Tarumanagara International Conference on the Applications of Technology and Engineering 2019

CERTIFICATE
OF ACHIEVEMENT
this certificate is presented to

BINTANG BAGASKARA KORDA (545160068)

for the contribution as **Presenter**

Paper Title: Redesign Layout Planning of Raw Material Area and Production Area Using Systematic Layout Planning (SLP) Methods (Case Study of CV Oto Boga Jaya)

November 21st - 22nd, 2019 | Universitas Tarumanagara, Jakarta

Chairman

TICATE

Dr. Hugeng, S.T., M.T.

Rector

Prof. Dr. Agustinus Purna Irawan

Jakarta, 4 November 2019

No.   : 160-TIM/7440/UNTAR/IX/2019

FULL PAPER ACCEPTANCE NOTIFICATION
Reference Number   : TICATE-126
Title   : Redesign Layout Planning of Raw Material Area and
Production Area Using Systematic Layout Planning (SLP) Methods (Case Study of CV
Oto Boga Jaya)
Authors   : Bintang Bagaskara Korda, Lina Gozali and Lamto Widodo

Dear Mr./Madam
Thank you for your paper submission to Tarumanagara International Conference on the Application of Technology and Engineering 2019.

We are pleased to inform you that your submission is accepted for presentation in TICATE 2019. Due to some outstanding reviews for other submissions, however, the review result is not available for viewing yet. We expect to publish the review results will begin on 12 November 2019, you need to register to conference before 9 November 2019.

In the meantime, we recommend that you check your manuscript to minimize obvious errors, such as formatting and grammatical errors.

If you have further questions, please don't hesitate to contact us. We are looking forward to seeing you at UNTAR. Thank you very much for your cooperation.

Sincerely,

Dr. Hugeng, S.T.,M.T.(SMIEEE)
        Chairman

PROGRAM AT A GLANCE

Tarumanagara International Conference on the Applications of Technology and Engineering
Jakarta, 21-22 November 2019

Day 1 (Thursday, 21 November 2019)

TIME	ACTIVITY
08.30 – 09.00	Registration & Coffee Morning
09.00 – 09.15	**Opening Ceremony** • Singing "National Anthem" & " Mars Tarumanagara" • Traditional Dance • Report from Chairman: Dr. Hugeng (SMIEEE)
09.15 – 09.30	**Welcome Speech:** Rector of Universitas Tarumanagara Prof. Dr. Agustinus Purna Irawan (ASEAN Engineer) **Untar Video Profile**
09.30 – 11.45	**Keynote Speaker:** 1. Dr. Ing. Joewono Prasetijo (Universiti Tun Hussein Onn Malaysia, Malaysia) 2. Prof. Dr. Tjokorda Gde Tirta Nindhia (Udayana University, Indonesia) **Invited Speakers:** 1. Prof. Dr. Srikantappa. A.S. (Cauvry Institute of Technology India, India) 2. Prof. Dr. Mohd Zulkifli Abdullah (Universiti Sains Malaysia, Malaysia) 3. Prof. Yasuyuki Nemoto, Ph.D. (Ashikaga University)
11.45 - 12.00	Souvenir Presentation & Photo Session
12.00 - 13.00	Lunch Break
13.00 – 15.00	Paper Presentation Session I
15.00 – 15.15	Coffee & Tea break
15.15 – 17.15	Paper Presentation Session II

Day 2 (Friday, 22 November 2019)

TIME	Activity
08.30 – 08.30	Registration & Coffee Morning
08.30 – 11.30	Paper Presentation Session III
11.30 – 13.00	Lunch Break
13.00 – 16.00	Paper Presentation Session IV

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 1
Time   : 13.00 – 15.00
Track   : Mechanical Engineering & Technology

NO	SCHEDULE	PAPER TITLE	AUTHOR	INSTITUTION
1	13.00-13.15	Smart Brake Monitoring System with Brake Failure Indication for Automobile Vehicles	Srikantappa. A. S	Cauvery Institute of Technology
2	13.15-13.30	Tensile Behaviour of Kevlar Fibre & Coir Fibre Reinforced with Epoxy	Srikantappa. A. S	Cauvery Institute of Technology
3	13.30-13.45	Flexural & Impact Characteristics of Kevlar Fibre & Coir Fibre Reinforced with Epoxy Hybrid Composites	Srikantappa. A. S	Cauvery Institute of Technology
4	13.45-14.00	A Study on Tool Characteristics for better Performance in machining OHNS Steel using TiAlN Coated Tungsten Carbide tool inserts	Srikantappa. A. S, Shivakumara. C. M, Adaveesha. B	Cauvery Institute of Technology
5	14.00-14.15	Comparative study between MSC Marc/Mentat student version and Simufact Welding for three-passed butt joint	Richard A.M. Napitupulu, Chilinton Hutabarat, Charles S.P Manurung, Yupiter HP Manurung, Marcel Graf	Nommensen HKBP University Medan
6	14.15-14.30	Simufact Welding for three-passed butt joint	Frince Marbun, Richard A.M. Napitupulu, Charles SP Manurung, Sutan Simanjuntak, Yung-Chou Kao	Nommensen HKBP University Medan
7	14.30-14.45	Influence Of Fillers On Tribological Behaviour Of Glass-Coir Reinforced Epoxy Composites – An Ann Approach	Vijay B R and Dr. Srikantappa A S	Cauvery Institute of Technology

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 2
Time   : 13.00 – 14.45
Track   : Mechanical Engineering & Information Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Aluminum Frame Product Development Using Quality Function Deployment and Value Engineering at PT KSN	Surya Perdana, Ridwan Usman and Zeny Fatimah Hunusalela	Universitas Indraprasta PGRI
2	13.15-13.30	Modeling of Prediction Bandwidth Density with Backpropagation Neural Network (BPNN) Methods	Cynthia Hayat, Iwan Aang Soenandi, Samuel Limong, Johan Kurnia	Universitas Kristen Krida Wacana
3	13.30-13.45	Experimental Analysis of Semi-Open Impeller Pump as Turbine	Dede Lia Zariatin, Risdianto, Amat Chaeroni and Ismail Ismail	Universitas Pancasila
4	13.45-14.00	Redox Flow Batteries as Energy Storage Devices	Septiani Silitonga, Richard A.M Napitupulu, Charles SP Manurung,Sibuk Ginting, Parulian Siagian, Yong-Song Chen	Nommensen HKBP University
5	14.00-14.15	An Experimental Study on the Response of Composite Plate Due to Granade Explosion	Gunaryo, Heriana, Andi Kuswoyo, Djarot Widagdo and Bambang K. Hadi	Institut Teknologi Bandung
6	14.15-14.30	Statistical Analysis of CFRP Mechanical Properties using B-Basis Based on Weibull and ANOVA Distribution Analysis	Yurviany, Djarot Widagdo, Muhammad Kusni and Bambang K. Hadi	Kementrian Pertahanan

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 3
Time   : 13.00 – 14.45
Track   : Mechanical Engineering & Electrical Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Design of an autonomous electric vehicle for assistance in the movement of people with visual disabilities using vision algorithms and artificial intelligence	Juan José Encinas Cantaro and Mario Chauca Saavedra	Ricardo Palma University
2	13.15-13.30	Characterization of Predictive Control Based on Model (MPC) in Multivariable Process of Milling in a Mineral Concentrator Plant	Juan Tisza, Mario Chauca	Universidad Nacional de Ingenierí
3	13.30-13.45	Development of Testing Equipment of Hydrokinetic Turbine Model to Support Implementation of the Laboratory Work	Jorfri Boike Sinaga, Novi Tanti and M.Dyan Susiala	Universitas Lampung
4	13.45-14.00	The Study Experimental of The Solar Collector Performance of Adsorption Refrigerator in Medan City	Syahrul Abda, Jaya Arjuna, Tulus B. Sitorus	Universitas Sumatera Utara
5	14.00-14.15	Automatic Statistics Measurement Antenna Performance Towards Virtual Ground Station	Arif Hidayat, Hidayat Gunawan1,Ali Syahputra Nasution, Andrianingsih, Diki Wahyudi	Pusat Teknologi dan Data Penginderaan Jauh
6	14.15-14.30	The use of MNCP-5 particle transport program for calculation of flux radiation exposure in object surface	Tumpal Pandiangan, Ika Bali and Alexander R.J. Silalahi	Matana University
7	14.30-14.45	Design of Multiband MIMO Antenna for 5G Millimeter-wave Application	Rusmono, Efri Sandi and Teresa Marani	Universitas Negeri Jakarta
8.	15.00 – 15.15	Optimization of PJU LED luminaires based on lamp housings, drivers and optics	Endah Setyaningsih, Yohanes Calvinus	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 4
Time   : 13.00 – 15.00
Track   : Civil & Environmental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Vehicle Road Accident Prediction Model along Federal Road FT050 Kluang-A/Hitam-B/Pahat Route Using Excess Zero Data	Joewono Prasetijo	Universiti Tun Hussein Onn Malaysia,
2	13.15-13.30	The compressive strength behavior of mahogany wood connections with bolt-ring connectors	Wiryanto Dewobroto, Ika Bali, Lodia Semaya Amnifu	Universitas Pelita Harapan,
3	13.30-13.45	Correlation of Undrained Shear Strength and Liquidity Index of Fine-Grained Soils in West Java, Indonesia	Gilberta Miranda Hutabarat and Budijanto Widjaja	Parahyangan Catholic University
4	13.45-14.00	Analysis of online-taxi service quality and passenger satisfaction	Tarita Aprilani Sitinjak, Ludfi Djakfar and Achmad Wicaksono	Palangka Raya University
5	14.00-14.15	The effect of addition of polypropylene fibers on crushed glass concrete mixed	Albert Aun Umbu Nday, Theresia Avila Bria and Deasi D. A. A. Daud	Politek Kupang
6	14.15-14.30	Utilization of roof garden installation to reduce rainwater runoff in urban residential	Endah Lestari	STT PLN
7	14.30-14.45	Natural Flocculant VS Chemical Flocculant Where Is Better To Used In Wastewater Treatment	Badrus Zaman*, Nurandani Hardyanti1, M. Arief Budihardjo, Budi Prasetyo S., Aldiansyah Ramadhandi, Arum Tri Listiyawati	Universitas Diponegoro
8	14.45-15.00	Assessing the Potential of Delivery Consolidation to Campus Center	Alfiora Santoni, Nahry Nahry and Sarini Abdullah	Universitas Indonesia
9	14.45 – 15.00	Comparation Between Suspended or Seabed Pipeline Installation for Inter Island Fresh Water System.	Try Suyono, Agustinus Purna Irawan and Wati Asriningsih	Universitas Khairun

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 5
Time   : 13.00 – 15.00
Track   : Industrial Engineering, Mechanical Engineering & Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Implementation of Lean Warehousing to Improve Warehouse Performance of Plastic Packaging Company	Yudha Prasetyawan, Alfia Khairani Simanjuntak, Lulu Auliya Andrian and Nauval Rifqy	Institut Teknologi Sepuluh Nopember
2	13.15-13.30	Simple automation for pinneaple processing combining with karakuri design	Yudha Prasetyawan, Atiya Arifiyana Agustin and Dewanti Anggrahini	Institut Teknologi Sepuluh Nopember
3	13.30-13.45	Lean Manufacturing Implementation on Extrude Process with Value Stream Mapping: Study Case in Tyre Manufacture	Teguh Sri Ngadono, Muh Rokhim and Zulfa Fitri Ikatrinasari	Mercu Buana University
4	13.45-14.00	Kinematics analyses for robot motion	Wandro Siregar, Parulian Siagian, Lin Rong-Shine, Richard AM.Napitupulu, MidukTampubolon,Sutan LMH Simanjuntak	Nommensen HKBP University Medan
5	14.00-14.15	Slicing Methodology of A CAD File for 3D Printing	Frince Marbun, Richard A.M. Napitupulu, Charles SP Manurung, Sutan Simanjuntak1, Yung-Chou Kao	Nommensen HKBP University Medan

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room : Conference Room 6
Time : 13.00 – 15.00
Track : Mechanical Engineering & Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Experimental analysis on combustion characteristics of single layer porous media for various burner sizes	M.Z. Abdullah	Universiti Sains Malaysia
2	13.15-13.30	Viscosity of Mono vs Hybrid Nanofluids: Measurement and Comparison	Khairil Fadzli and Mz Abdullah	Universiti Putra Malaysia
3	13.30-13.45	Lead-free solder SAC 305 Volume Reduction and Cold Slump after Stencil Printing Process	Mz Abdullah	Universiti Sains Malaysia
4	13.45-14.00	The Role of Technology Savviness in Muslim Online Shopping (MOS)	Jhanghiz Syahrivar Frangky Selamat2, Hetty Karunia Tunjungsari, Chairy	President University
5	14.00-14.15	Measurement of risk project maturity using organizational project management maturity model (OPM3): Study case of construction project in Bandung	Fanjar Wijaksono, Devi Pratami and Achmad Fuad Bay	Telkom University
6	14.15-14.30	Designing Procurement Process Monitoring Dashboard for Supporting Food Security Supply Chain Risk Management System in Indonesian Bureau of Logistics	Detha Aulia Alfazah, Ari Yanuar Ridwan, Femi Yulianti and Putu Giri Artha Kusuma	Telkom University
7	14.30– 14.45	The Use of Quality Metric To Control Quality Of Telecommunication Project (Case Study: Regional Metro Junction)	Naufal Muhammad Zaki, Imam Haryono and Devi Pratami	Telkom University
8	14.45-15.00	Personal Performance Measurement of Project Manager using Project Manager Competency Development Framework (PMCDF®) (Case Study PT.XYZ)	Sarah Wahyuni, Devi Pratami and Achmad Fuad Bay	Telkom University

Room : Conference Room 7
Time : 13.00–15.00
Track : Industrial Engineering, Mechanical Engineering , Civil Engineering & Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Project Acceleration of Outside Plant-Fiber Optic (OSP-FO) Project in PT. XYZ Using Time Cost Trade Off (TCTO) Method by Adding Overtime Hours	Syifa Nur Hasyyati, Ika Arum Puspita and Wawan Tripiawan	Telkom University
2	13.15-13.30	On Preparation of Advance Ceramic for Single-edge V-Notch Beam Fracture Toughness Test of ISO/FDIS 23146:2008(E) Standards	Tjokorda Gde Tirta Nindhia	Udayana University
3	13.30-13.45	Comparison of fracture toughness testing by the single edge v-notch beam and the surface crack in flexure method on silicon nitride	Tjokorda Gde Tirta Nindhia	Udayana University
4	13.45-14.00	Implementation of Statistical Quality Control to Reduce Defects in Mabell Nugget Products (Case Study at PT. Petra Sejahtera Abadi)	Rini Alfatiyah, Sofian Bastuti, Dadang Kurnia	Universitas Pamulang
5	14.00-14.15	Determined Consumers Online Purchase Intention Factors by Considering Risk and E-Trust	Aulia Fasha	Universitas Singaperbangsa Karawang
6	14.15-14.30	Analysis improvement process of making joint care air filter mitsubishi (CJM) with overall equipment effectiveness and six big loses PT. Nichirindo Pratama Duta	Syahreen Nurmutia, Adi Chandra, Muhammad Shobur	Pamulang University

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 8
Time   : 13.00 – 15.00
Track   : Civil Engineeering & Enviromental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	The Effect of High-Density Polyethylene (HDPE) and Low-Density Polyethylene (LDPE) on Characteristics of Asphalt Concrete with Dry and Wet Mixing Process	Eduardi Prahara and Fennysia Aswita	Bina Nusantara
2	13.15-13.30	Passenger Satisfaction Assessment On The Performance Of The Flight Of Balikpapan-Yogyakarta Route Flights (Case Study: International Airport Sultan Aji Muhammad Sulaiman Balikpapan Sepinggan)	Yanti, M.Eriko.T, Pius, Leksmono Suryo Putranto	Universitas Tarumanagara
3	14.00 – 14.15	Reducing Project Duration of An Apartment Project by Waskita Karya using Crashing Method	Kirana Rukmayuninda Ririh and Nur Yulianti Hidayah	Universitas Pancasila

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room : Conference Room 1
Time : 15.15 –17.45
Track : Industrial Engineering, Civil & Environmental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Strategies in increasing willingness to lend toward peer to peer lending companies operated in Indonesia	Niko Iskandar and Erlinda Muslim	Universitas Indonesia
2	15.30-15.45	Designing a performance measurement system for the human resources division using the human resource scorecard method: case study at PT KBN	Andi Yolanda and Erlinda Muslim	Universitas Indonesia
3	15.45-16.00	Detection of Cholesterol Levels by Analyzing Iris Patterns using Back Propagation Neural Network	Liani Budi Rachman and Basari Basari	University of Indonesia
4	16.00-16.15	Innovation of quality improvement to reduce weld defect through six sigma methods in the fabrication process of power plant component	Ayu Puspa Wirani, Dana Santoso Saroso and Humiras Hardi Purba	Mercu Buana University
5	16.15-16.30	Reducing of Defects in the Drug Tablets Production Process with DMAIC to Improve Quality – Study Case of Pharmaceutical Industry	Adha Winatie, Dana Santoso Saroso and Humiras Hardi Purba	Mercu Buana University
6	16.30-16.45	Determination Of Priority Criteria Which Influences CPO Factory Productivity	Nurhayati Sembiring and Imam Ramzani	Universitas Sumatera Utara
7	16.45-17.00	Analysing Company's Performance by Using Sustainable Supply Chain Management (SSCM)	Nurhayati Sembiring	Universitas Sumatera Utara
8	17.00-17.15	Determination Of Priority Criteria Which Influences CPO Factory Productivity	Nurhayati Sembiring, M. Imam Ramzani	Universitas Sumatera Utara
9	17.15-17.30	The strategy improvement of the engine maintenance	Nurhayati Sembiring and Diva Varian Koto Deli	Universitas Sumatera Utara

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 2
Time   : 15.15 –17.00
Track   : Informatic Engineering and Technologies

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Medical Diagnosis System in Healthcare Industry: A Fuzzy Approach	Nina Sevani, Andrih Setiawan, Fajar Saputra, Richardo Kusuma Sali and Oki Sunardi	Krida Wacana Christian University
2	15.30-15.45	Comparative Study Between the Integration of ITIL and ISO / IEC 27001 with the Integration of COBIT and ISO / IEC 27001	Nur Kholis Gunawan, Raden Budiarto Hadiprakoso and Herman Kabetta	Sekolah Tinggi Sandi Negara
3	15.45-16.00	A review of attacks, objects, and mitigations on web services	Rafif Masrur Rauf, Tubagus Eiffel Rivaldo, and Amiruddin Amiruddin	Sekolah Tinggi Sandi Negara
4	16.00-16.15	A brief review of attacks and mitigations on smartphone infrastructure	Rico Setyawan, Allicia A. Rahayu, Nur Annisa K. F., Amiruddin Amiruddin	Sekolah Tinggi Sandi Negara
5	16.15-17.00	Designing the QuickCash Payment System prototype by using cash withdrawal services through minimarket as an alternative solution for secure money transfer from bank customers to non-bank customers	Prasetyo Adi Wibowo Putro and Gagas Paras Mulati	Sekolah Tinggi Sandi Negara

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 3
Time   : 15.15 –16.45
Track   : Informatic   Engineering and Technologies

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Smart Chicken Farming: Monitoring System for Temperature, Ammonia Levels, Feed in Chicken Farms	Raden Budiarto	STSN
2	15.30-15.45	BCube and DCell Topology Data Center Infrastructures Performance	Edi Surya Negara, Keni Keni and Ria Andryani	Universitas Bina Darma
3	15.45-16.00	Analysis of Supply Chain Risk Mitigation Strategies in the Bogor Compressor Company with the House of Risk Method	Surya Perdana, Ridwan Usman, Nur Arifiya	Universitas Indraprasta PGRI
4	16.00-16.15	Networks Status Notification using Telegram Messenger	Erika Ramadhani and Akhmad Syarifurrahman	Universitas Islam Indonesia
5	16.15-16.30	Implementation of Incognito and SHA-3 Methods as Alternative to PIN Selection in Web Login	Gesi Deta and Yogha Restu Pramadi	STSN
6	16.30-16.45	Software-Defined Wireless Sensor Networks: A Systematic Review, Architecture and Challenges	Tony Tony and Lely Hiryanto	Curtin University

PARALLEL SESSION SCHEDULE
Thursday, 21 November, 2019

Room   : Conference Room 4
Time   : 15.15 –17.00
Track   : Medical & Health Technology, Industrial Engineering, Information Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Cardiac Arrhythmia classification using deep learning	Alexander R. J. Silalahi and Tumpal Pandiangan	Matana University
2	15.30-15.45	Designing and Building Secure Electronic Medical Record Application by Applying AES-256 and RSA Digital Signature	Galih Wening and Hermawan Setiawan	Sekolah Tinggi Sandi Negara
3	15.45-16.00	The Effectiveness of Massage Therapy and Music Therapy in Reducing Fear in Dental Spa	Siti Istiningsih and Basuki Wibawa	Universitas Mataram a
4	16.00-16.15	Modeling On Group Decision Support System to Determine Accreditation of Early Childhood Education Institutions	Muhammad Syaukani	STMIK Banjarmasin
5	16.15-16.30	Design of expert system for tool selection in digital forensics investigation	Erika Ramadhani, Elyza Gustri Wahyuni and Hanif Rizal Pratama	Universitas Islam Indonesia
6	16.30 - 16.45	Early Assesment Dyslexia	Wiryasaputra	Universitas Kristen Krida Wacana
7	16.45 – 17.00	Analysis Improvement Production Process of Making Joint Care Air FIlter Mitsubishi (CJM) With Overall Equipment Effectiveness and Six Big Losses PT. Nichirindo Pratama Duta	Syahreen Nurmutia, Adi Chandra, Muhammad Shobur	Pamulang University

PARALLEL SESSION SCHEDULE
Thursday, 21 November, 2019

Room   : Conference Room 5
Time   : 15.15 –16.30
Track   : Medical & Health Technology, Civil & Environmental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Dynamic Modeling to Predict The Availability of Premium Rice in Karawang Regency	Ekaterina Setyawati	Institut Pertanian Bogor
2	15.30-15.45	Distribution of Story Shear and Reinforcement in Dual System	Daud Rahmat Wiyono, Roi Milyardi and Cindrawaty Lesmana	Universitas Kristen Maranatha
3	15.45-16.00	Curve Number Method to Determine the Runoff Height in the Upper Cimanuk Watershed	Dwi Ariyani	Universitas Pancasila
4	16.00-16.15	Benefits of the Opex Pro Application in Online Project Monitoring and Evaluation at PT. XYZ	Manlian A. Ronald Simanjuntak, Mustafa Nahdi	Universitas Pelita Harapan
5	16.15-16.30	The Identification of Risk Factors of Quality that Affecting Contractors' Performance at XYZ Company	Edward Rizky Tatimu and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan

PARALLEL SESSION SCHEDULE
Thursday, 21 November , 2019

Room   : Conference Room 6
Time   : 15.15 –16.30
Track   : Civil & Environmental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	The Study of Quality Control Management that Influence the Implementation of Technical Standards for Class C Hospital Buildings in Tangerang Districs	Milla Andina Fajriah and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
2	15.30-15.45	The study of the identification of using the supply chain to increasing financing efficiency of management project for building construction x in Jakarta	Mukhamad Risa Diki Pratama and Manlian Ronald A Simanjuntak	Universitas Pelita Harapan
3	15.45-16.00	Cost Risk Analysis Method for Construction Project in Kuala Tanjung	Eko Handoyo Cahyo Pranoto and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
4	16.00-16.15	Cost Performance Study on EPC Projects in Banten Province (Case Study: Substation and Transmission lines 150 kV EPC Project)	Arif Deni Rahmat and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
5	16.15-16.30	Project Cost Risk Identification and Construction Performance Indicators of High-rise Building in DKI Jakarta (Case Study: PT. X)	Manlian Ronald A. Simanjuntak and Intan Virgina Suryaningrum	Universitas Pelita Harapan

PARALLEL SESSION SCHEDULE
Thursday, 21 November, 2019

Room   : Conference Room 7
Time   : 15.15 –17.00
Track   : Civil & Environmental Technology and Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	15.15-15.30	Risk Identification in Procurement of Glass facade in High-Rise Office Buildings in Jakarta	Reinaldi Tanumihardja and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
2	15.30-15.45	Identification of Design And Build Risks in School Building Construction Projects in Central Jakarta	Andreas Suharyanto and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
3	15.45-16.00	Study Phase of Operational Management Process X Building	Janerizka Bari Putri and Manlian Ronal A Simanjuntak	Universitas Pelita Harapan
4	16.00-16.15	Risk Identification in Procurement of Precast Facade Procurement on High Rise Buildings in Jakarta	Ardian Sulistianto and Manlian Ronald A. Simanjuntak	Universitas Pelita Harapan
5	16.15-16.30	Traffic Management and Engineering Analysis of the Manahan Flyover Area by using Traffic Micro-Simulation VISSIM	Budi Yulianto	Universitas Sebelas Maret
6	16.30-16.45	Control of Quality Concrete Base on Curing Methods	Anisah, Prihantono	State University of Jakarta
7	16.45-17.00	Increasing Production Efficiency using Karakuri Principle (A Case Study in Small and Medium Enterprise)	Dewanti Anggrahini, Yudha Prasetyawan and Sri Indriyani Diartiwi	Institut Teknologi Sepuluh Nopember

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 1
Time   : 08.30 – 11.30
Track   : Civil & Environmental Technology and Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Calibration and Validation Indonesian Highway Capacity Manual 1997 Model	Budi Yulianto, Setiono Yulianto, Rizki Putri, Stevani Prastica and Felix Hartono	Universitas Sebelas Maret
2	08.45-09.00	Evaluation and Decrease of The Likelihood of Risks in Mass Floor Excavations According to Your Texture in Peru	Jhannel Lourdes Arteaga Ramos, Giancarlo Enrique Andia Alvarez and Mario Bernabe Chauca Saavedra	Ricardo Palma University
3	09.00-09.15	Feasibility of Well Water as a Source of Clean Water in the Coastal Coastal Settlement Area	Idawarni Asmal	Universitas Hasanuddin
4	09.15-09.30	Graph Model of Reporting Engine Performance Results in The Business	Bambang Prasetya Adhi, Widodo Widodo and Dendy Nanda Prasetya	Universitas Negeri Jakarta
5	09.30-09.45	New theory in strategic management of Industry 4.0 and Society 5.0 within Industrial and System Engineering and Business Engineering	Khristian Edi Nugroho Soebandrija	Bina Nusantara University
6	09.45-10.00	Lean Six Sigma and Business Engineering Perspective of Electrical Energy Optimization	Khristian Edi Nugroho Soebandrija, Dendhy Indra Wijaya and Fauzi Khair	Bina Nusantara University
7	10.15-10.30	Industry 4.0 and Society 5.0 through Lens of Condition Based Maintenance (CBM) and Machine Learning of Artificial Intelligence (MLAI)	Khristian Edi Nugroho Soebandrija, Fauzi Khair and Dendhy Indra Wijaya	Bina Nusantara University
8	10.30-10.45	Risk Analysis The Construction Use Of Soft Toll Road System Metodologi (Ssm) Case Study: Trans Toll Road Sec Sumatra 1 Bakauheni - Kalianda	Enriko Tosulpa	Universitas Tarumanagara

Room   : Conference Room 1
Time   : 08.30 – 11.30
Track   : Civil & Environmental Engineering , Industrial Engineering

9	10.45-11.00	Development of unskilled labour into skilled labour at the jetty project of PLTU Tanjung Jati B Units 5 and 6	Jegoteluko	Universitas Tarumanagara
10	11.00-11.15	Designing marketing strategies based on factors affecting purchase intention of hotel voucher through Online Travel Agent's website	Cindy Yunitasari and Erlinda Muslim	Universitas Indonesia
11	11.15-11.30	Millennials employee retention strategies planning based on job satisfaction in Indonesia banking industry	Siti Rohmah As'Ad and Erlinda Muslim	Universitas Indonesia
12	11.30 – 11.45	Correlation between Plasticity Index and Methylene Blue Value to Determining Soil Classification	Andrias Suhendra Nugraha, Paulus P. Rahardjo, Bigman M. Hutapea, and Imam A. Sadisun	Universitas Kristen Maranatha

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 2
Time   : 08.30 – 11.30
Track   : Civil & Environmental Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Performance evaluation, violations and driver's perception of the Yellow Box Junction in the city of Surabaya (Case study of the junction of Jl. Ir. Sukarno - Jl. Dharmahusada and the junction of Jl. Kutai - Jl. Adityawarman)	Leksmono Suryo Putranto, Rpx Rooswan Happmono	Universitas Tarumanagara
2	08.45-09.00	Preliminary cost in industrial building at Sumatra, Kalimantan, and Papua	Christian Satrija S and Onnyxiforus Gondokusumo	Universitas Tarumanagara
3	09.00-09.15	The Use of Quality Metric to Control Quality of Telecommunication Project (Case Study: Regional Metro Junction)	Naufal Muhammad Zaki, Imam Haryono and Devi Pratami	Universitas Tarumanagara
4	09.15-09.30	Factors affecting residential choice in Greater Jakarta	L S Putranto, P Louis	Universitas Tarumanagara
5	09.30-09.45	Discovering Authenticity as an Architect Through Psychological Analysis. Case study: The Church of the Light, Tadao Ando	M Clara, R Trisno, P R Kasimun, F Lianto	Universitas Tarumanagara
6	09.45-10.00	Mechanical properties of powder concrete with a geopolymer bond	W Kushartomo, Sofianto	Universitas Tarumanagara
7	10.15-10.30	Whitmore Section and Block Shear Failure Analysis on a Bolted Gusset Plate using Finite Element Method	Yoses Riadi and Leo S Tedianto	Universitas Tarumanagara
8	10.30-10.45	Concrete Structure Condition Rating in Buildings with NonDestructive Testing	Henny Wiyanto, Joshua Chang, Yohanes Dennis	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 2
Time   : 08.30 – 11.30
Track   : Civil & Environmental Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
9	10.45 – 11.00	Application of life cycle cost in the construction of soil retaining wall replacing soldier pile with diaphragm wall (case studi of Pejaten Apartment Projects)	Lidya Monalisa and Chaidir Anwar Makarim	Universitas Tarumanagara
10	11.00 – 11.15	Climate Responsive Architecture in Jakarta's Apartments	Christine Tjie, Fermanto Lianto and Naniek Widayati Priyomarsono	Universitas Tarumanagara
11	11.15-11.30	Natural Lighting Analysis in Plaza Senayan, Jakarta, Indonesia	Silvia Gunawan, Naniek Widayati Priyomarsono, Rudy Trisno	Universitas Tarumanagara
12	11.30 – 11.45	Correlation between Plasticity Index and Methylene Blue Value to Determining Soil Classification	Andrias Suhendra Nugraha, Paulus P. Rahardjo, Bigman M. Hutapea, and Imam A. Sadisun	Universitas Kristen Maranatha

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 3
Time   : 08.30 – 11.30
Track   : Civil & Environmental Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Structural design of airport runway Case study: Jos Orno Imsula MOA Airport	Kelly V Khoemarga, Anissa Noor Tajudin	Universitas Tarumanagara
2	08.45-09.00	Emergency Shelter Design For Disaster Preparation	Abdel Mounaim, Naniek Widayati Priyomarsono, Rudy Trisno	Universitas Tarumanagara
3	09.00-09.15	Encapsulated Lime Peel Essential Oil (Citrus hystrix) Into Chitosan Nanoparticle: New Entity to Enhanced Effectivity Against Propionilbacterium Acne in Vitro	Linda Julianti Wijayadi , Taty Rusliati Rusli6	Universitas Tarumanagara
4	09.15-09.30	Determine The Value of Mark Up at Bid Price Hotel Buildings	Melisa Dwijayanti and Johny Johan	Universitas Tarumanagara
5	09.30-09.45	Decision making analysis for water distribution improvement projects	Dedi Alfa Julian Purba	Universitas Tarumanagara
6	09.45-10.00	Decision making application for housing development investment	Harun Immanuel	Universitas Tarumanagara
7	10.15-10.30	Study of Factors Affecting Productivity of Portable Concrete Pump for Slab and Beam Construction Project X	Arianti Sutandi	Universitas Tarumanagara
8	10.30-10.45	Designing Procurement Process Monitoring Dashboard for Supporting Food Security Supply Chain Risk Management System in Indonesian Bureau of Logistics	Detha Aulia Alfazah, Ari Yanuar Ridwan, Femi Yulianti and Putu Giri Artha Kusuma	Telkom University
9.	10.45– 11.00	Kapuas river sediment fall velocity analysis with withdrawal tube.	Wati Asriningsih Pranoto	Universitas Tarumanagara
10	11.00-11.15	Designing a marketing strategy for food products sold online	Septiana Pratama Nugraheni and Erlinda Muslim	Universitas Indonesia

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 4
Time   : 08.30 – 11.30
Track   : Civil & Environmental   Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Ground Water Potencial Analisys In Saolat And Waijoi Area East Halmahera	Wati Asriningsih Pranoto and Tri Suyono	Universitas Tarumanagara
2	08.45-09.00	Analysis of the Potential of Crust Formation and Corrosiveness in the Way Rilau PDAM Lampung Distribution Network Using the Langelier Saturation Index Method	Anwar	Universitas Tarumanagara
3	09.00-09.15	Market Analysis Consumer Profile And Product Test Apartments Near Campus Project Plan Puncak Kertajaya Apartment Surabaya	Syahrial Firdausi	Universitas Tarumanagara
4	09.15-09.30	Characteristics Analysis of Slum Area in the Region of Rw 16 Kapuk, West Jakarta	Jemima Devina Halim	Universitas Tarumanagara
5	09.30-09.45	Analysis of value engineering application at the design stage of a deep excavation system	Benjamin Benjamin and Johny Johan	Universitas Tarumanagara
6	09.45-10.00	Maintenance Building Strategies in a private University in Jakarta	Febry Triwijayanty and Wahyu Indra Sakti	Universitas Tarumanagara
7	10.15-10.30	Measurement of Risk Project Maturity Model (OPM3): Study case of construction project in Bandung	Fanjar Wijaksono, Devi Pratami and Achmad Fuad Bay	Telkom University
8	10.30-10.45	Climate Responsive Architecture in Jakarta's Apartments	C Tjie1, F Lianto, and Naniek Widayati Priyomarsono	Universitas Tarumanagara
9	10.45 – 11.00	Analysis of Affecting Factors Housing Prices in Indonesian Cities	Ibrahim Ibrahim and Nurahma Tresani	Universitas Tarumanagara
10	11.00-11.15	North Coast Jakarta Land Reclamation as a Solution of Land Requirements	Agustina Tjoi	Universitas Tarumanagara
11	11.15-11.30	The Impact of Online Travel Agents (OTA) towards Hotel Real Estate Market : Jakarta, Indonesia	Charles Tahir, Nurahma Tresani and Nasirrudin Mahmud	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 5
Time   : 08.30 – 11.30
Track   : Civil & Environmental, Electrical, & Industrial Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Flexible Pavement Mechanistic Response to the 2017 Indonesian Road Pavement Manual with Cement-Treated Base (CTB)	Anissa Noor Tajudin	Universitas Tarumanagara
2	08.45-09.00	Utilization of rainwater harvesting installation to fulfil water needs in educational buildings	Endah Lestari	Universitas Tarumanagara
3	09.00-09.15	Determine The Value of Mark Up at Bid Price Hotel Buildings	Dwijayanti	Universitas Tarumanagara
4	09.15-09.30	Expanded Coverage Remote Control	Hadian Satria Utama, Tryas Honorris and Indra Surjati	Universitas Tarumanagara
5	09.30-09.45	Analysis the measurement quality system of clearence tappet using measurement system analysis on motorcycle manufacturing company	Carla Olyvia Doaly, Iphov Kumala Sriwana, Lithrone Laricha Salomon and Farrell Farrell	Universitas Tarumanagara
6	09.45-10.00	Interior Design Of Postgraduate Library Based On Cyber Technology By Applying Javanese Cultural Ornaments And Eco-Friendly Materials	Hartini Laswandi, Basuki Wibawa, Robinson Situmorang and Stephanie Efendy	Universitas Tarumanagara
7	10.15-10.30	Risk Assessment Of Working Posture And Implementation Of New Workstation To Increase Productivity	I Wayan Sukania	Universitas Tarumanagara
8	10.30-10.45	Application Of Six Sigma Method As A Quality Control Tool Tool With DMAIC Concept In PT. XYZ.	Ahmad Ahmad, Lina Gozali, Lamto Widodo and Cristin Natalina	Universitas Tarumanagara
9	10.45 – 11.00	Performance Anakysis Of Employees At PT. Sungai Berkat Serani Sukses Using Human Resource Scorecard Method	Ahmad Ahmad, Lithrone Laricha Salomon and Dean Alexander	Universitas Tarumanagara
10	11.00 – 11.15	The Key Factors Influencing Consumers' Level of Satisfaction of Subsidized Housing in Puri Harmoni 8, Parung Panjang	Hendri Viandra Reza, Lana Winayanti, Liong Ju Tjung	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room : Conference Room 6
Time : 08.30 – 11.45
Track : Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	08.30-08.45	Calculation of Labor Amount with Theory of Constraints and Line Balancing Method in PT. XYZ Fish Crackers Factory	Lina Gozali, Frans Jusuf Daywin and Alvin Jestinus	Universitas Tarumanagara
2	08.45-09.00	Research Gap of Facility Planning and Layouts Studies	Bintang Bagaskara	Universitas Tarumanagara
3	09.00-09.15	Comparison Study about Production Scheduling System from Some Paper Case Studies	Vania Eliyanti, Lina Gozali, Lamto Widodo and Frans Jusuf Daywin	Universitas Tarumanagara
4	09.15-09.30	Comparison Study about Inventory Control System from Some Papers in Indonesia Case Study	Shelinsca Hoswari, Lina Gozali, Iveline Anne Marie and I Wayan Sukania	Universitas Tarumanagara
5	09.30-09.45	Comparison Study of the Application of Line Balancing and the Theory of Constraint	Jessica Sagitta, Lina Gozali and Frans Daywin	Universitas Tarumanagara
6	09.45-10.00	Comparison Study about Warehouse Layout from Some Paper Case Studies	Natalia Sudiarta, Lina Gozali, Iveline Anne Marie and I Wayan Sukania	Universitas Tarumanagara
7	10.15-10.30	Designing Press Tool For Carton Finishing Process To Improve Productivity And Efficiency	Lamto Widodo, Adianto Adianto, Siti Rohana Nasution and Priadi Wijaya	Universitas Tarumanagara
8	10.30-10.45	Consumer Preference Analysis Of Snack With Conjoint Analysis Method Approach (Case Study : Telur Gabus).	Lithrone Laricha Salomon, Wilson Kosasih and Carla Doaly	Universitas Tarumanagara

Room   : Conference Room 6
Time   : 08.30 – 11.45
Track   : Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
9	10.45 – 11.00	Application of quality control of carton box in quality control department at PT Purinusa Ekapersada	Clara Puspita Ningrum, Lina Gozali and Lamto Widodo	Universitas Tarumanagara
10	11.00 – 11.15	Redesign Layout Planning of Raw Material Area and Production Area Using Systematic Layout Planning (SLP) Methods (Case Study of CV Oto Boga Jaya)	Bintang Bagaskara Korda, Lina Gozali and Lamto Widodo	Universitas Tarumanagara
11	11.15 – 11.30	Understanding of Customer Services Based on Value Chain Strategy and Practical Instructions for Hospital Financial Management at Miriam Pratama Clinic, Kudus, Central Java	Roni Setyawan	Universitas Tarumanagara
12	11.30 – 11.45	Aggregate and Disaggregate Production Planning, Material Requirement, and Capacity Requirement in PT. XYZ	Fransiska Lefta, Lina Gozali and Iveline Anne Marie	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Friday, 22 November , 2019

Room   : Conference Room 1
Time   : 13.00 – 15.15
Track   : Industrial Engineering, Mechanical and Civil Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	The Influence Of IOT (Internet Of Things) Against Industrial Development In Tanah Abang Market	Yorent Natanael	Universitas Tarumanagara
2	13.15-13.30	Potential of processed timber for preserving the Chinese traditional buildings	James Rilatupa, Rudy Trisno and Fermanto Lianto	Universitas Tarumanagara
3	13.30-13.45	Comparison Study Among Production Planning Research in Some Papers and Industries in Indonesia	Fransiska Lefta, Lina Gozali and Iveline Anne Marie	Universitas Tarumanagara
4	13.45-14.00	Flexural properties of bamboo strip composites on lamina configuration	Sofyan Djamil	Universitas Tarumanagara
5	14.00-14.15	Cipali Toll Road Safety Audit	Ni Luh Shinta Eka Setyarini Setyarini, Lekmono Suryo Putranto Putranto and Najid Najid	Universitas Tarumanagara
6	14.15-14.30	Project Manager Classification for Design and Build Construction of State Buildings	Jujuk Kusumawati, Khrisna M, and Najid	Universitas Tarumanagara
7	14.30-14.45	Evaluation of Side Friction in IHCM For Highway 4 Lanes 2 Ways Divide	Najid	Universitas Tarumanagara
8	14.45-15.00	Personal Perfomance Measurement of Project Manager Using Project Manager Competency Development Framework (PMCDF) (Case Study PT.XYZ)	Sarah Wahyuni, Devi Pratami and Achmad Fuad Bay	Telkom University
9	15.00 – 15.15	Mapping and Measuring IT Governance Performance in Higher Education	Bagus Mulyawan, Raymon Kosala, Benny Ranti, Suhono Haryo Supangat	Universitas Tarumanagara

PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 2
Time   : 13.00–15.30
Track   : Informatic Engineering and Technology

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Comments Scraping Application For Review Youtube Content	Viny Christanti M	Universitas Tarumanagara
2	13.15-13.30	Tourism Destination Grouping Systems With Partitioning Clustering Method from Geotagged Photo using Android	Maya Retnosari, Wasino Wasino and Desi Arisandi	Universitas Tarumanagara
3	13.30-13.45	Prediction Analysis Of Criminal Data Using Mechine Learning	Meiliana Meiliana, Dedi Trisnawarman, Muhammad Choirul Imam and Zyad Rusdi	Universitas Tarumanagara
4	13.45-14.00	Sentiment Analysis Ford Opinion Classification Of Smart Farming In Indonesia	James Nata Salim, Dedi Trisnawarman, Zyad Rusdi and Muhammad Choirul Imam	Universitas Tarumanagara
5	14.00-14.15	Decision Support System Model Determines The Type Of Road Construction In Indonesia	Henderi Henderi, Endang Kusnadi and Dedi Trisnawarman	Universitas Tarumanagara
6	14.15-14.30	Business Intelligence Framework for Performance Measurement in Higher Education Study Programs	Dedi Trisnawarman and Muhammad Choirul Imam	Universitas Tarumanagara
7	14.30-14.45	Start to End: Recommended Travel Routes Based on Tourist Preference	Vivien H. Wangi, Jap Tji Beng and Wasino	Universitas Tarumanagara
8	14.45-15.00	Vowel Recognition Based on Face Images Using Fisher Linear Discriminant Analysis	Lina and Desi Arisandi	Universitas Tarumanagara
9	15.00 – 15.15	Segmentation of White Blood Cell Areas from Colour Degraded Microscope Slide Images	Lina, Ery Dewayani and Arlends Chris	Universitas Tarumanagara
10.	15.15 – 15.30	Grouping of Tourism Objects Using Geotagged Photo with Hierarchical Clustering Method in Bantul and Sleman	Fenny Lusiana, Jap Tji Beng and Wasino	Universitas Tarumanagara

Room   : Conference Room 3
Time   : 13.00–15.00
Track   : Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Comparison Study of Facility Planning and Layouts Studies	Bintang Bagaskara Korda, Lina Gozali, Lamto Widodo and Frans Jusuf Daywin	Universitas Tarumanagara
2	13.15-13.30	Establishment of An Application for Quality Detection of Photographs Based on Sharpness and Light Intensity	Hugeng Hugeng, Ardis Jevon Tjahyadi	Universitas Tarumanagara
3	13.30-13.45	Public Housing Savings (TAPERA) and The Application In DKI Jakarta	Henriko Ganesha Putra	Universitas Tarumanagara
4	13.45-14.00	Community Service Report : Designing The Ergonomic Roasting Machine For Coffe Seed WIth Additional Engine at Seduh Kopi Coffe Shop	Frans Yusuf Daywin, Lina Gozali, Lamto Widodo, Carla Olyvia Doaly and Wildan Hendri Ross	Universitas Tarumanagara
5	14.00-14.15	Factors affecting potential customers in choosing an apartment	Suryanto and Nurahma Tresani	Universitas Tarumanagara
6	14.15-14.30	Driving Factors and Occupant Satisfaction Riving Factors and Occupant Satisfaction Choosing Residental Apartment Near Campus University of Indonesia Locations Taman Melati Apartments Margonda	Syahrial Firdausi, Nurahma Tresani and Suryono Herlambang	Universitas Tarumanagara
7	14.30-14.45	Comparison study between nearest neighbor and farthest insert algorithms for solving VRP model using heuristic method approach	Wilson Kosasih, Ahmad, Lithrone Laricha Salomon and Febricky	Universitas Tarumanagara
8.	14.45 – 15.00	Facial Skin Disease Recognition Using Backpropagation Neural Network (Bpnn)	Chairisni Lubis and Krisna Susanti	Universitas Tarumanagara

Room   : Conference Room 4
Time   : 13.00–15.00
Track   : Industrial Engineering & Mechanical Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Concept design for adjustable motorcycle handlebar	Aldo Salim Sandy Yehezkiel, Bready Fernando, Tasya Monica, Joshua Ricardo, Agustinus Purna Irawan	Universitas Tarumanagara
2	13.15-13.30	Development of Wood Carving Furniture Technology in Jepara	Eddy Supriyatna Marizar	Universitas Tarumanagara
3	13.30-13.45	Study of Vertical Residential Development in the Poris Plawad Mass Transportation Development Area (TOD) in Tangerang City	Megawati	Universitas Tarumanagara
4	13.45-14.00	The Characterizing of Ageing Temperature of Lead-Free Solder Sn-0,7Cu x Zn on Mechanical, Physical Properties, and Microstructure	Erwin Siahaan, Abrar Riza	Universitas Tarumanagara
5	14.00-14.15	The effect of maximum cross-section Reduction and Rolling Temperature on Formability and Mechanical Properties of Al-Cu.	Erwin Siahaan	Universitas Tarumanagara
6	14.15-14.30	The influence of Silver content in Lead-Free Solder Sn-0,7Cu xAg (SAC) on Physical and Mechanical Properties.	Erwin Siahaan	Universitas Tarumanagara
7	14.30-14.45	The Characterizing on Corrosion Rate and Mechanical Properties of Low Carbon Steel in Potassium Chromate Solution.	Erwin Siahaan	Universitas Tarumanagara
8	14.45-15.00	Concept design of solar cell satellite dish	Steven Teja Nicholas Travis Adrianto, Louis Martin JM3, Nicholas Kurniawan, Agustinus Purna Irawan	Universitas Tarumanagara

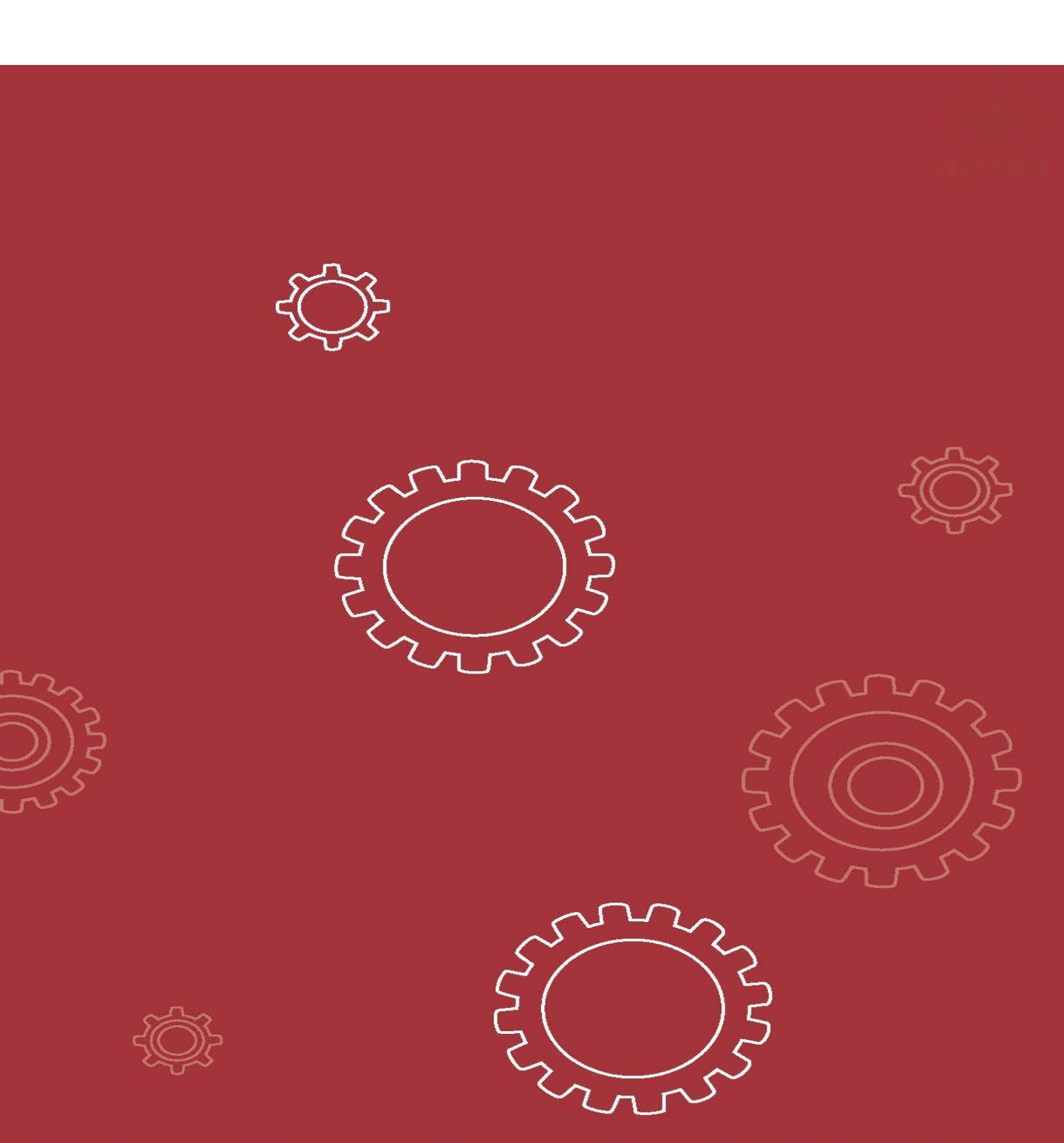PARALLEL SESSION SCHEDULE
Friday, 22 November, 2019

Room   : Conference Room 5
Time   : 13.00–15.30
Track   : Industrial Engineering & Mechanical Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Concept design of high interface powerbank	Verry Gunawan, Nicholaus Christiardy , Agustinus Purna Irawan	Universitas Tarumanagara
2	13.15-13.30	Potential of ProcessTimber for Preserving the Chinese Traditional Buildings	J. Rilatupa and F Lanto	Universitas Tarumanagara
3	13.30-13.45	Reynolds Number Effects on Swirling Flows Intensity and Reattachment Length over a Backward Facing Step Geometry Using STD k-e Turbulance Model	Steven Darmawan	Universitas Tarumanagara
4	13.45-14.00	The Effects of Brand Loyalty and Brand Image on Repurchase Intention of Premium Priced High-Tech Product in Indonesia	Hetty Karunia Tunjungsari	Universitas Tarumanagara
5	14.00-14.15	Investment Analysis of Boarding House in Tanah Abang District	Arnold Pramudita	Universitas Tarumanagara
6	14.15-14.30	Tool Wear Analysis of Coated Carbide Tools on Cutting Force in Machining Process of AISI 4140 Steel	Sobron Lubis	Universitas Tarumanagara
7	14.30-14.45	The role of technology in reshaping the payment method among Indonesians	Keni Keni, Hendry Tjoe and Nicholas Wilson	Universitas Tarumanagara

Room   : Conference Room 6
Time   : 13.00–15.30
Track   : Industrial Engineering

NO	SCHEDULE	PAPER TITLE	AUTHORS	INSTITUTION
1	13.00-13.15	Resistance of Residents In The Klender Public Housing Revitalization Program	Maya Sari, Nurahma Tresani and Wita Simatupang	Universitas Tarumanagara
2	13.15-13.30	Does Go-Jek affected Smart City Operational in Jakarta	Jevon Atmabrata and Nurahma Tresani	Universitas Tarumanagara
3	13.30-13.45	Podcast Technology as a Favorable Media-on-Demand for Indonesian Young Generation	Diah Ayu Candraningrum, Joni Welman Simatupang and Fransisca Iriani Roesmala Dewi	Universitas Tarumanagara
4	13.45-14.00	Travel App - showing nearest tourism site using Haversine formula and directions with Google Maps	Grace Tarani Sridevi Lee, Desi Arisandi and Wasino Wasino	Universitas Tarumanagara
5	14.00-14.15	Website Application for Visualizing Reports of Intangible Cultural Heritage Integrated with Google Maps : Case Study in Balai Pelestarian Nilai Budaya Jawa Barat	Andre Laverius, Wasino Wasino and Ery Dewayani	Universitas Tarumanagara
6	14.15-14.30	Curve Number Method to Determine the Runoff Height in the Upper Cimanuk Watershed	Dwi Ariyani	Universitas Pancasila
7	14.30-14.45	Dry Land Irrigation In Kandar, Tanimbar Islands Regency	Ony Frengky Rumihin	Universitas Tarumanagara
8	14.45-15.00	Development of Transit Oriented Development (TOD) Areas in Improving Public Transport Services and Traffic Engineering in DKI Jakarta Province	Baidowi	Universitas Tarumanagara
9	15.00-15.15	Dynamics Of Land Value Change	Juntrisnawati Loi, Nurahma Tresani and Nasiruddin Mahmud	Universitas Tarumanagara

PAPER • OPEN ACCESS

Redesign Layout Planning of Raw Material Area and Production Area Using Systematic Layout Planning (SLP) Methods (Case Study of CV Oto Boga Jaya)

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Redesign Layout Planning of Raw Material Area and Production Area Using Systematic Layout Planning (SLP) Methods (Case Study of CV Oto Boga Jaya)

Bintang Bagaskara K.[1*], Lina Gozali[1], Lamto Widodo[1]
[1]Industrial Engineering Department, Faculty of Engineering, Tarumanagara University, Indonesia
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Abstract. CV Oto Boga Jaya (Oto Bento) is one of the largest industries which is producing Japanese food that is located in Bogor City and has many franchise partners throughout Indonesia. CV Oto Boga Jaya has the most significant problem and complained by most employees and operators (interview results) is a matter of factory layout between the raw material warehouse and the production area where the position of the two departments has an excess of more than 29 meters and takes time more than 10 minutes for one move. Therefore, researcher conducted observations and data processing with systematic layout planning (SLP) methods to design a new factory layout for CV Oto Boga Jaya. The processed data is the Operation Product Chart (OPC) data by selecting the product that has the highest and longest production process named shrimp roll, routing sheet, material handling costs, and initial layout as a reference. Then after conducting the research, the results obtained are in the form of 2 alternative layouts with distances and positions of different departments that have been processed in the FTC, ARC, ARD, AAD. The results of this study were chosen alternative layout 2, because it has shorter inter-departmental distances, a more orderly production / administration process, and fewer room intersections compared to alternative layout 1.

1. Introduction
Companies in terms of production require high effectiveness and efficiency. CV Oto Boga Jaya is a Japanese cuisine restaurant that was established on December 9, 1999. In the production process CV Oto Boga Jaya still has several problems that must be addressed by this company, namely the long distance between the warehouse of raw materials so that it takes time to move and requires more energy in the material handling used. Marked by the distance that is too far between the warehouse area of raw materials with a production area of more than 29 meters so it takes a longer transfer time to CV Oto Boga Jaya, which is more than 10 minutes. Based on the above problems, the researcher uses the systematic layout planning method, the researcher can help the company to evaluate and minimize the distance and time. The layout design did not add or change the existing production facilities during the study; use five types of reference products, those are the products that have the greatest demand, namely "Shrimp Roll"; and in research only discuss the operational costs of material handling.

2. Literature review and methods
2.1. Definition of Facility Layout
Facility layout is a function that involves analysis (synthesis), planning and design of the interrelationships between physical facility arrangements, material movements, activities

associated with personnel and information flow needed to achieve optimum performance in a range of related activities [1].

2.2. Definition of Warehouse
Warehouse is a building used to store goods [2]. The location for storing the product until demand is large enough to carry out its distribution [3].

2.3. Definition of Production Area
Production is all activities aimed at increasing or increasing the use of an object, or all activities aimed at satisfying others through exchange [4].

2.4. Definition of Layout Planning
Systematic Layout Planning (SLP) is widely applied to various types of problems including production, transportation, warehousing, support services and activities found in offices [5].

2.5. Method of Systematic Layout Planning (SLP)
The following are the steps for the preparation and research by the SLP method: Preliminary Data Collection and Activity, Flow Process Chart, Operation Process Chart, MPPC (Multi Product Process Chart), Production Order (routing sheet) , From To Chart, Analysis of Relationship of Work Activities (Activity Relationship), Activity Relationship Diagrams (ARD), Area Alocation Diagrams (AAD), Work Sheets, Block Templates [5] [6].

2.6. Material Handling Costs
This cost is the cost incurred for moving material or goods by considering the operator's salary and the cost of material handling equipment within a certain distance and time in accordance with the transfer. Cost per second is found from the operator's salary as a power plus the cost of moving equipment per second by taking into account the life of the tool. So the material handling costs (OMH) can be calculated as follows:

$$\text{OMH} = \text{Cost Per Second (Rp) x Transfer Time (seconds)} \qquad (1)$$

3. Results and discussion
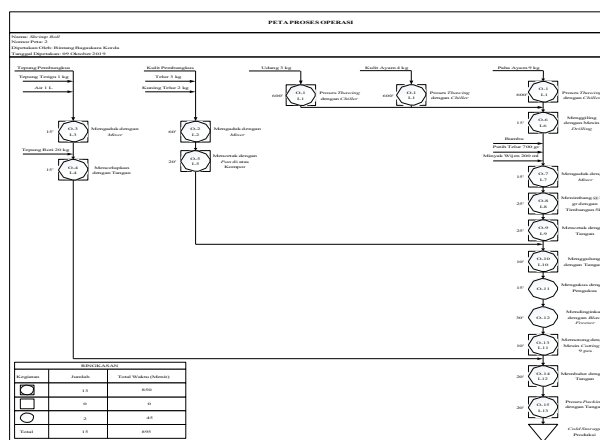### 3.1. Operation Process Chart (OPC)
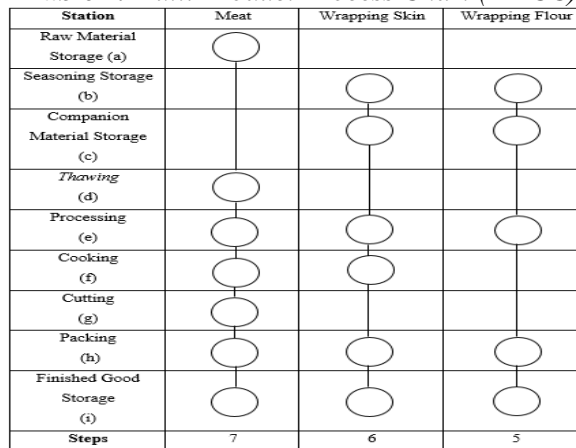

Figure 1. Operation Process Chart (OPC)

3.2. Routing Sheet

Table 1. *Routing Sheet*

Operation	Name	Machine	Standard Time (min)	Set-up Time (menit)	Scrap (%)	Reliability (%)	Efficiency (%)	Expected Amount	Prepared Amount	Amount after Reliability	Amount after Efficiency	Capacity	Number of Machine
						Meat							
O - 1	Thawing	Chiller	600	2	0	90	95	105	105	116.6667	122.807	53.997	2.274
O - 6	Grinding	Drilling	15	1	1	90	95	108.21	109.31	121.4524	127.8446	2159.9	0.059
O - 7	Stirring	Mixer	15	1	1	90	95	107.13	108.21	120.2379	126.5662	2159.9	0.059
O - 8	Weighing	Scale (5 kg)	25	2	0	90	95	180	180	200	210.5263	1295.9	0.162
O - 9	Printing	Hand	25	5	3	90	95	105	108.25	120.2749	126.6052	1295.8	0.098
O - 10	Scrolling	Hand	10	3	1	90	95	105	106.06	117.8451	124.0475	3239.7	0.038
O - 11	Steaming	Steamer	15	1	1	90	95	105	106.06	117.8451	124.0475	2159.9	0.057
O - 12	Cooling	Blast Freezer	30	1	0	90	95	105	105	116.6667	122.807	1080	0.114
O - 13	Cutting	Cutting	10	0.5	1	90	95	105	106.06	117.8451	124.0475	3240	0.038
O - 14	Binding	Hand	20	5	2	90	95	105	107.14	119.0476	125.3133	1619.8	0.077
O - 15	Packing	Hand	20	3	1	90	95	106.06	107.13	119.0355	125.3005	1619.9	0.077
						Wrapping Skin							
O - 2	Stirring	Mixer	60	1	1	90	95	105	106.06	117.8451	124.0475	539.98	0.23
O - 5	Printing	Stove	20	2	1	90	95	105	106.06	117.8451	124.0475	1619.9	0.077
						Wrapping Flour							
O - 3	Stirring	Mixer	15	1	1	90	95	105	106.06	117.8451	124.0475	2159.9	0.057
O - 4	Dyeing	Hand	15	5	3	90	95	105	108.25	120.2749	126.6052	2159.7	0.059

3.3. Multi Product Process Chart (MPCC)

Table 2. *Multi Product Process Chart (MPCC)*

Station	Meat	Wrapping Skin	Wrapping Flour
Raw Material Storage (a)	◯		
Seasoning Storage (b)		◯	◯
Companion Material Storage (c)		◯	◯
Thawing (d)	◯		
Processing (e)	◯	◯	
Cooking (f)	◯	◯	
Cutting (g)	◯		
Packing (h)	◯	◯	◯
Finished Good Storage (i)	◯	◯	◯
Steps	7	6	5

3.4. From To Chart (FTC)

Table 3. *From To Chart* (FTC)

From/To	a	b	c	d	e	f	g	h	i	T	PP
a				144.01 (432.03)						144.01	432.03
b			288.01 (288.01)							288.01	288.01
c				3052.81 (6105.62)						3052.81	6105.62
d					52.81 (52.81)					52.81	52.81
e						62.41 (62.41)		105.61 (316.83)		168.02	379.24
f							81.61 (81.61)	120.01 (240.02)		201.62	321.63
g								52.81 (52.81)		52.81	52.81
h									124.81 (124.81)	124.81	124.81
i										-	-
T	-	-	288.01	144.01	3105.62	62.41	81.61	278.43	124.81	4084.9	-
PP	-	-	288.01	432.03	6158.43	62.41	81.61	609.66	124.81	-	7756.96

Table 4. FTC *Inflow*

From/To	a	b	c	d	e	f	g	h	i	T
a				1						1
b			1							1
c					0.98					0.98
d					0.02					0.02
e						1		0.38		1.38
f							1	0.43		1.43
g								0.19		0.19
h									1	1
i										-
T	-	-	1	1	1	1	1	0.97	1	-

3.5. Activity Relationship Chart (ARC)
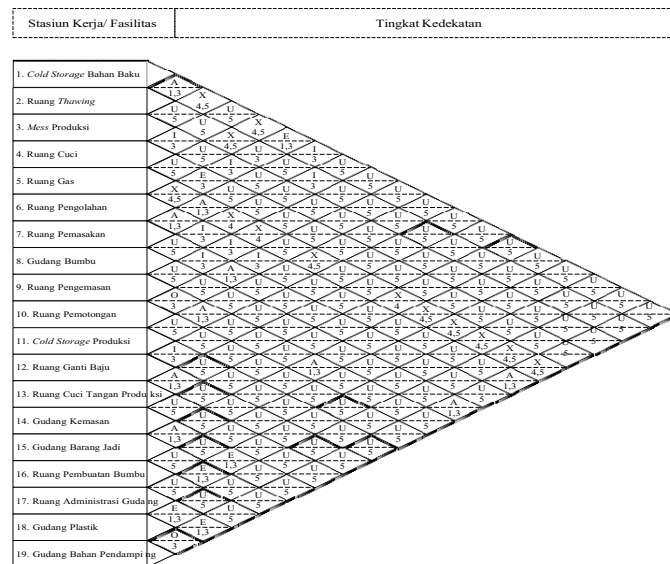
Figure 2. Activity Relationship Chart (ARC)

3.6. Activity Relationship Diagram (ARD)
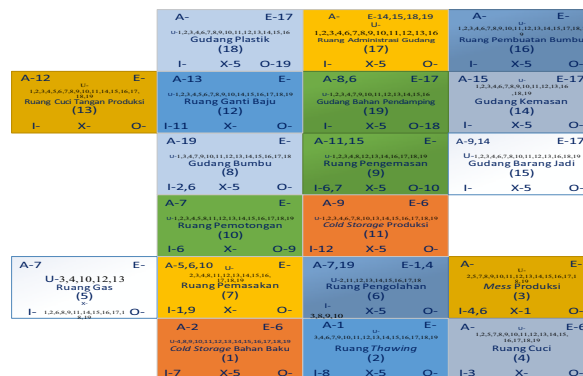
Figure 3. Activity Relationship Diagram (ARD) 1
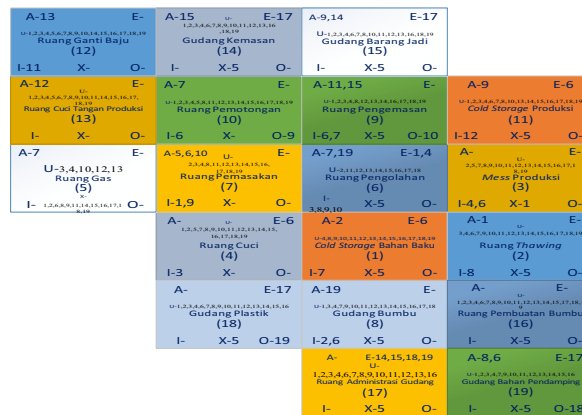
Figure 4. Activity Relationship Diagram (ARD) 2

3.7. Area Allocation Diagram (AAD)
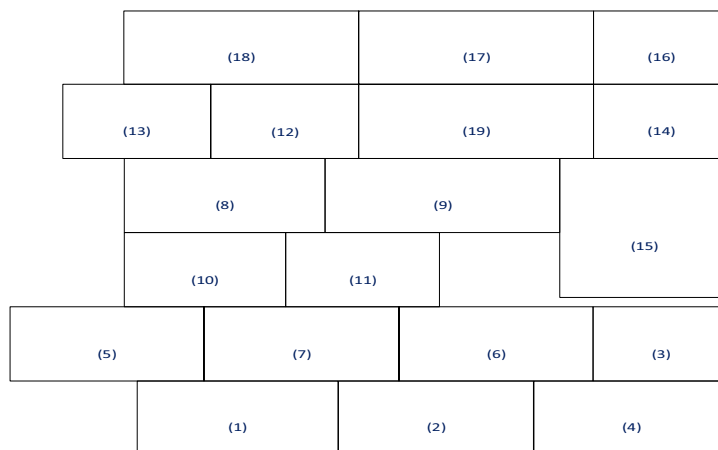
Figure 5. Area Allocation Diagram (AAD) 1
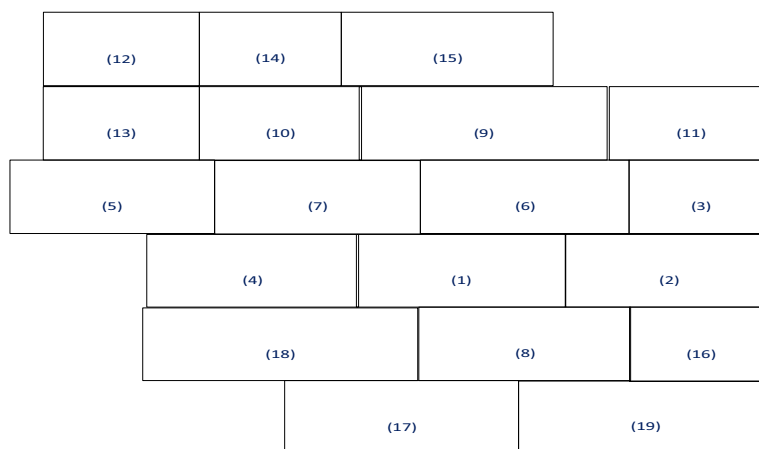
Figure 6. Area Allocation Diagram (AAD) 2
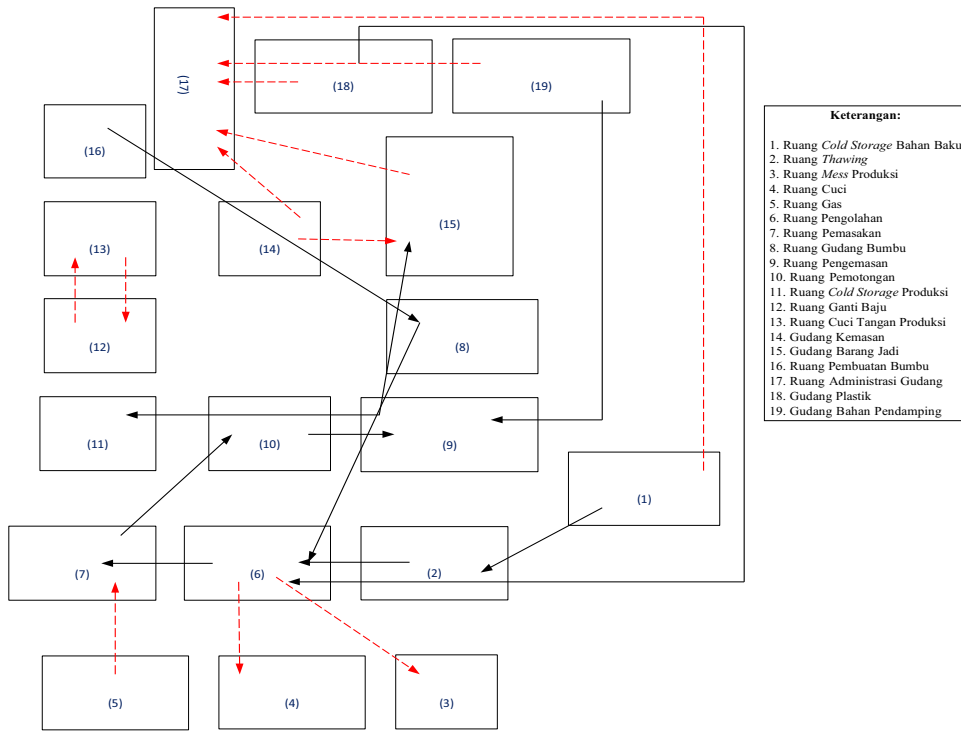
3.8. Flow Process Material Layout
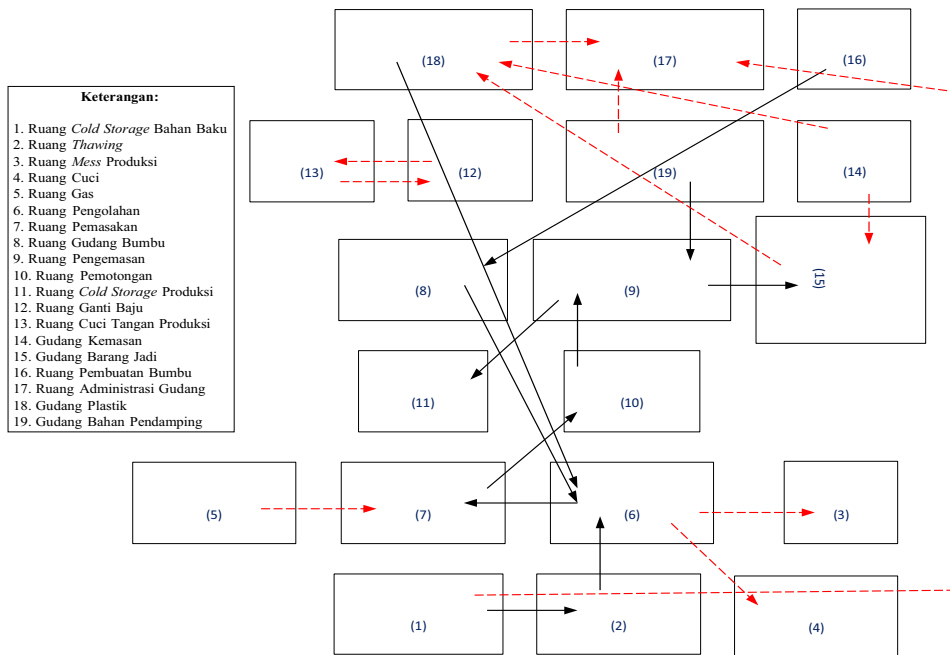

Figure 7. Flow Process Material Initial Layout

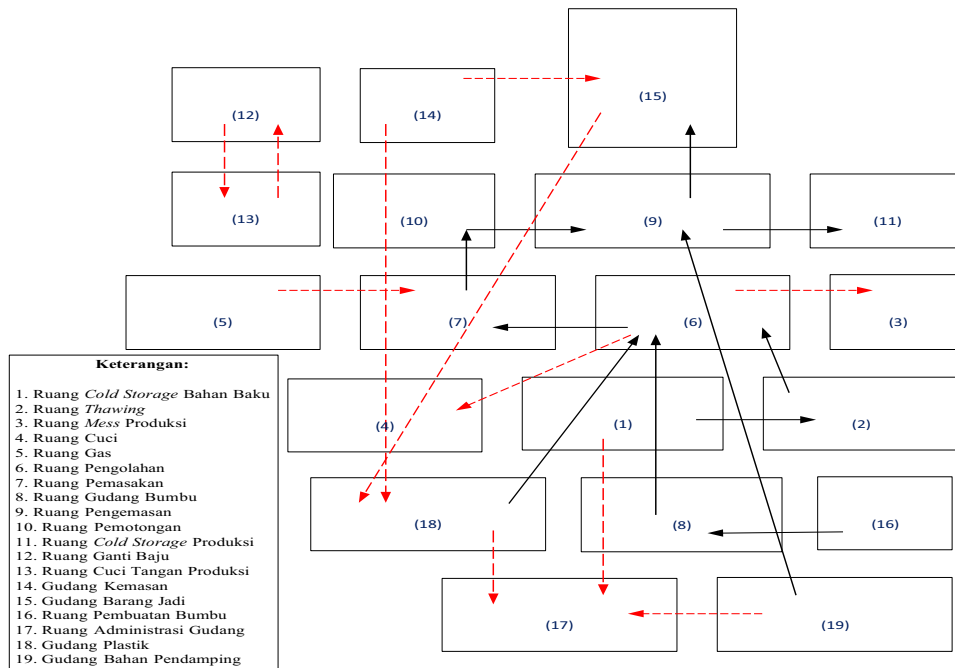**Figure 8.** Flow Process Material Alternative Layout 1

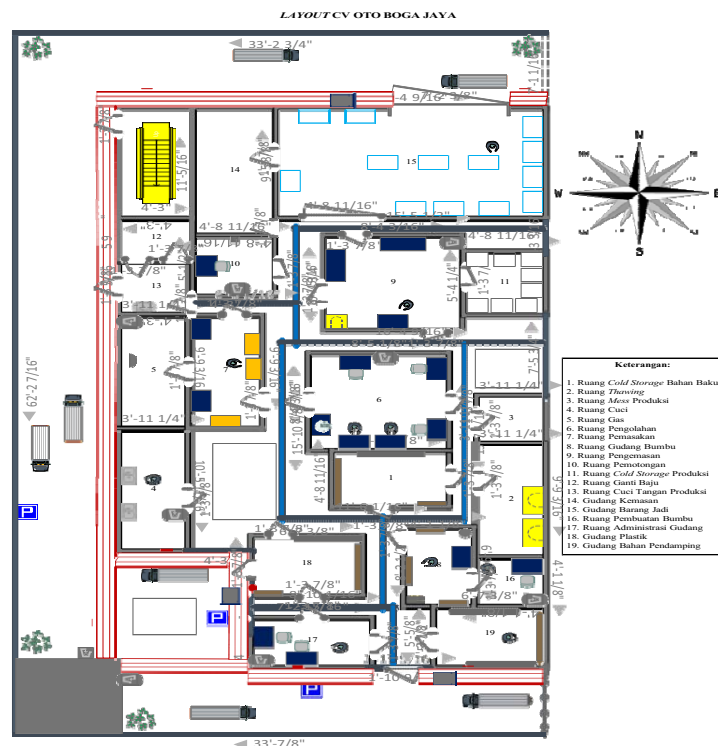**Figure 9.** Flow Process Material Alternative Layout 2

3.9. General Floor Plan

Figure 10. Floor Plan Alternative Layout 2 (Choosen)

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4. Conclusion

Table 5. Results Analysis

Alternative Layout 1	Alternative Layout 2 (Choosen)
The production process line is less organized, it is seen that there are too many displacement paths passing through other departments to get to the destination.	The production process line is more organized, only a few departments are passed from one department to the intended department.
The distance of transfer of material is still far away, because several paths pass through several departments to get to the destination, thus affecting the distance of movement.	The relative displacement distance is closer, because it passes through a few departments for the material transfer path so that the automatic distance is closer.
The administrative process / application of SOP (Standard Operating Procedure) is less orderly, marked by red dotted lines that collide a lot.	The administration process / application of SOP (Standard Operating Procedure) is more organized, it can be seen in the red dotted line which has only a few crosses with other lines.
The administrative process / application of SOP is still a long distance, because many pass through departments for several administrative processes / application of SOP, thus affecting mileage.	The administrative process / application of SOP has a relatively close distance, because only a few departments are traversed for the administration / implementation of SOP.

The selection of alternative layouts considers the distance of material transportation which affects the cost of material handling in the production department. Then it can be concluded that alternative layout 1 and alternative layout 2 have different department positions. The initial layout has a long distance so it takes a long time and incurs material handling costs that are not supposed to. alternative layout 1 and alternative layout 2 can increase productivity by minimizing distance and cutting material handling costs. The result of the alternative layout chosen for CV Oto Boga Jaya's factory was alternative layout 2. The reason for choosing alternative layout 2 is because the production process is more organized compared to alternative layout 1, and has shorter distances in intersecting less space [both production processes and administrative affairs and SOP (Standard Operating Procedure)] than alternative layout 1. As in plastic storage section (18) and spice storage room (8) with processing room (6) and accompanying material warehouse (19) with packaging room (9). The reason for not choosing alternative layout 1 is because the distance between rooms that intersect farther and more rooms that intersect compared to alternative layout 2. spice warehouse (8), production cold storage room (11), and changing room (12). And also the spice making room (16) to the spice shed room (8) which must pass through the companion material shed (19).

5. References

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