social media online shop, i.e : reputation, transaction, communication, safety, information quality, economic feasibility, and word-of-mouth referrals. The purpose of this study is to test a framework of Instagram account quality model and its impact on MSMEs social media marketing strategy. An online-based questionnaire was administered to 271 MSMEs. Furthermore, structural equation modeling was used to analyze the data. Findings indicate that there are significant effect between information quality, reputation, safety, communication, and economic feasibility to the Instagram account quality construct. The practical implications emphasize on MSMEs first need to develop their information quality on Instagram, because that is the most significant factors towards Instagram account quality in online store perception. A focus on improving information quality will also help MSMEs to communicate and promote their post to reach more audience and interaction with potential consumers.

**Keywords:** Instagram account quality, Customer trust, MSMEs, Social media, Key factors

**ANTECEDENTS OF BEHAVIORAL INTENTIONS ON ONLINE TRAVEL AGENT COMPANY: COMPARISON BETWEEN GENERATION X AND MILLENNIAL**

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**Abstract**

The number of internet users in Indonesia has grown at the unbelievable rate. There is no exception with the growth rate of the online travel agent users in Indonesia. When making online transaction, including via online travel agent, consumers are faced with uncertain situations. The uncertain situations could grow increasingly critical when consumers have to share sensitive personal information in the transaction process. In this context, the importance of building and maintaining trust becomes very important to online marketers as numerous studies have shown that the lack of trust is one of main reasons for consumers' hesitancy to online shopping. The evidence has shown that trust could reduce the perceived risks and thereby determines success or failure of e-vendors. The research objective is to analyze the antecedents of behavioral intentions on online travel agent company. Also to see whether the trust formation between generation X and Millennial has difference. The research is based on online surveys conducted with convenience samples from two different generation. The results have shown a strong relationship between initial trust towards online travel agent and consumers' behavioral intentions. The results suggest that there's no difference between two generations on the formation trust and behavioral reactions. Both Gen X and Millennial seen the risks and trust of using online travel agent in the same way. Both generation willing to give personal information to online travel agent.

**Keywords:** Online Travel Agent, Behavioral Intentions, Trust Propensity, Familiarity, Web Risk.

**STAKEHOLDER ANALYSIS APPROACH:  
WHO IS AUTHORIZED TO REGULATE THE  
NATIONAL HEALTH INSURANCE BENEFITS?**

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**Abstract**

BPJS Kesehatan (Badan Penyelenggara Jaminan Sosial Kesehatan) is an agency that liable to organize the national health insurance in Indonesia. The director of health services insurance of BPJS Kesehatan has issued three regulations as an effort to control deficits which currently hit since 2014. The issuance of the regulations reaped controversy over its contents governing the limitation of insurance benefits. Besides that, BPJS Kesehatan has assumed not an authorized institution to issue that policy. This study aims to analyze the issuance of the regulations as a public policy. Data collection is obtained by in-depth interviews with top-level management, literature review and observation. Stakeholder analysis used to find out where the position of BPJS Kesehatan in the national health insurance program environment is. It will help in carrying out its functions and roles to succeed in the health insurance program in Indonesia. Through stakeholder analysis is known that the government and the participants are the primary stakeholders of the national health insurance system. BPJS Kesehatan is an agent representing the government providing health benefits to the participants. BPJS Kesehatan is not the primary stakeholder but secondary stakeholder, then the determination of any health benefits provided to the participants is an authority of the government rather than BPJS Kesehatan.

**Keywords: Public Policy, Stakeholder Analysis, National Health Insurance, National Health Insurance Agencies, BPJS Kesehatan.**

**INFORMATION SYSTEM STRATEGIC PLANNING AND  
INFORMATION TECHNOLOGY IN ORGANIZER EVENT  
SERVICE COMPANY AT SURABAYA**

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**Abstract**

The company is engaged in event organizer services to support promotions, event organizers, digital printing, production, exhibitions that were established in 2008. The company has several problems, namely the application of IS / IT that is currently not aligned with the company's business strategy and only implement the task of each unit, this company has not made a grouping and has not determined the priority scale for the IS / IT to be implemented. The solution to this problem is that there must be an IS / IT strategic planning that is appropriate and in line with the company's business strategy. The proposed IS / IT strategic planning consists of 3 stages, namely: understanding the current conditions by analyzing the external and internal business environment along with the analysis of the external and internal environment of IS / IT and followed by the SWOT analysis. The next stage, interpretation of future needs is analyzed using value chain analysis and success determinants. After this, formulate a strategy and then determine the portfolio of future applications. Based on the results of the current analysis, the SWOT matrix is located in coordinates (1.61, 2.05), which means that the focus of the proposed strategy is the SO strategy (opportunity strength). Analysis of the SI strategy produces recommendations for updates for one application and four new applications support the company's business strategy. Analysis of IT strategies produces recommendations for the use of server colocation, the addition of web servers, cloud computing. The IS / IT management strategy analysis generates recommendations regarding IT master plans and IT providers that meet their needs. Determining the Priority of Future Application Portfolios using AHP calculations, the event organizer package application gets a weight of 0.44.

**Keywords:** Critical Success Factor, IS/IT Strategic Planning, SWOT, Value Chain Analysis, Waard and Peppard, AHP.

## **THE IMPORTANCE OF SOCIAL NETWORK IN FAMILY BUSINESS FOR ENHANCING MANAGERIAL ABILITY**

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### **Abstract**

Prior research has underlined the benefit of social network to provide advantage of information inflow and economic rent. However, the exploration on the effect of social network toward a managerial skill in family firm environment is still limited. We explore the role of external social network on the relation between family control and managerial ability. Using data of Taiwanese Listed companies, we measure CEO and director's social network ties based on education backgrounds, prior work experiences, and their participating in the same training courses, business forum, and meetings conducted by authorities and independent organization. The empirical result showed an inverse relationship between family control and managerial ability. In addition, the board social network could help alleviate the managerial ability. But, the CEO social network itself does not help improve the managerial ability. Our evidence suggests that while external social network can help family firms improve managerial ability, CEO's social network does not led to better managerial ability as they might be too busy in dealing their external relationships, making themselves incapable of focusing on their management.

**Keywords: Social Network, Family Business, Enhancing Managerial Ability.**

## **Paper #102**

# **ENTERPRISE ARCHITECTURE AS A TOOL FOR DIGITAL TRANSFORMATION**

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### **Abstract**

Enterprise Architecture (EA) is the holistic expression for the main strategies of an enterprise in terms of business, applications and technologies, and the impact they have on its processes and functions. Currently, the CEOs of most businesses are investigating what opportunities are afforded by digitalization. However, despite the benefits of EA, and its possible role in digital transformation, there is a gap in the research regarding how to take advantage of EA in digital transformation. This article explores the concepts of EA and digital transformation based on a set of publications we selected from the area of IS/IT, and addresses some contributions to a methodology that promotes EA planning as a tool for digital transformation. As such, we refer to the dimensions, the approach, and the two phases of development which will contribute to placing EA as a tool for solving the problems of digital transformation initiatives.

**Keywords:** Enterprise Architecture, Digital Transformation.

**SALT FIELDS PRODUCTIVITY FORECASTING  
BASED ON SUNLIGHT DURATION, WIND SPEED AND  
TEMPERATURE DATA**

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**Abstract**

Once a major salt producer, Indonesia has imported million tons of salt in recent years to meet domestic demands of chemical industries. Indonesia's salt-producing potential has been hindered by lack of competitiveness and unsynchronized production data. The salt supply chain process is typically finished on a monthly basis, yet the uncertainty of weather conditions often leads to erratic production yields. Since heavy reliance on the weather can bring negative consequences for salt farmers around the country, accurate salt field productivity forecasting is of great importance. This study aims at examining sunlight duration, wind speed and temperature data to predict salt field productivity in Kalianget Sumenep Madura. The predictive model is developed using Artificial Neural Network (ANN) method because it has a low risk of fault to solve nonlinear relationships. The effects of different learning rate and momentum values are analyzed by full factorial design of experiment and evaluated based on the lowest root mean square error (RMSE). Then, the optimal model is used to test and compare the forecasting performance based on ANN and Holt-Winters predictors. The result demonstrates that the proposed model is accurate and efficient to represent a good solution to predict salt field productivity in the region.

**Keywords:** Artificial Neural Network, Forecasting, Predictive Modeling, Salt fields, Supply Chain Management.

**ANALYSIS OF FACTORS AFFECTING EDMODO ADOPTION  
AS LEARNING MEDIA USING TECHNOLOGY  
ACCEPTANCE MODEL 2 (TAM 2)**

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**Abstract**

Electronic-based learning media is essential in the industrial revolution 4.0 era for the advancement of education. Electronic learning (E-Learning) like Edmodo has an important role to support the practice of teaching and learning at universities. Edmodo was chosen as the one of the most effective User Generated Content (UGC) to directly represent users between lecturers and students. The ease and benefits of using Edmodo have never been measured at Ciputra University, Indonesia. Edmodo must be analyzed in order to determine the acceptance and benefits perceived by users. Distribution of samples was conducted using an online questionnaire as the data collection method. The data analyzed were obtained from 94 respondents using descriptive statistics and path analysis. Respondent data were processed using the SPSS software. Technology Acceptance Model 2 (TAM 2) is the most suitable method in analyzing the user acceptance adoption based on its constructs. This study used 10 constructs which had been adjusted to answer problems and focus on explanatory research to measure user acceptance with a quantitative approach. The result indicated that the relationship of the highest indicator with a value of 35% is on the Output Quality (X4) which had a significant effect on Perceived Usefulness (Y1); the lowest indicator has a value of 3.1% on the Perceived Ease of Use (Y2) which does not have a significant effect on Perceived Usefulness (Y1). The overall result also showed that Edmodo can be accepted by users as a reference in education, especially at the university level.

**Keywords:** E-Learning, Edmodo, Technology Acceptance Model 2, User Acceptance Perception.



**THE INFLUENCE OF DIGITAL MARKETING, CUSTOMER VALUE, WEBSITE QUALITY & CREDIBILITY, CUSTOMER TRUST & LOYALTY, TO DIGITAL ADVANTAGE ON DIGITAL BANKING SERVICE IN SURABAYA**

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**Abstract**

This paper presents the first known empirically-tested model of Digital Marketing Strategy to gain Customer Value, through the building of Website Quality, Website Credibility, to achieve Online Customer Trust, Online Customer Loyalty, performing results on creating and sustain the Competitive Advantage. In doing so, it provides insight into not only how organizations can effectively manage the strategic digital brand building process but, more importantly, appreciate the subsequent non-employee effects on digital banking services as organization's digital benefits. Data were collected via field survey of 300 lounge banking service, sourced from a market research Bank Indonesia data base list. SEM analysis was conducted for several model test, and LISRELL software was used to statistically validation. Strong support was found for 10 of the hypothesized relationships thus providing strong validation for the proposed model. The employment of surveys can present data collection problems stemming from such things as lack of willingness to participate on behalf of the respondent, loss of validity when using structured questionnaires and inherent challenges of wording questions properly. Knowledge gained from empirically validating of Digital Marketing Strategy: 1) further enriches the application of traditional brand management techniques; 2) provides a framework for digital brand communication training; 3) increases organizational understanding of how to engender positive non-employee actions and; 4) increases the accountability of such an internal investment by identifying measurable organizational digital benefits. This research makes three important contributions including: 1) expanding the existing digital brand equity literature to incorporate relevant perspective, that being employed; 2) the adoption of a multi-disciplined approach to addressing a digital marketing issue and, in doing so, extending beyond the connection on cognitive psychology view of digital brand equity to incorporate a contextual/organization cultural element and; 3) reflecting the perceptions of non-employees services, who are currently underrepresented in the digital brand management literature.

**Keywords:** Digital Marketing Strategy, Customer Value, Website Quality, Website Credibility, Online Customer Trust, Online Customer Loyalty, Competitive Advantage.

**UNDERLYING FACTORS OF THE INTENTION TO  
PARTICIPATE IN DIET & PHYSICAL EXERCISE:  
AN EXPLORATORY STUDY**

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**Abstract**

It is the truth that mostly men are the breadwinner in nearly all family system across the world. Breadwinner husband becomes an important factor in marriage. However, the fact is men's health outcomes continue to be substantially worse than women's. As overweight and obesity is a major risk factor for most major Non-Communicable Diseases (cardiovascular diseases, diabetes, and cancer), and considering an early onset of obesity is potentially facing the high cumulative incidence of several diseases and also preventing in the early stage is much better, it would be very best to call out all the healthy stakeholders to change the young adult's behavioral risk factors – unhealthy diet, and lack of physical activity. There are many evidence shows that social/health marketing is an impactful way to support people and deliver positive change. It was found that social marketing is needed to drive future awareness and behavior change in obesity. A qualitative methodology was undertaken. The study population was male who domiciled in *Jabodetabek* yet had a job or went to school in Jakarta, who had the Body Mass Index (BMI) overweight and obese, and aged between 18 years old and 29 years old. Quota sampling was taken. Several in-depth interviews was taken due to the sensitivity of the case. Interviewees were approached in some malls in Jakarta using means of purposeful sampling strategy. Total of the respondents were 40 interviewees. Thematic analysis was used in order to gain the insights. Results indicate that the underlying factors of the intention to participate in diet and physical exercise are composed of four factors, and they are labeled as perceived severity, self-esteem, perceived benefit, and perceived barrier. This exploratory study contributes a fundamental insight about social/health marketing strategy to move men to participate in diet and physical exercise program.

**Keywords:** Exploratory Study, Health Marketing, Men's Health, Obesity, Social Marketing.

# **OPTIMIZING THE FERTILITY RATE OF SUGARCANE CROPS AT PRECISION AGRICULTURE USING THE FUZZY LOGIC METHOD**

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## **Abstract**

Soil fertility has a significant role in the sugarcane plantation industry to maintain plant fertility so that optimal yield productivity is obtained. The management system that has been used by farmers only based on practices and estimation, so that it can not determine the exact needs of water, lime and fertilizers in each area of the plant. Therefore, we need a system that are able to provide a reference for giving water volume, lime content and fertilization according to the level of nutritional needs of sugarcane plants. This study aims to design a system that is able to provide recommendations for sugarcane needs, based on soil nutrient content using the fuzzy logic method. The first step in this method is the fuzzification process carried out on four types of data used as input parameters, namely soil moisture, soil pH, plant phase, and nutrient content. The next step is choosing the relevant criteria from each assessment to get best alternative. The next stage, a membership function is created to estimate the next process and defuzzification process. According to the result of the study found the value of cost efficiency, optimization of growth in stem height and plant tillers. The resulting cost efficiency is 30.05% compared to the factory method. While the level of optimization of plant growth compared to the factory method, tillering growth increased 8% but the growth of primary stem height was higher by the factory method of 3%.

**Keywords:** Defuzzification, Fuzzification, Irrigation, Soil Fertility.

**QUALITY IMPROVEMENT OF AIRCRAFT MAINTENANCE  
SERVICE: CASE STUDY C-CHECK BOEING 737-800**

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**Abstract**

There are delays on several executions of Aircraft C-Check Maintenance on Boeing 737-800 at a company that provides Maintenance, Repair, and Overhaul (MRO) service in Indonesia. Based on observations and C-Check data of eight Boeing 737-800 aircrafts, Turn Around Time schedule compliance is 69%. Meanwhile, World Class Maintenance Target for Schedule Compliance is 90%. According to that, a new improvement method to reduce unproductive and non value added activity is needed to increase maintenance quality and effectivity. Evaluation on implementation of maintenance scheduling principles is conducted in this research. Worksampling is used to collect data sample and analyse it. This method can show productivity level and identify unproductive activity. So, improvement to increase maintenance effectivity can be done by eliminating the unproductive activity. Based on analysis, PK-003 is happened to be the main object of the study due to the biggest non-value-added percentage that it owns, which is 43%. After further identification, the biggest non-value-added activities are excessive break time, waiting for towing, and coffee break. For waiting for towing issue, analysis is done by Leavitt Model. To improve excessive break time and coffee break, change management and Kotter's 8 Steps to Accelerate Change are used. By assuming those causes is improved maximally, the improvements can reduce the lead time process significantly.

**Keywords:** Worksampling, Wrench Time, Maintenance Scheduling, Change Management.

**THE INFLUENCE OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) DISCLOSURE ON FIRM FINANCIAL PERFORMANCE**

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**Abstract**

This research aims to analyze non-financial factors that affect the companies' financial performance, focusing on the levels of companies' ESG (Environment, Social, Governance) disclosure. Nowadays, Investors not only analyze the financial information but also non-financial, such as ESG performance as a risk measurement. There have been lots of research based on the connection between the firm CSR/ESG disclosure and financial performance. However, these have found a mixed result that warranted further research. We conducted research on companies in the real estate sector since its long-term nature of investment is aligned with long-term ESG and CSR goals. Due to the high concern of disclosing CSR information in developed countries, the data was collected from the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom, and the United States). The dependent variables are ROA, NPM, Stock Price, and P/E. The independent variables are the ESG disclosure score as well as the ESG specific factor (Environmental, Social and Governance). The data was collected over five years (2014-2018) giving 610 observations, using SPSS to run multivariate regressions to test for the correlation between dependent and independent variables. The results indicate that there is a statistically significant positive relationship between ESG disclosure and financial performance.

**Keywords:** CSR, G7, Financial Risk Measurement.

**Paper #110**

**REVISIT INTENTION ANALYSIS ON VISITOR  
MANDALIKA BEACH LOMBOK**

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**Abstract**

One of the factors that influence the development of tourism is the city personality and website destination quality. Every tourism destination must be able to create a positive image of the destination to attract tourist have the intention to come back to the tourism destination. Evaluations conducted related travel experience and overall visitor satisfaction will influence the future behavior in considering the desire to return to the same destination. The purpose of this study to determine the factors that affect revisit intention in Mandalika Beach Lombok. This study uses a quantitative method with purposive sampling as sampling technique. Samples from this research that consumers who've been to Lombok Mandalika Beach at least 1 time.

**Keywords:** Revisit Intention, Website Destination Quality, City Personality, Satisfaction.

## **Paper #111**

# **LINKING PRODUCT, PEOPLE AND PHYSICAL EVIDENCE TO MARINE TOURISM VISIT INTENTION**

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### **Abstract**

This study discusses the issue of intention in tourist visits to marine tourism triggered by product factors, humans and physical evidence. After that, give the results of the analysis related to this factor to the intention of tourists visiting marine tourism places, whether it can increase and maintain interest in tourist visits or even has no effect on tourists' interest in visiting. Visit intention is very important for managers of marine tourism, because it is the key to competition with other marine tourists. The literature review is done through five steps, namely determining urgency, determining keywords, replacing with previous research and the benefits of research. The results of this study provide the fact that product factors, people and physical evidence can be used as a trigger for tourists in marine tourism. Thus, these three factors are important by each marine tourism actor, whis is to excel in the competition related to visit intention. Moreover, in the current global era, the competition in the tourism industri is experiencing very rapid development, in which the development begins in competition to maintain or even increase tourist visits. The tourist visit certainly starts from the sense of intention of tourist to visit marine tourism. Therefore, for every marine tourism actor must be able to implement factors of product, people and physical evidence to attract tourists intention to visit tourist objects that have been developed.

**Keywords: Product, People, Physical Evidence, Visit Intention.**

## **Paper #112**

# **DEVELOPMENT OF ORGANIZATIONAL INFORMATION SECURITY POLICIES INVOLVING ORGANIZATIONAL STRATEGIES AND SWOT ANALYSIS**

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### **Abstract**

The growth of threats to information security every year continues to increase, therefore the organization must have the right strategy in overcoming the problem of information security. One of the organizational strategies implemented is implementing the Information Security Management System (ISMS). Terms that must be fulfilled in implementing the ISMS, namely the existence of an information security policy which as the legal basis for implementing ISMS. In previous studies it was never explained how security policies could be established after the security risk management process was carried out. For this reason, this study tries to give a clearer picture of where a security policy is made by involving organizational strategy factors and SWOT analysis based on pre-existing studies. It should be borne in mind that in the development of information security policies must not be separated from the general strategy of the organization, do not let security policies that are made become a barrier to the running of the organization's strategy. The results of this study are in the form of an information security policy development framework in organizations involving organizational strategies and SWOT analysis as the basis for structuring information security risk strategies that are able to describe more clearly step by step how information security policies are built. Given a clear picture of how information security policies are built, the implementation of an ISMS in organizations will be more real and not only rely on the use of information system security tools.

**Keywords:** ISMS, Security Policy, Strategy, SWOT Analysis.



## **BOAT ROUTING OPTIMIZATION TOOL FOR OIL AND GAS OFFSHORE LOGISTIC OPERATION**

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### **Abstract**

Oil and gas operation is an interesting problem to be solved since it has specific characteristics. Transportation costs is one of significant cost in offshore logistics operations, therefore routing is one of interesting topic. In this paper a vehicle routing problem optimization for offshore logistic operation is introduced. Some offshore production wells will be supplied from one shore base. There are two main things should be distributed by the shore base which are material and worker using some boats. One unique distribution problem is distribution of workers to production wells for checking and maintenance purpose. It is not like common vehicle routing problems where vehicle will return to depot after deliver items to the last point, in this problem there are two options can be chosen. One option is to make boat return to base and the second option is let the boat wait in the last delivery point and return to base by using the opposite delivery route. Two models are built to cover the problem and comparison of the models are shown to get the best solution. The problem is solved using evolutionary algorithm in Solver. The results show interesting results from both methods and second method is preferred to be applied.

**Keywords:** Vehicle routing, Boat, Optimization, Evolutionary algorithm

## **Paper #114**

# **BUILDING SALES PERFORMANCE THROUGH THE USE OF SALES DASHBOARD AS A FORM OF APPLICATION DASHBOARD INFORMATION SYSTEM (DIS) AT DFI LOGISTICS SURABAYA BRANCH**

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### **Abstract**

Sales performance for its core business organizations Export-Import services sector has always been a challenge to do the changes and development in each year. External conditions of competition forcing business organizations to continue to spur their sales activities, one of them with the help of a sales dashboard. Sales dashboard is expected to be a booster of sales performance amid the instability of the external conditions of business which will have an impact on corporate sustainable. Aim - This paper aims to provide a picture of the sales dashboard which has been owned by PT Dewata Freight International (DFI) Logistic in relation to help boost the sales performance of each sales agent who use it. This paper uses a descriptive qualitative research design that emphasizes the perception of the agent PT Dewata Freight International (DFI) Logistic against sales dashboard, which involves sales agent at the main office and branch (branch office). The process of data collection using the questionnaire form questionnaire assistance stuffing open and closed. The process of data analysis using Likert qualitative data analysis to illustrate the extent of the sales dashboard is able to help boost the sales performance of the sales agent PT Dewata Freight International (DFI) Logistic. Not all features are complete and sophisticated will bring a good impact for the company. Selection of its selective program with more is considered as the key to success in applying the sales dashboard. The research result state that feature sales dashboard that emphasizes the aspects of reliability or the program's ability to remain capable and can run / perform at a specific certain level when the program is run on a specific situation anyway, seems to be more emphasis on program sales dashboard PT Dewata Freight International (DFI) Logistic. This research was conducted at PT Dewata Freight International (DFI) Logistic internal to the application dashboard information system which is applied to the sales agent.

**Keywords: Sales Performance, Sales Dashboards, Dashboard Information System.**

## **DETERMINANTS OF INDONESIAN AGRICULTURAL EXPORTS: A GRAVITY MODEL APPROACH**

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### **Abstract**

This paper analyses determinants of agricultural exports and imports from Indonesia, including a set of demand and supply factors capturing effects of income, market size, prices, and variables related to logistics, competitiveness, trade policy, and innovation. A specific focus is on trade creation and diversion effects possibly arising as Indonesia experienced a deep liberalization of markets through the implementation of multiple FTA. A gravity model helps to analyze the determinants of trade and the impacts of the multiple agreements, applied to two categories of agricultural exports: raw goods and food. The dataset comprises 50 countries with data on exports and import from 2007 until 2017. The results find trade creation effects for both categories, with larger effects in exports within agricultural raw goods, and higher creation through imports in food. Indonesia also experiences trade expansion with non-free trade partners suggesting that demand variables (e.g. income, market size, sophistication) are a more important driver of growth rather than agreements. Price factors affect agricultural goods, with food products experience elastic price demand, while raw goods being affected by prices and exchange rate. Gains in competitiveness, logistics performance, and innovation is supporting agricultural exports (imports as well), although Indonesia is behind most of its trade partners. The current implementation of the FTA should be critically evaluated with respect to food products as imports have expanded more rapidly than exports and domestic goods may have experienced pressure from liberalization.

**Keywords:** Agricultural Trade, Gravity Model, Trade creation and trade diversion, GMM

**THE EFFECT OF ORGANIZATIONAL LEARNING,  
ORGANIZATIONAL CULTURE AND INNOVATION IN  
PROJECT PERFORMANCE OF PT.PLN (PERSERO)**

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**Abstract**

Business challenges involving external and internal problems occur within the attempts made by PT. PLN (Persero) in providing electricity services and in completing the 35.000 MW electricity project. External problems are related to Holder of Electricity Service Business Permit or Pemegang Usaha Penyediaan Tenaga Listrik (PIUPTL) that has opened this business as a non-monopolistic business. Meanwhile, internal problems include inadequate number of employees and imbalance proportion of employees who are retiring shortly. Those issues demand the company to guarantee that all organizational knowledge is well- documented before the retirement, regeneration and employee placement. In addition, the competence of employees and structural staffs should be improved. These attempts have to be administered to utilize the knowledge owned by the company to drive new innovations in order to improve the services given to customers and to improve the corporate performance. The building of new power plants and transmissions should be well-anticipated by PT. PLN (Persero) Unit Induk Distribusi that hold the responsibility related to the quality of electricity distribution. In order to run those roles, it is necessary to determine clear target of Action Plan and Company Budget for new projects, infrastructure maintenance for electricity distribution to avoid energy not sales. The success of company projects is measured by several parameters including time, quality and costs. The success of those project can be achieved through good innovation, organizational culture and organizational learning that have been empirically validated in prior research. However, research on the simultaneous influence of those three variables on the success of a project especially on the utility aspect has not yet been conducted. This research was conducted to investigate variables that were assumed to have significant influence on project performance including organization learning, organizational culture and innovation. This research involved 75 unit managers of Unit Pelaksana Pelayanan Pelanggan in all Unit Induk Distribusi all over Indonesia. In this research, the Structural Equation Modelling (SEM) was used in data validation and data analysis. The results of this research showed that Organizational Culture had a significant and positive influence on Project Performance. Meanwhile, Organizational Learning was found to have a positive and significant influence on Innovation. Those findings are expected to provide valuable insights for the company management in designing work programs to improve Organizational Culture and Organizational Learning.

**Keywords: Project Performance, Organization Learning, Innovation, Organizational Culture, Structural Equation Modeling (SEM)-PLS.**

**BENCHMARKING PERFORMANCE OF SUGARCANE  
PRODUCTION FIRMS IN INDONESIA: A DATA  
ENVELOPMENT ANALYSIS APPROACH**

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**Abstract**

Declining trends in sugarcane manufacturing industry in Indonesia has become a government's concern since Indonesia has used to be the largest sugar exporter in the world. This article aims to develop an efficiency-based performance measurement of sugarcane production firms of a state-own sugar manufacturing enterprise in Indonesia. The efficiency-based performance scores are calculated based on multiple dimensions of variables (5 inputs and 2 outputs). The inputs are sugarcane farming area, raw materials (sugarcane volume), production capacity, number of labors, energy consumptions production, whilst the outputs are production outputs and cost of goods manufacture. The Data Envelopment Analysis (DEA) approach is used to benchmark the performance of 13 sugarcane production firms under PT Perkebunan Nusantara XI (PTPN X). The result shows the fluctuation in the efficiency scores of the firms under study within 5 production-years observation. The DEA model highlights variables that become the determinants of sugarcane manufacturing performance. We provide a recommendation of how an improvement endeavor should be set up to deal with the inefficiency issues.

**Keywords: Benchmarking, Performance Measurement, Data Envelopment Analysis, Sugarcane Manufacturing.**

## **COST ANALYSIS FOR IOT BASED CONDITION BASED MAINTENANCE TO INCREASE PRODUCTIVITY**

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### **Abstract**

Condition Based Maintenance (CBM) is one of maintenance method that believed to be the most effective at reduction of cost and number of activities than the other maintenance methods. Degradation monitoring condition is an important things in order to get effective CBM system. The rapid development in information and communication has lead our industrial phase to industry 4.0, where are lot of smart objects can be connected and integrated in one network system, which is called Internet of Things (IoT). IoT facilitates monitoring and controlling to an object, and help maintenance system to monitor, record, and analyze the degradation of the object. Furthermore, with real time monitoring, system could detect and make decision when is maintenance activity should be done with consideration in cost. This research focused in the issue of integration of many smart objects to support CBM activities in cost reduction and IoT decision making with cost minimization as criteria. Cost analysis has been done using Activity Based Costing (ABC) and mathematical model has been constructed for decision making criteria which will be tested with numerical test using the data that gathered from company which applied IoT system. There are three condition which are tested: system without IoT implementation, current system with IoT implementation (auto shutdown when machine stroke reaches 300), and IoT system that consider the degradation condition to shut down. The result shows that IoT based CBM system that consider degradation level will incur optimal number of activities which resulting in fewer cost that the other systems. With fewer activity maintenance than auto- shutdown at 300 strokes, shows that the productivity increase without any delay due to maintenance.

**Keywords: Maintenance, IoT, Cost Analysis, Decision.**

## **REDUCTION DEFECT IN SEWING WORK STATIONS BY INTEGRATING OTSM-TRIZ AND FMEA**

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### **Abstract**

The problems that occur in PT Sepatu are still many defect products. To improve the quality and reduce the number of defects is to make improvements to the flow of the process by using the DMAI stages. In the Define stage, the determination of the selected critical defect is needle fracture, jump stitch, loose stitch, Upper symmetry, and Upper wrinkling. In the Measure phase, DPMO measurements were carried out at 4028 units and a sigma level of 4.1. In the Analyze stage, analyze complex problems that cause defects in the sewing department using Network of Problem (NoP). The output of Nop in the form of partial solution (Ps) and sub problem (Pb) becomes the FMEA input, which will then be analyzed and measured in the value of the RPN. The potential Failure Mode (s) with the highest RPN score in the FMEA table will be a priority and become the initial input to the OTSM-TRIZ stage procedure. In the Improve phase using 40 selected inventory principles the repair solution performs cleaning and checking the position of the rotary-yarn tip at the start of each shift, gives a sign sticker on the tension ring, makes a tool to check bent needles, conducts employee training and employee skill mapping. From the results of the implementation of recommendations, improvements to the estimated reduction defect of 705 pairs of shoes with sigma 4.3 level.

**Keywords:** FMEA, Quality, NoP, OTSM-TRIZ, Six Sigma.

## **EVALUATION SETUP PROCESS ONROTOGRAVURE PRINTING MACHINE IN ODER TO REDUCE SETUP TIME**

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### **Abstract**

The company carries out various ways to be able to meet customer demand quickly, one of which is to speed up the production process. In the printing process, the company encountered a problem, one of which was the high downtime caused by the setup process. The standard setup time determined by the company is 150 minutes but in fact the time required is 216.33 minutes. This shows that there are inefficient methods applied by the company. In this study, we will evaluate the work method to get errors so that the setup duration becomes high. This study will draw on the Modified Cooper Harper Scale and Single Minute Exchange of Die (MCH-SMED) method to balance the workload between operators so that the setup time can be reduced. The MCH method is used to analyze the mental and physical workload on an operator based on a tree decision scale so that it can balance the workload between operators. SMED is used to identify on-line and off-line operations in the setup process. This study aims to produce a comparison of the standard setup times that have been set by the company and after evaluating the integration process of printing machine setup (MCH-SMED). The results of this study are to obtain a new sequence of operations that can reduce the duration of setup time to 147.19 minutes or be able to reduce the setup time by 68%.

**Keywords: Setup Time, SMED, MCH, Productivity.**



**ANALYSIS OF THE EFFECT OF TOTAL QUALITY  
MANAGEMENT, TECHNOLOGY, AND KNOWLEDGE  
MANAGEMENT ON PRODUCT QUALITY IN INDONESIA  
CONSTRUCTION INDUSTRY**

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**Abstract**

The construction industry is being faced with rapid development with a high level of competition. In the current global competition, construction companies must be able to compete in order to meet customer demand and satisfaction. In response to the competition, construction companies must efforts to develop products and services. In the development process knowledge management has a role in improving quality. In addition, the use of technology and the implementation of total quality management through knowledge management can improve quality. Quality is the main factor in order to develop products and services to encourage sustainable achievement. This research aims to analyze the factors that influence technology, implementation of total quality management, and knowledge management on the product construction quality in Indonesia. The data used in this research are primary data. The factor identification process is carried out by distributing questionnaires to contractors which involved in the construction industry in Indonesia as respondents. Furthermore, the data obtained were analyzed using the relative importance index (RII) to obtain a sequence of factors that influence. Then the influencing factors analyzed using structural equation modelling (SEM) with SPSS statistical software. This research expected to resulting models of factors that influence technology, implementation of total quality management, and knowledge management on product construction quality in Indonesia.

**Keywords:** Technology, Implementation of Total Quality Management, Knowledge Management, Quality, Structural Equation Modelling (SEM).

## **Paper #122**

# **ANALYSIS OF FACTORS CAUSING REJECTION OF MATERIAL SELECTION BASED ON COUNTRY OF ORIGIN (COO)**

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### **Abstract**

There are 19 power generation industries in East Java with a total capacity of 8000MW with various types of generation processes that work every day. To support this process they need good quality materials or equipment. Many of these equipment are produced overseas. However, the issue that is currently developing regarding the selection of materials is the Country of Origin (COO). COO is defined as the country where the last product is subject to an economic, commercial or technically significant manufacturing or assembly process. Until now, the Country of Origin has had a profound effect on material selection in tenders at the generation companies in East Java. In this study will analyze the factors that influence the selection of materials based on the Country of Origin (COO) by conducting a survey of those who have authority over the purchase of goods in the Power Generation Industry in East Java. The data obtained will be analyzed using the Structural Equation Model (SEM) - Partial Least Square (PLS) method, from the analysis results obtained that the factors causing rejection of material selection based on the Country of Origin in the Power Generation Industry in East Java is brand and product judgement.

**Keywords:** Power Generation, Country of Origin, Structural Equation Model (SEM)- Partial Least Square (PLS).

**Paper #123**

**ANALYSIS IMPLEMENTATION OF THE PROJECT  
MANAGEMENT TOOLS AND TECHNIQUES PT. XYZ IN  
INDONESIA**

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**Abstract**

The level of business competition in the organization is now increasingly high. This causes economic factors and the presence of new transitions. Many organizations do not have the ability to overcome these problems (Ferreiraa, 2013). Management of innovations and improvements incurred by time, cost and quality is referred to as project management. Many methods, techniques, and tools are developed, which are equipped with all management projects from start to finish (White and Fortune, 2002). If the application of management is applied correctly, it increases efficiency and improvement (Harold, 2004). When the project used the right tools and techniques it will produce success (Milosevic 2004). In this study, the method of project management is carried out by implementing the project management system and effectiveness in supporting projects that run in the organization of PT. XYZ. PT XYZ is multinational company in textile industry. This is done by interview and distributing questionnaires to stakeholders regarding the projects carried out during 2018. The analytical method used is the results of statistic descriptive and inferensia test for non parametric contextual differences. In this research, it is expected that PT XYZ will get suggestion to use tools and techniques in project management that are useful for the effectiveness of the project

**Keywords: Project Management, Project Management Tools and Techniques, Project Management Implementation.**

**ANALYSIS OF THE EFFECT OF SERVICE QUALITY ON  
SATISFACTION OF VISITORS OF BLITAR AGROTOURISM  
USING SERVQUAL**

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**Abstract**

Blitar kakao agro tourism object is a combination of tourism and cocoa fruit plantations which are combined into agro-educational tourism to become a destination that is not only interesting to be sponsored but also provides educational values for useful visitors with cocoa fruit. In addition, tourism managers must also provide satisfaction to visitors, one of which is by providing the best service. Therefore, this research was conducted with the aim to determine the quality of service to visitor satisfaction of Blitar kakao agrotourism. Service quality is given tangible, responsiveness, assurance, empathy, and reliability obtained by the results of multiple regression analysis  $Kp = 2,476 + 0,005T + 0,002Rs + 0,741A + 0,401E + 0,401E + 0,468RI$ . The dimensions of service quality that include tangible, responsiveness, assurance, empathy, and reliability simultaneously can contribute to visitor satisfaction by 69.9 percent. From the partial test the results of the tangibles variables obtained influence visitor satisfaction but the effect will be significant if the service quality attributes on T4, T6, T8, and T9 are improved. This also happens in the responsiveness dimension that the dimensions of service quality show a positive response to visitor satisfaction Blitar kakao agrotourism but needs to be improved so that the effect becomes more significant. While the assurance dimension shows the dimensions of this quality that are shown to be positive and have significant dimensions to visitor satisfaction of Blitar kakao agro tourism. The empathy dimension partially contributes positively and significantly to visitor satisfaction. The reliability dimension has a significant positive effect on the variable visitor satisfaction of Blitar kakao agro tourism.

**Keywords:** Agro Tourism, Service Quality, Visitor Satisfaction, ServQual.

**GREEN SUPPLY CHAIN MANAGEMENT CONSIDERATION  
USING ANALYTICAL NETWORK PROCESS (ANP) METHOD  
IN SUPPLIER SELECTION IN PT XYZ**

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**Abstract**

Green Supply Chain Management (GSCM) is an effort to incorporate environmental issues in the context of supply chain management. The concept of Green Supply Chain Management is to integrate supply chain management with the idea of saving the environment, which includes the process of designing and developing products, supplier selection and procurement processes, manufacturing processes with clean technology, distribution of final products to consumers, and recycling (recycle) at the end of the product life. This study aims to determine how much influence of top management has on the application of the green supply chain. The sample in this study was top management who worked at PT XYZ. Data collection techniques using a questionnaire. This research was conducted by using the Analytical Network Process (ANP) method, one method of decision making with many related criteria. The criteria for selecting suppliers are financial, environmental, quality, service (technical). Based on the identification of criteria / subcriteria and their relevance, a model of the Analytical Network Process linkage was built. After that all the criteria along with the sub-criteria will be compared with each other. These comparison values will be processed and obtained values for each alternative supplier in the end.

**Keywords:** Green Supply Chain Management, Supplier, Questionnaire, Analytic Network Process.

## **ECONOMIC ANALYSIS OF THE USE OF BIOETHANOL VS. BIODIESEL FOR REPLACEMENT OF FOSSIL FUEL**

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### **Abstract**

Several countries in the world have started to increase the production and consumption of biofuels or biofuels as a substitute for fossil fuels. In addition, biofuels have lower emissions than fossil fuel. Indonesia is one of the countries that is developing biofuels, especially in the transportation sector, bioethanol and biodiesel. Bioethanol in Indonesia uses sugar cane as a raw material with a policy of utilizing bioethanol mixtures namely E2 in the PSO and E5 sectors in the non PSO sector. While biodiesel in Indonesia uses palm oil raw materials with the policy of utilizing biodiesel mixtures, namely B20 for the PSO and non PSO sectors. The development and utilization of bioethanol and biodiesel in Indonesia has gaps, especially in the economic aspect. This causes a difference in the mix of new renewable energy between bioethanol and biodiesel. The purpose of this present study is to understand the economic analysis between bioethanol and biodiesel. Literature review is conducted to explore variables that is being considered as preference variable on the economic aspects of the development and use of biofuels, and the economic impacts. In this present study review in several literature that were published ranged from 2006 to 2019. There are four variables based on the study of literature, including production costs, market prices, economic impacts, and socioeconomic impacts. The method used in this study is preference measurement to measure preferences between the use of bioethanol or biodiesel. As the result, a research map is proposed for the future research direction.

**Keywords: Biofuel, Economic Analysis, Preference Measurement, Indonesia.**

## **BENEFITS IDENTIFICATION OF DREDGING PROJECT ON SURABAYA EAST ACCESS CHANNEL**

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### **Abstract**

The Surabaya East Access Channel is the link between the Tanjung Perak Port and other ports in eastern of East Java. Indonesia Government plans to dredge the access channel into a minimum depth of -5 m LWS. Because of the limited budget, the Government needs to determine which projects provide benefits for implementation priorities. This research aims to identify the benefits that can be generated if the Surabaya East Access Channel dredging project is carried out. This research uses a survey method to the respondents who are users of Surabaya East Access Channel. Based on the result of survey the concept of project benefit is decreasing ship turn round time, improved port performance, decreasing logistics costs, increased ship fuel efficiency, increased port operator revenue, increased non-tax state revenues, increased ship call, increased flow of goods, increased number of jobs in port, increasing regional shipping connectivity, decrease sedimentation in the access channel, increased income of sea transport companies, and increased ship occupancy.

**Keywords:** Access Channel, Benefits, Dredging Project, Transportation.

**ANALYSIS AND MITIGATION OF STRATEGIC RISK  
BUSINESS PROCESS CONSIDERING RELATIONSHIP  
BETWEEN RISK CASE STUDY IN ELECTRICITY  
GENERATION COMPANIES**

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**Abstract**

Risk analysis is an important tools for ensuring alignment between the strategies that have been set and the programs that will be carried out in the next 5 years in the company's strategic planning. Given the importance of this, a comprehensive risk analysis of the risks that may arise in a strategic plan is necessary. Different strategic risks may be correlated between one another, and one strategic risk can strengthen or reduce the effects of other strategic risks. How this also influences management in recognizing and responding to the interdependence between strategic risks is an interesting thing to study.

In this study an analysis of the linkages between the causes of strategic risks of business processes which refers to the balance scorecard perspective. Where at the initial stage prioritization of 87 risk causes identified at the outset using the House of Risk 1 method and the Pareto principle so that 17 dominant risk causes were obtained, which were then analyzed using the ISM method and then weighted using the analytic network process (ANP) method to obtain the new ARP value causes risk that has accommodated the relationship between the causes of risk.

To make it easier for companies to prioritize the handling of the 17 risk-causing agents, a mitigation analysis is then carried out using the House of Risk phase 2 (HOR2) by considering the ranking of existing Effectiveness to Difficulty so that 8 strategies for handling agents that cause risk are considered effective as follows: Optimizing preventive / predictive maintenance control processes using NFC-based web-based technology, LCCA uses CMS-based RAMS modeling, conducts knowledge loss risk assessment, develops enterprise architects, makes SLA between fields, implements long term service agreement and multi-year contracts, utilizes RLA web , making maintenance work packages for K3 and the environment equipment

**Keywords:** Analytic Network Process, Balance Scorecard, House of Risk, Interpretive Structural Modeling, Strategic Risk.



**UNDERSTANDING THE PALM OIL UTILIZATION  
PREFERENCE: A LITERATURE REVIEW AND PREFERENCE  
MEASUREMENT**

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**Abstract**

Energy supply security has become the world's issue this past decades. World's energy demand keep growing yet supply remains stable. Numerous renewable energy sources are developed to fulfil this energy supply gap. This issue is also being a concern in Indonesia. Palm oil is considered as one of the renewable energy because of its production flexibility. Palm oil could be processed into cooking oil and fuel energy such as biodiesel. Objective of this present study is to understand the palm oil utilization preference either as the cooking oil or biodiesel. Literature review is conducted to explore variables that is being considered as preference variable. This present study conducted review in several literature that were published ranged from 2009 to 2018. Three variables were considered as a result of literature review. The first variable is sustainability aspect which represent life cycle of the processed product. The second variable is policy which could influence the industry's stakeholder to conduct a utilization decision. The last variable is emission that is being produced by the processed product. This present study also conducted preference measurement in order to measure the preference of palm oil utilization either as he cooking oil or biodiesel. As the result, a research map is proposed for the future research direction.

**Keywords: Palm Oil, Cooking Oil, Biodiesel, Preference Measurement.**

# **STOCK PRICE ESTIMATION USING KALMAN FILTER AND UNSCENTED KALMAN FILTER METHODS**

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## **Abstract**

A stocks market is established to bridge sellers and buyers to make share transaction. Securities often traded on the stock market are stocks. Stocks are securities as proof of ownership of a person or legal entity in a company. In choosing safe and appropriate investments in stocks, investors need an instrument to assess the price of stocks to purchase or the ability of these to provide dividends in the future, so they can optimize profits. Two estimation methods considered the most objective in assessing investment feasibility are the Kalman Filter method and the Unscented Kalman Filter method. The Unscented Kalman Filter method is a development of the Kalman Filter method. The objective of this paper is to analyze the comparison of stock price estimates by the Kalman Filter (KF) and Unscented Kalman Filter (UKF) methods. The simulation results showed that both methods had a high accuracy levels of more than 98%. In conclusion, both of the methods can be used to estimate stock prices.

**Keywords:** Stock price, Estimation, Kalman Filter, Unscented Kalman Filter

## **DESIGN OF ENTERPRISE APPLICATION INTEGRATION (EAI) IN E-PLANNING AND E-BUDGETING SYSTEMS**

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### **Abstract**

Information system integration is needed to support business processes in order to achieve organizational goals. E-Planning and E-Budgeting are systems that are managed by the Department of Communication and Information Technology in Pasuruan Regency. E-Planning is taking part in planning activities, while E-Budgeting is taking part in assigning activities budget. Both systems are working separately that may cause data to exist only in one of those systems. Lacks of data in another system can lead to activity without fund and vice versa. Of course, this problem can disrupt the annual budget plan of the Department of Communication and Information of Pasuruan Regency. This problem can be solved using Enterprise Application Integration (EAI). EAI allows the exchange of data and business processes from several different applications that are interconnected. EAI have 12-steps program that come from best practices for system integration. Despite requiring full steps, this research will only take the first seven steps and then proceed with making UML diagrams. The result of this research are UML diagrams such as use case diagram, class diagram, sequence diagram, and object-oriented data model. Those designs will be validated through user debriefing and user validation. The final design will be used as references to build a system to integrate E-Planning and E-Budgeting systems.

**Keywords:** System Integration, E-Planning, E-Budgeting, EAI.

## **OPTIMAL PAIRING SELECTION FROM FLIGHT SCHEDULE USING PENALIZED PARTICLE SWARM OPTIMIZATION**

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### **Abstract**

Indonesian is a large archipelago country with large population so that the demands of flight service are very high. Because the demands of flight service, flight industry should minimize operational cost such as crew cost. Crew cost depends on pairings from flight schedule. Optimization model of this problem is selecting optimal pairings covering all flight numbers. In this research, optimal pairing selection will be applied by heuristic method like Particle Swarm Optimization (PSO) with penalty. PSO is optimization method inspired from the flock of fish or bird in searching food source. PSO can be applied on constrained optimization. In update particle position, in order that satisfying constraints, particle will be given penalty if the constraint isn't satisfied. Simulations are applied by generating the set of pairings and selection using PSO with penalty. Simulation result shows PSO method with penalty can select optimal pairing in approaching.

**Keywords: Optimal Pairing, Greedy Algorithm, Knapsack Problem, Particle Swarm Optimization.**

**THE EFFECT OF INTEGRATED REPORTING KNOWLEDGE,  
PERCEIVED USEFULNESS AND SOCIAL NORMS ON  
INTENTION TO PREPARE**

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**Abstract**

The aim of this study is to investigate the Integrated Reporting (IR) knowledge on Intention to prepare, with social norms as a moderating variable and perceived usefulness as mediating variable. This study used survey questionnaire in collecting data from SMEs Owners. The questionnaires consist of two essential parts. The first section looks for demographic information from respondents such as gender, age, education, type of business. The second part of this survey is designed to investigate variables examined in this study. One hundred twenty eight SME owners participated in this study. Research was conducted in four cities located in east java province. Two criteria are used to choose SME owners: (1) they have operated their business for at least five years, (2) have made financial reports regularly for at least the last five years. Overall, the results indicated that (1) IR Knowledge does not affects the intention to prepare IR, (2) IR knowledge significantly affects Perceived usefulness Perceived usefulness; (3) Perceived usefulness significantly affects the intention to prepare IR, (4) Perceived usefulness mediate the relationship between IR knowledge ad intention to prepare, (5) Social norms moderate relationship between IR knowledge and intention to prepare IR. This research contributes to the IR literature. Furthermore, the findings of this study are consistent with Technology acceptance model (TAM). Practical implications of this study emphasizes the importance of IR knowledge to enhance the intention to prepare IR.

**Keywords:** Integrated Reporting, Knowledge, Social Norms, Perceived Usefulness, Intention.

**TOURISM 4.0: IS E-SERVICE QUALITY ENOUGH TO  
FOSTER TRAVELERS REPURCHASE INTENTION IN  
ONLINE TRAVEL AGENCIES (OTAS)?**

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**Abstract**

Internet of Things (IOT) on the service industries, such as tourism industry run seamlessly though slower than other industries. Tourism under Industry 4.0 (or transform into Tourism Industry 4.0) will have a huge impact as millions travelers targeted by this breakthrough each year. The purpose of this present study is to examine the antecedents (e-service quality and travelers' perceived value) and the consequences (travelers' trust and travelers' commitment) travelers' satisfaction and its role in travelers' repurchase intention. Testing the hypotheses involved a sample of 221 Indonesian travelers as users of Online Travel Agencies (OTAs). The data was collected through a self-administered questionnaire and analyzed with Partial Least Square (PLS) 3 software. The results suggested travelers' satisfaction is significantly affected not only by e-service quality but also by travelers' perceived value as consequence of e-service quality. Additionally, study results revealed that travelers' satisfaction and travelers' commitment have a positive effect on travelers' repurchase intention. Surprisingly, this study found that travelers' trust as a predictor of travelers' satisfaction and travelers' commitment can not predict travelers repurchase intention in OTAs. This study offers some managerial insights to manage e-service quality and to maintain travelers' satisfaction in creating travelers repurchase intentions so OTAs can gain competitive advantage in Tourism Industry 4.0.

**Keywords:** E-Service Quality, Travelers' Perceived Value, Travelers' Satisfaction, Travelers' Trust, Travelers' Commitment, Travelers' Repurchase Intention.

**EFFECTIVENESS ANALYSIS OF THE APPLICATION OF THE  
FAILURE MODE AND EFFECT ANALYSIS METHOD WITH  
FAILURE DEFENSE TASK FOR RELIABILITY MANAGEMENT  
IMPROVEMENT IN SEA WATER DESALINATION SYSTEM OF  
PLTU PAITON (1 x 660 MW)**

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**Abstract**

PT PJB UBJOM Paiton Baru as the O & M Service Manager of PLTU Paiton Baru 1 x 660 MW has approved the concepts and policies of PT PJB on the Reliability Management Program using the FMEA method along with the Failure Defense Task (FDT). However, the FMEA method that has been implemented not yet effective. First, because first has not been aligned with existing reference books and international journals where there is no process of determining the value of Severity (S), Occurrence(O), and Detection (D), and calculation of Risk Priority Number (RPN), and the process of decreasing the risk value by using the right Failure Defense Task. Second, based on the evaluation of the results of the site visit at UBJOM Paiton Baru for Main Equipment and Sub Equipment for Seawater Desalination Systems, among 21 Sub-Systems in the Seawater Desalination System using Reverse Osmosis Technology, only 7 Sub-Systems have conducted The FMEA and FDT Workshop or 33.3% of the total Sub-Systems, and 14 Sub-Systems have not conducted FMEA and FDT Workshops or 66.6% of the total Sub-Systems. Third, based on further research on the results of the FMEA and FDT Workshop at UBJOM Paiton Baru in 5 Sub-systems namely Mechanical Accelerated Clarifier, Air Scouring Filter, Self Cleaning Filter, Ultra Filtration Device, Energy Recovery Device, that for determining Failure Mode sourced from Manual Book , PM Base, Existing Unit, and Browsing the Internet, so there is no data in identifying Failure Mode. Then FDT for interval 1Y (Annually) is an Overhaul with several types of inspections that have not been implemented / executed for Mechanical, Electrical, Control & Instrumentation Skills which include Assembly and Disassembly, Visual Inspection, repair or replacement if needed according to the results of Visual Inspection, testing, I / O Check , and calibration, so that FDT with Frequency 1Y (Annually) has not been effective. Meanwhile, based on the results of the Workshop on Failure Mode and Effect Analysis (FMEA) and FDT which has been aligned with reference books and international journals, by calculating the Risk Priority Number (RPN) on Failure Mode - Failure Mode identified and assessed Severity , Occurrence and Detection Levels for 6 Sub Systems, 14 Failure Modes have been mapped with risk categories of Major Risk, 31 Failure Modes with risk categories of Moderate Risk and 2 Failure Mode with risk categories of Minor Risk according to Ranking based on Risk Priority Number. From 41 Failure Modes that have been mapped risk categories, have been submitted for approval Proposed Maintenance Strategy as an effort in recalculating the value of Risk Priority Number (RPN), based on the results of Review and Evaluation of FMEA and Existing FDT Workshop Data Results and Analysis of Equipment Condition.

**Keywords: FMEA, FDT, Severity(S), Occurrence(O), Detection(D), RPN, Failure Mode Sub System, Risk Category, Proposed Maintenance Strategy**

**Paper #138**

**THE EFFECT OF JOB STRESS ON TURNOVER INTENTION  
WITH ORGANIZATIONAL COMMITMENT AS  
INTERVENING VARIABLES AT COUNTER-EMPLOYEES  
AND PRODUCTION OF OXXO CARE CLEANERS IN  
KERTAJAYA SURABAYA BRANCH**

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**Abstract**

Technological developments can change the culture of society, both in terms of consumption behavior and in the business world. The sophistication of technology raises a variety of business opportunities, from activities that use certain expertise and minimal expertise that must be done in everyday life. The development of communication technology and the technology of various equipment has made someone tend to live in 'practicality'. Most of the upper middle class social society, preferring a variety of routine activities using the services of others, because the disadvantage has taken a lot of time. Likewise the case with students who do not have much time to do housework especially in terms of washing clothes. From these facts, it is not surprising that at this time the laundry business attracted many business players and began to mushroom, especially in the campus and housing areas. The number of requests for users of laundry services can directly increase the workload on employees who often experience stress in work. This study aims to determine the effect of work stress towards turnover intention with organizational commitment as an intervening variable to counter and production employees of Oxxo Care Cleaners in Kertajaya Surabaya Branch. The population in this study were composed of 42 employees from counter and production department. The sampling method used in this study is saturated sampling where the entire population was sampled.

**Keywords:** Job Stress, Organizational Commitment, Turnover Intention, Employee.



**ENTREPRENEURIAL MARKET ORIENTATION AND  
MARKETING PERFORMANCE: AN EVIDENCE FROM  
MALANG TEMPE CHIPS INDUSTRY**

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**Abstract**

This study aims to test the effect of entrepreneurial market orientation (EMO) as the development of entrepreneurial orientation concept. Particularly, this study tested the dimensions of EMO name innovation, customer orientation, market orientation and entrepreneurial orientation on marketing performance. To answer the proposed research objectives, this study used multiple regression analysis. Self-administered questionnaires were distributed into one hundred respondents while only 67 questionnaires collected. The results of multiple regression showed innovation has a positive significant effect on marketing performance. Similar to innovation, this study indicated that customer orientation has a positive significant effect on marketing performance. As proposed in the hypothesis, this study found that market orientation positively affected marketing orientation. Entrepreneurial orientation as the dimension of EMO was shown to have a significant effect on marketing performance. After the completion of this study, both theoretical and practical contribution are provided.

**Keywords: Innovation, Customer Orientation, Market Orientation, Entrepreneurial Orientation.**

## **WHAT MUST BE BUILT BY THE UNIVERSITY TO PRODUCE YOUNG ENTREPRENEURS?**

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### **Abstract**

The increasing number of start-up business in Indonesia illustrates the rising of interest of the younger generation in becoming entrepreneurs. However, business sustainability has not been in line with the euphoria. To reduce the risk of failure, entrepreneurial knowledge and abilities must be strengthened so that new businesses must be built by educated entrepreneurs. Entrepreneurship education in universities is expected to be a tool to intensify the number of educated entrepreneurs. Many Indonesia universities offer entrepreneurship study programs but still need to know the extent of the effectiveness of the learning process and what factors have an impact on increasing student intention to become entrepreneur. Literature studies were employed in this research. Conclusions were obtained from 30 literatures and previous research. Two main elements were summarized, namely: methods of entrepreneurship education and learning orientation of students. Educational methods consist of five dimensions: curriculum, pedagogy, teaching methods, educator's competencies, and university support systems. While the learning orientation consists of five dimensions: students 'critical thinking, students 'shared vision, students' interest, students 'commitment to learning and knowledge sharing. These variables need to be empirically tested in future studies.

**Keywords:** Entrepreneurship Education, Learning Orientation, Intention, Entrepreneur, University.

## **INDONESIA VS CHINA TRADE BALANCE: WHY IS IT GETTING A DEFICIT?**

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### **Abstract**

Indonesia's international trade performance has experienced the largest deficit since independence. Economic data shows that the biggest contributor to the deficit was imports from China. For this reason, an analysis of the performance of Indonesia's bilateral trade balance with China is needed. Given that China is an important partner for Indonesia but continues to experience a trade deficit. This study analyzes the relationship of Exchange Rate factors, Indonesian GDP, Domestic Consumption, Indonesian Population, and Foreign Direct Investment towards the Indonesian Trade Balance with China in the period 1989-2018. The VECM method is used to measure and the result is GDP, FDI and the exchange rate has a positive effect on the trade balance while the level of domestic consumption and the population have a negative influence. Based on the results of the analysis, recommendations can be given, 1. Government policies to improve the performance of Indonesia's trade balance with China should not be focused on exchange rate policies and foreign direct investment flows because they have little effect on domestic consumption and real GDP in Indonesia, must be considered for other factors that support competitiveness such as improving production quality, product socialization in the country and the creation of a more conducive business climate. 2. The government should also improve the industrial structure because Indonesia still relies heavily on imported raw materials (and also capital goods). Lastly, 3. The increase in human resources is mandatory step to be more productive than consumptive.

**Keywords:** Exchange rate, GDP, Domestic Consumption, Population, FDI, trade balance, Indonesia, China.

**IMPROVING BRAND LOYALTY THROUGH BRAND  
EXPERIENCE AND BRAND TRUST OF E-COMMERCE IN  
INDONESIA**

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**Abstract**

Some researchers stated that the world enters the experience economy era. Thus, it is important to consider customers experience as a basis in all aspects of the business, including the brand. In a disruptive and competitive market place, maintaining loyal customers is a critical issue faced by many companies. Another crucial problem is customer brand trust since it could make or break a business. This study attempts to investigate the influence of brand experience on brand trust and brand loyalty in the context of e-commerce in Indonesia. This research measures the effect of six dimensions of brand experience that are behavioral, usability, sensory, affective, cognitive, and relational through an empirical study of Traveloka as one of online travel website. In all, 150 responses were collected using both offline and online survey methods. Variance-based structural equation model techniques were performed to test the measurement and structural models using SmartPLS 3.0 statistical software. The research demonstrates the mediating role of brand trust on the relationship of brand experience and brand loyalty, which deepens the understanding of the processes in shaping customer's brand loyalty. The implication of this study is e-commerce brand managers should design differentiated strategies by creating and deliver unique and memorable brand experiences to enhance customer's brand trust and brand loyalty.

**Keywords: E-Commerce, Brand Experience, Brand Trust, Brand Loyalty.**

**FINANCIAL INCLUSION THROUGH DIGITAL FINANCIAL SERVICE: THE EYES OF AGENTS AS MEDIUM DIGITAL FINANCIAL SERVICE PROVIDER**

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**Abstract**

Financial inclusion in Indonesia is largely carried out through program of Branchless Financial Services in the Framework of financial Inclusion (Laku Pandai). The success of financial inclusion activities is largely determined by the existence of financial service quality of Banks as a financial service provider supported by local development agents as a medium of financial service provider. Therefore, this study aims to explain the agents' perceptions on services quality of Bank as medium Financial service provider of Laku Pandai program. Case study was conducted at local development agent of Bank Negara Indonesia46 (BNI46) that is one of main organizer of digital financial service at the local level in Indonesia. This study showed that program of Laku Pandai had positive perception on customer value. The program was perceived to have functional value, emotional value, and social value on local socio-economic development. Moreover, this study showed that there was positive perception on main components of service quality including higher responsiveness, trusted, ease of used, assurance, speed and accuracy, good appeal, good accessibility, good fulfillment. Nevertheless, there are still negative perception on functional value and social value on the implementation of Laku Pandai Program. This study concluded that although the Laku Pandai program has positive perception, Bank, as a medium digital financial service should review the effectiveness of service quality for increasing the functional and social value of Laku Pandai program.

**Keywords: – Financial Inclusion, Digital Financial Service, Laku Pandai, customer value**

**COPE WITH THE TURBULENCE ENVIRONMENT:  
THE IMPACT OF ENTREPRENEURIAL INTENSITY IN  
IMPROVING INNOVATION ACTIVITIES**

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**Abstract**

In a world of globalization, every business organization is forced to face a fierce competition. The dynamic changes of external factors such as market demand and technological advancement make business organization to be more innovative. This study aims to investigate the antecedents of business organizations' innovation activities. Entrepreneurial Intensity is integrated in the model together with the external environmental factors and strategic flexibility. One hundred and seventy eight respondents participated in the study were recruited by using purposive sampling technique. The data were analyzed by using Structural Equation Modelling through two steps of analysis: Confirmatory Factor Analysis (CFA) and hypothesis testing. The original CFA found that the model is unfit, thus the modification of the model was executed, and resulted in an adequately fit model. The results show that strategic flexibility is significantly affected by competitive intensity and technological turbulence. Furthermore, market turbulence found to be a significant antecedent of entrepreneurial intensity. This results means that external environment can enforce business organization to be more flexible in designing and applying their strategy as well as boost the entrepreneurial intensity of the managers. Regarding the innovation process and activities, strategic flexibility and entrepreneurial intensity proven to be the constructs that can be boost firms' innovation design, process, and activities. The conclusion and direction for future research are provided in the paper.

**Keywords:** Technological turbulence, Market turbulence, Strategic flexibility, Entrepreneurial intensity, Innovation

**MARKET VALUE ANALYSIS OF PUBLIC LISTED  
COMPANIES IN INDONESIA**

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**Abstract**

The purpose of this study in to analyze factors that influence market value of public listed companies in Indonesia. The independent variables are return on equity (ROE), price earning ratio (PER), debt to equity ratio (DER), and dividend policy proxied by dividend payout ratio (DPR). The market value as dependent variable proxied by price to book value (PBV). This study uses secondary data from financial statement and annual report of public listed companies in Indonesia Stock Exchange during 2012-2017. Using purposive sampling, this study obtain 12 companies as sample. The analytical tool for testing hypothesis is SPSS version 20. This study indicates that partially ROE, PER, and DER has significant positive effect on market value while dividend policy has no significant effect on market value of public listed companies in Indonesia.

**Keywords:** Market Value, Return on Equity, Price Earning Ratio, Debt to Equity Ratio, Dividend Policy.

**TAM AS A MEDIATOR IN THE IMPACT OF  
INNOVATIVENESS ON CREATING E-LOYALTY**

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**Abstract**

Over the decade, the concept of Technology Acceptance Model (TAM) to adopt new technologies has been discussed extensively. With the development of digital technology, there is some application that needed to explore more in their innovation on the internet of things. This research aims to discover the impact of innovativeness through perceived usefulness and perceived ease of use which become the indicator of TAM to e-loyalty. The explanatory research through hypothesis testing was conducted by an online survey on this research. By using a non-probability sampling technique, the sample was collected. In this research consisted of the respondents who were individuals who had lived or settled in Indonesia and had heard or learned about mobile banking. The path analysis model was tested using SmartPLS. Furthermore, according to the partial least square result, the proposed model fits well. Our findings illustrate that innovativeness has a direct effect on perceived usefulness, and perceived ease of use. Meanwhile, perceived usefulness does not have a direct impact on e-loyalty. Besides perceived ease of use has a direct impact on e-loyalty. Moreover, innovativeness has a direct effect on e-loyalty. On the other hand, the indirect effect of innovativeness to e-loyalty mediated by perceived usefulness is not significant. Otherwise, there was an indirect effect of innovativeness to e-loyalty mediated by perceived ease of use. The research tries to provide an insight into future trends in the technology acceptance model to understanding consumer behaviour.

**Keywords:** Innovativeness, Technology Acceptance Model, E-loyalty, Path Analysis



**Paper #147**

**DO STORE ATMOSPHERICS, REFERENCE GROUP,  
AND PRICE AFFECT PURCHASING DECISION ON  
COFFEE CAFÉ?**

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**Abstract**

Store atmospherics plays an important role in influencing consumer purchasing decision and has been recognized by academics and practitioners in current years. This study aims to identify the effect of store atmosphere, reference group, and price on consumer purchasing decision at Maxx Coffee Marvel City Surabaya. The type of this research is the explanatory research which explains the relationship and effect between one variable and other through hypothesis testing. The samples of this research consist of 120 respondents who has visited the object of research. The sampling technique in this study is non probability sampling. Hypothesis testing was conducted using probability value and t-statistic. The data were analyzed using The Statistical Package for Social Sciences (SPSS) 21 software. The research findings indicate that store atmosphere and price significantly affect consumer purchasing decision, while the reference group does not affect consumer purchasing decision.

**Keywords:** Store atmospherics, Reference group, Price, Purchasing decision

**OPTIMIZING STATE-OWNED ENTERPRISES LAND ASSETS USING HBU AND VALUE-BASED DECISION**

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**Abstract**

Competitive business climate, lack of capital and urban land function changes have an impact on land assets that are not optimally used. State-Owned Enterprises (SOE) assets covering 32,495 m<sup>2</sup> with IDR 227,773,000,000 market value containing cultural heritage building. This study aims to optimize and find the best development alternatives become a profit center. Based on surveys and interviews found that possible development alternatives to be carried out were Mixed- use Commercial Building (a1), Diesel Engine Industry (a2) and Maximize Workshop (a3). Value-based decision hierarchy develop from HBU criteria. Analytical Hierarchy Process (AHP) applied to develop decision making processes. The best alternative obtained from Satisficing Option games by comparing functions to costs. Functions are determined from the HBU criteria, which physically possible, legally permissible, financially feasible and maximally productive while costs are determined from initial costs and life cycle costs (LCC). Based on financial analysis shows that mixed use commercial development have the highest dan best use Net Present Value with Internal Rate of Return (IRR) is 20.66% and 6.30 years payback period. Based on HBU-Value Based Decision and Satisficing Option found that mixed-use commercial property development is the best alternative to optimize the assets.

**Keywords:** Highest and best use, Life cycle cost, Value based, Land development, Analytical hierarchy process.

## **THE INFLUENCE OF A DIGITAL INFLUENCER TO THE PURCHASE DECISION**

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### **Abstract**

Electronic word of mouth (eWOM) nowadays has been one among the many marketing tools which has given a wide range and easy accessibility. One kind of electronic WOM is digital influencer. The phenomenon of digital influencer such as beauty vloggers in this digital era has become more and more popular. The digital influencer has a role as a communicator who influences the purchase decision of the viewers. This study aims to reveal the influence of electronic word of mouth to the decision of purchasing of cosmetic products of certain brand. This study uses quantitative research method with analysis techniques includes tests of validity, reliability, normality, linearity, simple linear regression, statistic descriptive, and determination. The study used a total quota sampling technique. Data collection was done by distributing questionnaires to 100 respondents. The result of this study shows that the contribution of the digital influencer to the decision of purchasing cosmetic products is 87.6%.

**Keywords: Electronic Word of Mouth, Digital Influencer, Beauty Vlogger, Purchase Decision.**

## **ANALYSIS OF INDONESIAN BANKING PERFORMANCE**

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### **Abstract**

The development of the number of banks in Indonesia is increasing, accompanied by globalization which has made competition in the banking industry even tighter. Tight competition requires banks to improve their performance in a healthy and solid manner. Banking health alone is not enough to define in detail the state of the bank, so an approach is needed through an industrial organization model using instruments of structure, behavior and performance. This study will discuss in more detail the performance of banks by using a sample of 78 banks in Indonesia that are processed through panel data from 2008 to 2015, 78 are considered to represent the banking population in Indonesia because only 78 of these banks have the most complete annual and financial reports of the year 2008 - 2015. This research was conducted using panel data to determine the performance of banks. The variables used in this study are bank assets, branch office growth, return on assets (ROA) and the number of loans offered each year. Data is obtained from annual reports and banking financial reports. The result is that banking performance measured through ROA is not affected by the market share of the bank but is influenced by assets, sales intensity and the intensity of costs incurred by the bank itself.

**Keywords:** Banking industry, Performance, Asset growth, Data panel, Return on asset

# **IMPLEMENTATION LEAN CONSTRUCTION TO REDUCE WASTE ON HIGH RISE BUILDING CONSTRUCTION**

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## **Abstract**

The limited available land as well as the increase in building needs as a function of occupancy, making the construction of multi-storey buildings an alternative used to meet these needs, and the faster time needed for development increasingly makes the building multi-storey built. However, in the process of building a multi-storey building, waste is always produced, which results in increasing the budget and time spent on development. To anticipate this, several methods are used to increase productivity, use the right methods and materials, retrieve and store materials, and supervise the work process that is improved so that all the grooves can add value to the results. The concept was successfully used to increase productivity and reduce waste in the manufacturing industry, which was tried to be applied in the construction industry, where in the construction process, the waste produced would be reduced by using the concept. The identification step uses the Pareto Diagram method, Big Mapping and VASAT mapping and the use of FMEA is used to find the source of the problem and the sequence of risks that produce waste can be identified, which is then analyzed and evaluated to reduce the source of waste, both procedures for implementation, use of materials and what steps should be taken. This research was carried out to provide mapping, analysis and evaluation carried out for recommendations for repairs and controls, so as to reduce waste generated. Observations were made on work items that had the weight of work as major jobs and were not carried out by sub-contractors. Identification on the implementation of work period up to February 2019 shows that there is waste of ceramic tiles 300mm x 600mm for 26.76%, homogenous of Tile 600 x 600mm at 24.97%, portland cement at 9.15%, plastering 8, 20%, and light brick adhesives of 8.03% in the highest order of 5. After obtaining identification and being given a method of repairing waste, it can be reduced to ceramic tile 300mm x 600mm by 22.16%, homogenous Tile 600 x 600mm at 20.75%, portland cement 4.34%, plastering 7.70% and adhesive light brick by 5.59%. The process needs to be enhanced by supervision and implementation and needs to be applied at the beginning of the work so that it can be an appropriate work procedure.

**Keywords:** Project, Lean Construction, VSM, VASAT, FMEA

**MODELING PORTFOLIO BASED ON LINEAR  
PROGRAMMING FOR BANK BUSINESS DEVELOPMENT  
PROJECT PLAN**

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**Abstract**

Business plans are targeted by the bank's business processes for the next year. At present, the business plan is determined by the growth of the asset portfolio every year, so that the realization is determined by the existence of an offer when needed. This condition will cause a portfolio to not be measured and the inaccuracy of portfolio selection. Asset Liability Management (ALM) is the management of the structure of assets and liabilities, to achieve profit. Banking books and trading books are bank portfolios to earn income. In selecting each portfolio, it contains liquidity risk, market risk and credit risk. The level of profit is reflected in returns, while returns and risks are a trade off so that calculations require mathematical and simulation models. Each bank needs an overview of the composition of productive assets, as short-term, medium-term and long-term assets must be measured risk and target achievement. Linear programming method will allocate productive assets as the bank's main source of income, to achieve optimization of profit on the risks received. The problem with this research is that there are 830 variables as banking assets and 19 constraints as indicators of risk. In the seventh iteration of mathematical models, return 1,803 Trillyun from 11 banking book assets.

**Keywords: Productive assets, Banking book, Constraint**

## **DOES CSR AFFECT THE COMPANY'S IMAGE: STUDY ON GOVERNMENTAL COMPANY IN INDONESIA**

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### **Abstract**

Corporate Social Responsibility (CSR) has developed into a strategic factor to gain competitive advantage of a company. This study aims to examine the effect of community and environmental support on the corporate image of one largest governmental company in Indonesia, PT. Perusahaan Listrik Negara (Persero). This type of research is explanatory research that explains the relationship between research variables through testing hypotheses with quantitative approaches. The population in this study is people in Malang City who have used Bank Sampah Malang at least once. The sampling technique used purposive sampling with 150 respondents. Data analysis in this study is used multiple linear regression analysis with SPSS version 24 software. In this study, the hypothesis was tested using the t-test. The results of hypothesis testing indicate that the variable of community support with support for community programs as an indicator is significantly influenced to improve the corporate image of PT. Perusahaan Listrik Negara (Persero). In addition, the results of hypothesis testing indicate that environment variable with environmental quality improvement as an indicator has significantly influence in improving the corporate image of PT. Pweusahaan Listrik Negara (Persero). Implication and limitation also discussed in the end of this research to give suggestion on further research.

**Keywords:** Corporate Social Responsibility, Community Support, Environment, Corporate Image

**Paper #154**

**DOES BOARD SIZE AND GENDER DIVERSITY ON  
BOARDROOMS AFFECTING THE CORPORATE RISK  
TAKING?**

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**Abstract**

We investigate the effect of board size and gender diversity on boardrooms toward corporate risk taking. Using data on 262 non financial companies from the Indonesia Stock Exchange (IDX) database, we observe the sample for period of 2011 to 2014. Mostly consistent with predictions, board size is found to be positively influence corporate risk taking. However the gender diversity on boards, in contrast, are negatively influence on corporate risk taking in small effect. The larger size on the boards, the greater the variability of corporate risk taking. Interestingly, in other way the higher the percentage of diversity on the boards, the lower the variability of corporate risk taking. It means the presence of women on boards may reduce the volatility Return on Asset (ROA) as impact of they aversion behavior to both carry out riskier projects and take uncertain investments.

**Keywords:** Corporate Social Responsibility, Community Support, Environment, Corporate Image



