

IConBMT

The International Conference on Business
and Management of Technology

Program Book

The 3rd International Conference on Business
and Management of Technology

Online Conference,
July 31st 2021

Organized by:

**BUSINESS
MANAGEMENT**



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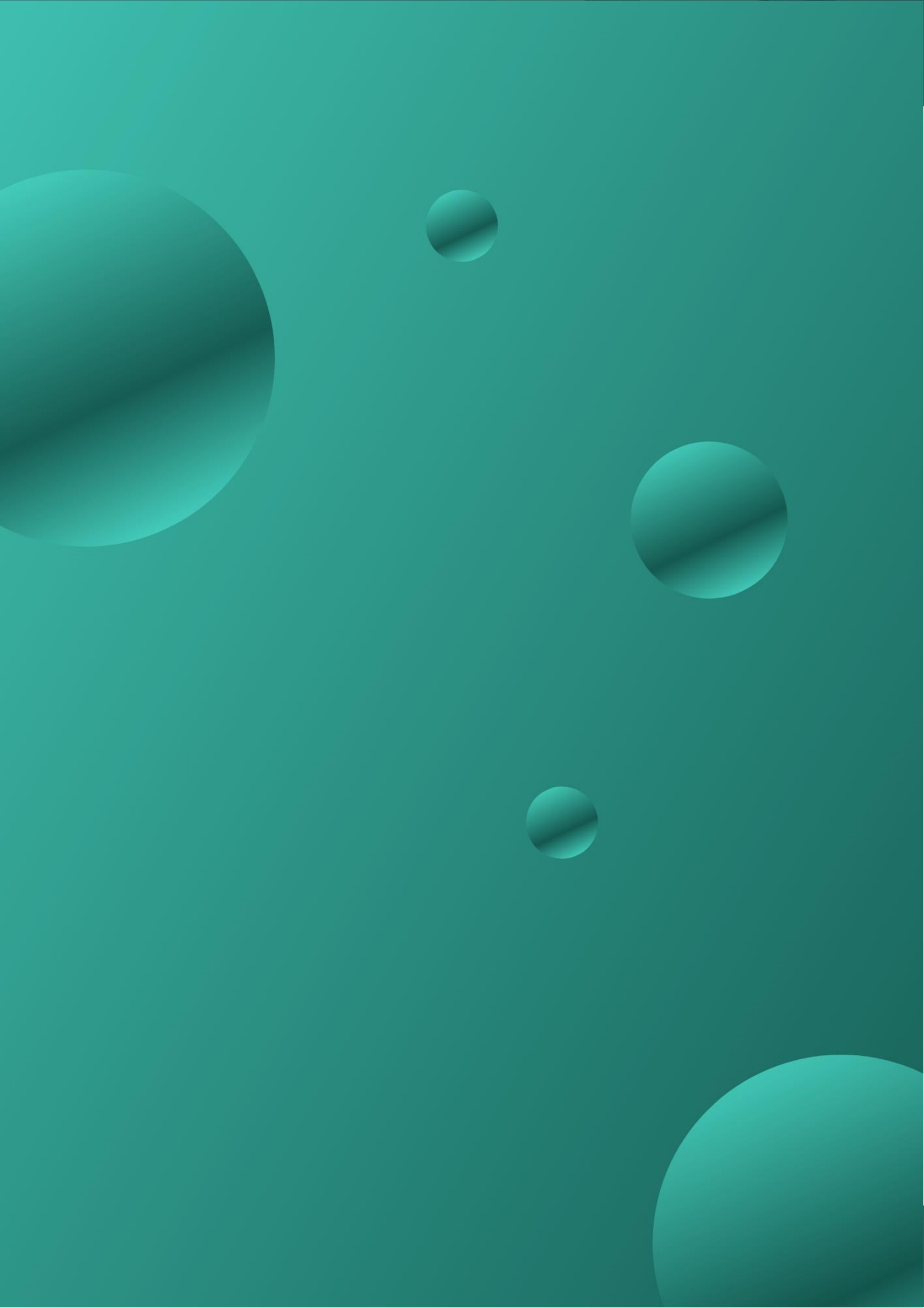
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MESSAGE FROM THE CONFERENCE CHAIR

On behalf of the conference committee, we would like to welcome all delegates to the 3rd International Conference on Business and Management of Technology (IConBMT) 2021. This conference is organized by the Department of Business and Management Institut Teknologi Sepuluh Nopember (ITS) Surabaya, and in partnership with Politeknik Negeri Tanah Laut. The conference is also supported by Swiss German University.

The theme of this year's conference is "Back on Track Post COVID-19 Pandemic: How Agile is Your Business?". Since March 2020, we face unprecedented events due to pandemic COVID19. It is not easy for business, both on the supply and demand sides. However, we believe that through intellectual gathering, such as today, we may find ways to recover, and provide a meaningful path to back on track. Innovation in various aspects is essential to overcome this challenge. This conference will bring together ideas, knowledge, problems, research findings, and expert experiences on post covid-19 pandemic. We are so pleased to see many respected colleagues and reputable practitioners in this conference event. The total of 97 papers were registered, representing a wide range of topics from various fields in the Business and Management of Technology. Thank you very much for your participation. We wish to make a meaningful impact on a better aspect of business and management of technology through our discussion today.

We have recorded that five Countries participate in the submission papers such as Indonesia, Australia, Malaysia, Phillipines, and USA. We are also delighted to have three respected keynote speakers. Mr. Tantowi Yahya from Indonesian Ambassador to New Zealand, Samoa, and Tonga. Assoc. Prof. Dr. Yingyot Chiaravutthi from Mahidol University International College, Thailand, and Prof. James Stanworth from National Cheng Kung University, Taiwan. The respected keynotes are well known in practical and great scientists at their area. Finally, this conference runs smoothly because of the contribution of all parties. We sincerely thank the participants, reviewers, keynote speakers, committees, and audiences of this conference who have made this conference possible.

Wishing you all a productive and enjoyable conference.

IConBMT 2021 Conference Chair,
Dr. Ir. Janti Gunawan, M.Eng.Sc., M.Com.IB



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KEYNOTE SPEAKERS



Mr. Tantowi Yahya
Indonesian Ambassador
New Zealand, Samoa, and
Tonga

How New Zealand SMEs thrive through the COVID-19 Pandemic

SMEs and tourism are a significant part of New Zealand Economy. 97% of industries in New Zealand are SEMs, whereas tourism contributes 20,4% of New Zealand's total export value and NZD 3,8 billion in the form of tax income. The Covid 19 Pandemic severely impacted New Zealand's SMEs and tourism industry. The government had taken some extraordinary measures to mitigate the spread of the virus. Those measures have brought consequences both on the daily life of its people and the economy. The Jacinda Arden's administration manage to contain the spreading of the Covid 19 virus across New Zealand while maintaining the wellbeing of the SMEs and the tourism industry which are important parts of the New Zealand's economy foundation through policies that supports the sustainability of SMEs and tourism industry.



Assoc. Prof. Dr. Yingyot Chiaravutthi
Chair of South East Asia
Chapter – Academy of
International Business
Mahidol University
International College,
Thailand

AIB and How the Universities in Thailand Dealing with Covid

The business world has been catching up with the disruption trend, even prior to the COVID-19. The pandemic simply makes it inevitable. The academic world is no exception. The purpose of the presentation is to share the experiences under the roles of the Chair of the Executive Committee of Academy of International Business (AIB): Asia Pacific Chapter and the Associate Dean of Finance and Human Resources at Mahidol University International College, Thailand. In 2019, AIB: Asia Pacific Chapter's Executive Committees met and agreed to hold the annual conference at Phnom Penh, Cambodia. Eventually, the online approach was employed, amidst several challenges and uncertainties. Higher education institutions in advanced economies that rely on international students face a similar challenge when travel is prohibited. The situation in Thailand has not been as severe as in other advanced economies until mid-2021. Students' demand and behavior have changed due to this new health and security concern; and although higher education could overcome several challenges in the short run, it is difficult to predict the long-term consequences.



Prof. James Stanworth
National Cheng Kung
University, Taiwan
Professor in Service
Management

The Chinese User - Technology Adoption Prospects Post Covid-19

Service is central to the way firms co-create value with their customers. Technology increasingly mediates these interactions - whether it be in self-service technologies or online education, which we can see as a service. Covid-19 amplifies the attention on the role played by technology in service. Prior to Covid-19, there was already a marked difference in the adoption of self-service technologies and online learning between users in the West and Far-East. This relates to fundamental differences in cognitive patterns between Western and Far-Eastern peoples and varying assumptions over the role of interpersonal connections versus institutionalized norms. With these understood we are in a position to consider how users may react to technology in service post Covid-19.



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GENERAL PROGRAM

Online, July 31st, 2021

Time (GMT+7)	Agenda
08.30 - 09.30	Prelude
09.30 - 09.35	Opening MC
09.35 - 09.40	Opening Performance
09.40 - 09.45	Opening Remark
09.45 - 09.55	Welcoming Speech by Rektor of ITS
09.55 - 10.00	Intoduction of Co-Host of IconBMT
10.00 - 10.45	Keynote Speaker 1: Mr. Tantowi Yahya Indonesian Embassy to New Zealand, Samoa and Tonga
10.45 - 11.30	Keynote Speaker 2: Assoc. Prof. Dr. Yingyot Chiaravutthi Mahidol University International College, Thailand
11.30 - 12.15	Keynote Speaker 3: Prof. James Stanworth National Cheng Kung University, Taiwan
12.15 - 13.00	Break
13.00 - 15.00	Parallel Session
15.00 - 15.05	Closing Ceremony
15.05 - 15.10	Announcement of Best Presenter and Best Paper
15.10 - 15.15	Compilation Videos of IconBMT 2021



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PARALLEL SESSION

July 31st, 2021

13.00 – 15.00 (GMT+7)

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18	Reza Hermansyah and Riyanarto Sarno	SENTIMENT ANALYSIS BASED ON QUALITY DIMENSION ASPECTS IN IMPROVING THE QUALITY OF INDIHOME PRODUCTS AND SERVICES PT TELKOM INDONESIA TBK
19	Alvin Syarifudin Shahab and Mohammad Isa Irawan	Non-Container Port Services Bottlenecks Identification Using Process Mining and Simulation Analysis
30	Danica Virlianda Marsha, Riyanarto Sarno and Kelly Rossa Sungkono	Standard Operating Procedure Optimization of Resource Level for Hospital Waste Handling Using Hybrid DES-ABM Simulation, Genetic Algorithm and Goal Programming
36	Akhmad Bajora Nasution and Rr Ratih Dyah	Analysis of Asphalt Refinery Development. Case Study: Production Capacity Planning and Location Determination
46	Bayu Cahyono, Sumarsono Sumarsono, Dena Hendriana, Gembong Baskoro and Henry Nasution	TQM Implementation in an Indonesian Remanufacturing Company with a Long- Term Relationship with Customer Satisfaction and Business Performance
52	Mochamad Aziz, Dena Hendriana and Gembong Baskoro	Strive Reliable Heavy Equipment Main Component Lifetime with Oil Monitoring System in Condition Based Maintenance Implementation through IoT
29	Riza Ali Fikri and Mohammad Isa Irawan	Information Technology Governance Audit At A Regional General Hospital of Sidoarjo Regency With the Cobit 5 Framework
31	Arief Budiman Hervananda	Implementation Of Enterprise Risk Management (ERM) And Organizational Performance: Moderating Role of Organizational Culture at State-owned Indonesian MRO
32	Mushonnifun Faiz Sugihartanto, Syarifa Hanoum and Jovanka Nabilah Hadi	Evaluating hospital efficiency using data envelopment analysis: A Literature Review
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58	Hasanuddin Hasanuddin, Gembong Baskoro and Aditya Pratama	Reducing Scrap of Cement A3CM-05 By Using PDCA (Plan Do Check Action) And QCC (Quality Control Circle) Method In An Indonesia Leading Tire
62	Fatwa Dewi Widyani and Athor Subroto	Comparison of Artificial Neural Network and Seasonal ARIMA to Forecast Intermittent Demand in Telecommunication Company
63	Mahdi Diego and Athor Subroto	De Minimis Impact Towards Lead Time for Global Logistic Industry
71	Putri Asriyah and Nurmala Nurmala	Cause of delay analysis in procuring goods at Geothermal Power Plant Companies
79	Arif Supriyanto, Agustian Noor and Yunita Prastyaningsih	SMART VEST PROTOTYPE FOR SEAT POSITION CORRECTION
34	R Sunni Nugraha Priadi and Udisubakti Ciptomulyono	IMPLEMENTATION OF AHP AND TOPSIS METHODS FOR NON-SIMULATION ENHANCED OIL RECOVERY TECHNIQUES SCREENING IN “X” AND “Y” FIELDS
38	Imam Turmudi and M.Isa Irawan	DETERMINING PRIORITY OF CCTV PACKING FOR MONITORING PHYSICAL DISTANCING COVID-19 PREVENTION IN BATU CITY WITH DEMATEL AND AHP METHODS
40	Warih Puspitasari, Muhardi Saputra and Donny Trihanondo	ISLAMIC BOARDING SCHOOL DIGITALIZATION TO FACE THE ERA OF THE DIGITAL REVOLUTION 4.0
55	Hermawan Aji Utomo, Tanika Sofianti and Sumarsono Sudarto	Improving Quality of Compound Properties Base on Best Sequence of Produce Mixture Using Analytical Hierarchy Process Approach in Rubber Compounding
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76	Rulianda Purnomo Wibowo, Isfenti Sadalia and Isdiana Syahfitri	Is tourism sector still the main contributor of Local Government Revenue in Samosir Regency?
3	Vilar K. Adhi, Janti Gunawan and Nabila S. Hakim	THE RELATIONSHIP BETWEEN PERCEIVED RISK OF COVID-19 PANDEMIC TOWARD THE INTENTION TO TRAVEL OF INDONESIA DOMESTIC TOURISTS
4	Muhammad Fahmi Nugroho, Janti Gunawan and Mushonnifun Faiz Sugihartanto	THE EFFECT OF PERCEIVED VALUE AND TEAM IDENTIFICATION ON SPECTATORS' PURCHASE INTENTION OF PERSEBAYA LICENSED MERCHANDISE
5	Abdurrafi Maulana Ghani, Janti Gunawan and Mushonnifun Faiz Sugihartanto	DESIGNING PLACE BRANDING ELEMENTS AND INSTAGRAM MARKETING OF FOOD CLUSTERS AS A CREATIVE TOURISM DESTINATION IN SIDOARJO
6	Ghaisani Nadhila Mahmudi, Janti Gunawan and Bahalwan Apriyansyah	THE EFFECT OF CSR FEMVERTISING ABOUT WOMAN EMPOWERMENT TOWARDS PURCHASE INTENTION: A CASE STUDY OF THE BODY SHOP IN INDONESIA
7	Dani Bergas, Janti Gunawan and Bahalwan Apriyansyah	ANALYSING YOUTUBE MID-ROLLS ADVERTISING FACTORS ON WATCHERS' PURCHASE INTENTION OF ONLINE TRAVEL AGENT DURING COVID-19 PANDEMY
8	Naurah L. Fithriyah, Janti Gunawan and Nabila S. Hakim	THE ONLINE SECOND-HAND SHOPPING MOTIVATION (OSSM) TOWARDS PURCHASE INTENTION OF FASHION PRODUCTS IN THE COVID-19 PANDEMIC PERIOD
11	Syarifatul Aisah, Janti Gunawan and Nabila Silmina Hakim	ADOPTING DESIGN THINKING APPROACH FOR ECOTOURISM PRODUCT DEVELOPMENT AND SEGMENTATION (CASE STUDY : JATILUHUR VALLEY & RESORT)
12	Ika Diyah Candra Arifah	E-COMMERCE GAMIFICATION: THE EFFECT OF GAMEFUL EXPERIENCE (GAMEX) AND GAME DESIGN ON THE SELF-BRAND CONNECTION OF E-

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15	Ihsan Firdaus, Janti Gunawan and Nabila Hakim	THE INFLUENCE OF MEMORABLE TOURISM EXPERIENCE (MTE) ON REVISIT INTENTION OF LOMBOK TOURISM DESTINATION DURING COVID-19 PANDEMIC
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80	Muhammad Yunus, Muhammad Ghalih and Ani Suasri	EVALUATION OF SALES USING THE TOPSIS AND ENTROPY METHODS
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43	Tiophani Naomi and Gita Gayatri Phd.	THE INFLUENCE OF SITUATION-DEPENDENT FACTOR ON INTENTION TO USE AIRPORT SELF-SERVICE TECHNOLOGY AND TRAVEL INTENTION: DEVELOPING AN EXTENDED MODEL OF GOAL-DIRECTED BEHAVIOR
53	Farhah Izzah Dinillah, Janti Gunawan and Bahalwan Apriyansyah	Exploring the Role of Virtual Try On use Mobile Augmented Reality (MAR) in Indonesia Consumer's Online Buying Behaviour during Covid-19 Pandemic
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57	Emilleo Boby Erlangga, Satria Fadil Persada and Bahalwan Apriyansyah	The Effect of Consumer Intrinsic Factors on Impulsive Buying Behaviour in Online Marketplace: Case Study of Shopee Consumers

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93	Ni Gusti Made Rai, Erica Meilina, Maziya Atika, Melani Febrianti and Rofifah Aisy	Analysis of Factors Affecting Intention to Use E-wallet Services Sustainably During the COVID-19 Pandemic
95	Nabila Silmina Hakim, Syarifa Hanoum, Mushonnifun Faiz Sugihartanto, Winaldo Mandiri Putra, Raga Pamor Alam, Harits Dymawafie and Aliifah Tsabitah Nur Annisa	The Influence of Brand Equity on Smartphone Purchase Decisions for Female College Students in Surabaya
96	Sara Veronica, Satria Fadil Persada	Analysis the effect of Viral Marketing on Brand Image and Purchase Intention of Furniture Products During The Covid-19 Pandemic
97	Anggit Akbar Yudisaputra, Satria Fadil Persada	ANALYSIS OF BUSINESS DEVELOPMENT & MARKETING STRATEGY CASE STUDY MULTINATIONAL TRADING COMPANY (PT. XYZ)
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24	Rhamadina Fitrah Umami and Mohammad Isa Irawan	Application of UTAUT2 for Analysis of Use Behavior Sistem Informasi Manajemen Barang Milik Daerah (SIMBMD) in District Government XYZ

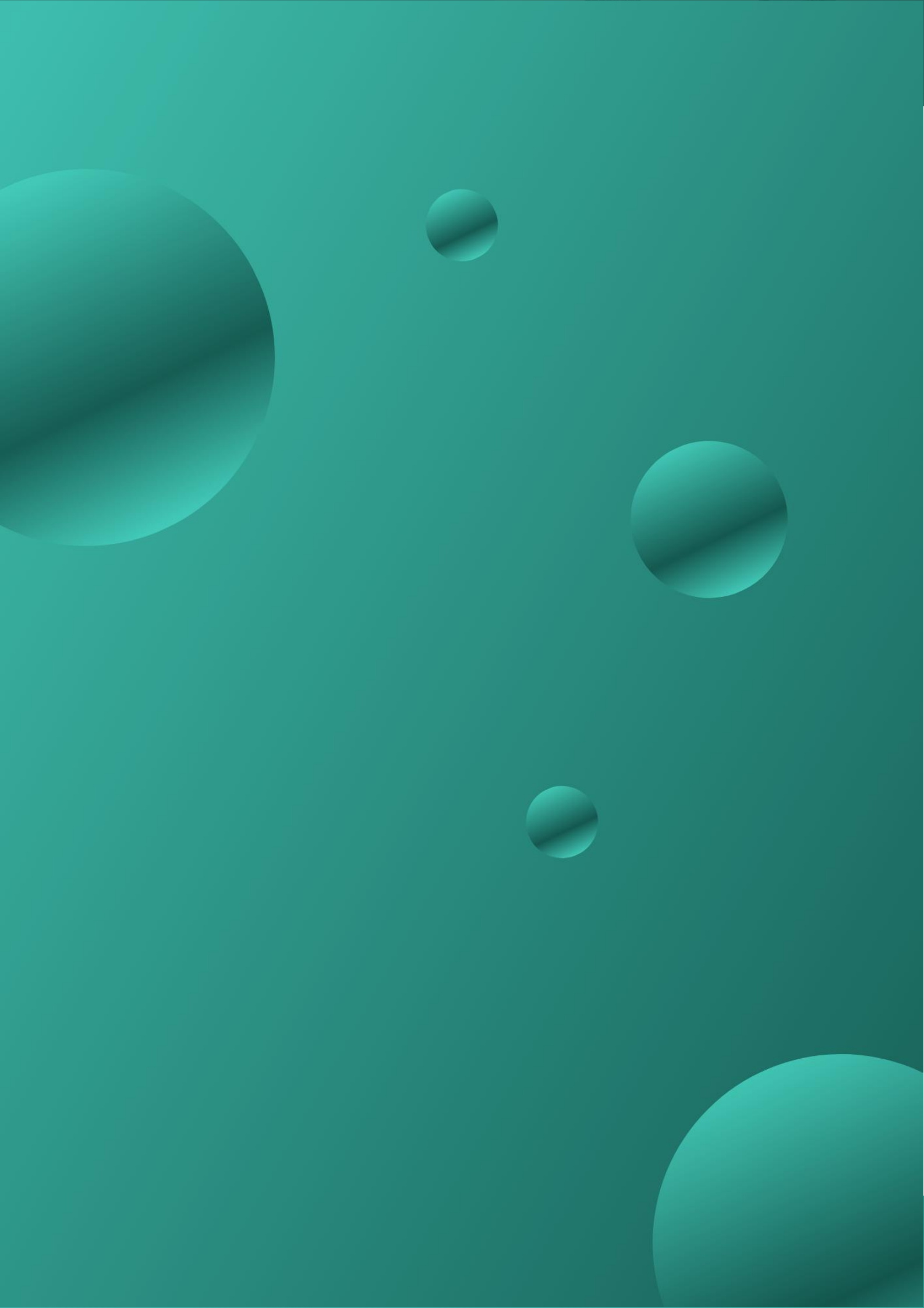
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48	Teguh Setiono, Dena Hendriana, Henry Nasution, Gembong Baskoro and Edi Sofyan	The Effect of Increasing Mechanic Competence via Competence-Based Curriculum on Product Support Performance in Leading Indonesian Heavy Equipment Manufacturers
49	Yohanes Eka Prayuda, Sumarsono Sumarsono, Edi Sofyan, Gembong Baskoro, Aditya Tirta Pratama and Henry Nasution	Choosing an Intervention for Implementing Behaviour-Based Safety (BBS) in a Building Construction Project
20	Adnin Diba Purnomo and Mohammad Isa Irawan	ANDROID BASED EMPLOYEE PERFORMANCE ASSESSMENT SYSTEM USING MANAGEMENT BY OBJECTIVE (MBO) AND BEHAVIORALLY ANCHORED RATING SCALE (BARS) METHOD
39	Ermy Rizkawati	Job Crafting Analysis As The Impact Of Working Condition Changes In The Covid-19 Pandemic
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70	Yasmin Chairunisa Muchtar and Linda Trimurni Maas	Employee Performance Analysis: The Influence of Local Wisdom-Based Communication Strategy and Employee Engagement on Employee Performance

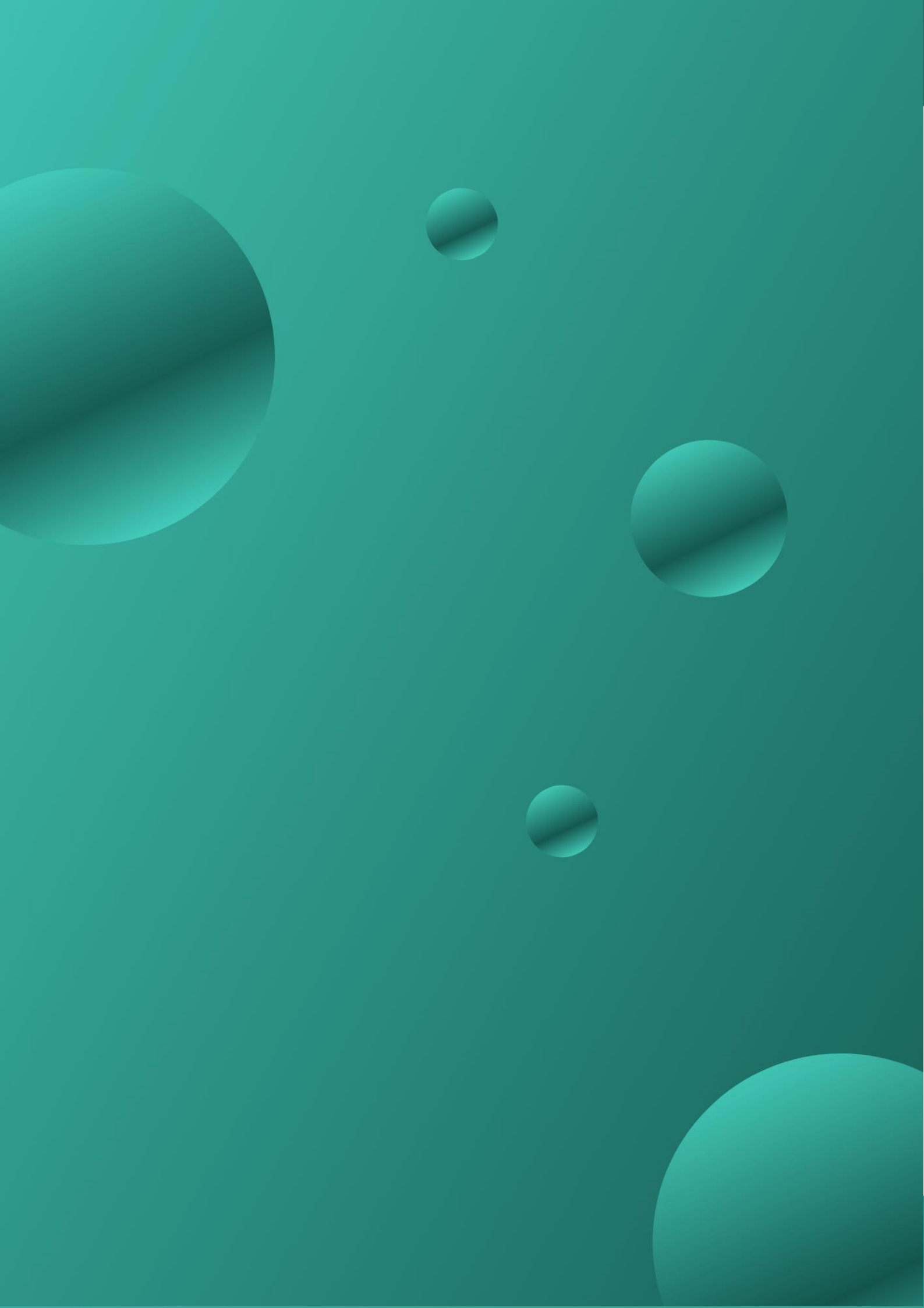
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89	Inneke Qamariah and Yasmin Chairunisa Muctar	The Influence of Strategic Leadership, Intrapreneurship Orientation, and University Support on the Commercialization Capability of Academics in Higher Education at USU
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87	Syarifa Hanoum, Josua Hasiholan Munthe, Prahardika Prihananto, Aldi Arhab Al Khawarizmi, Dwika Zain Magenda, Muhamad Ady Nugroho and Oktaviana Manalu	The Relationship of Social Media Networking and Human Resource Recruitment: A Literature Review
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92	Helmi Fitrananda Putra, Ni Gusti Made Rai and Nabila Silmina	THE EFFECT OF WORK CONFLICT AND JOB STRESS ON EMPLOYEE PERFORMANCE (CASE STUDY: MAINTENANCE & ENGINEER DIVISION AT PT. PAITON OPERATION & MAINTENANCE INDONESIA)
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51	Hafidz Syihab and Zuliani Dalimunthe	Why did borrowers apply for debt restructuring during the covid-19 pandemic
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35	Ninditya Nareswari, Geodita Woro Bramanti and Aang Kunaifi	The Effect of Behavioral Biases on Risk Perception

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75	Geodita Woro Bramanti, Ninditya Nareswari, Maydawati Fidellia Gunawan, Aang Kunaifi and Nugroho Priyo Negoro	Descriptive Analysis of Environmental Performance, Sustainability Report, and Financial Access In Non-Financial Sector Companies
86	Adi Saputro, Abdul Muta Ali and Marliza Noor Hayatie	ANALYSIS OF FINANCIAL PERFORMANCE USING ECONOMIC VALUE ADDED (EVA) METHOD IN PT DARMA HENWA Tbk. 2017-2019 PERIOD
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13	Seprianti Eka Putri	Assessment Consumer Intentions to Use e-Wallet During COVID-19 Outbreak in Indonesia
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41	Teuku Rian Aulia and Budi W Soetjipto	Effect of Openness to Change, Empowerment, Customer Orientation, and Marketing Innovation to Resilience and Survival of a Convenient Store Business in the Midst of Covid-19 Pandemic
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TQM Implementation in an Indonesian Remanufacturing Company with a Long-Term Relationship with Customer Satisfaction and Business Performance

Bayu Cahyono^{1,2} Sumarsono² Dena Hendriana^{2,*} Gembong Baskoro² Henry Nasution²

¹ United Tractors. Tbk., Jakarta - Indonesia

² Master of Mechanical Engineering, Swiss German University, Tangerang - Indonesia

*Corresponding author. Email: dena.hendriana@sgu.ac.id

ABSTRACT

Total Quality Management (TQM) implementation highlights two critical components of daily management and policy management that must be guaranteed to assure customer satisfaction and corporate performance. The researchers concentrated on the success of TQM adoption through internal management diagnostic and customer satisfaction surveys to address this issue. The primary goal of this study is to examine the relationship between TQM implementation effectiveness and its effects on customer satisfaction and business performance utilizing the Quality Function Deployment (QFD) approach. TQM implementation was found to have a beneficial influence on customer satisfaction and business performance, with a correlation seen in daily management and policy management effectiveness utilizing the QFD technique. TQM implementation focuses on parts of day-to-day management and policy deployment. An internal diagnosis is required by management as a feedback loop for evaluating to create a sustainable TQM implementation. The QFD method can ensure the linkage between day-to-day management and policy management, which is carried out according to the results of the customer satisfaction survey and business performance to ensure the effectiveness of the necessary improvements.

Keywords: Total Quality Management, Quality Function Deployment, Customer Satisfaction, Business Performance.

1. INTRODUCTION

Most companies are trying to satisfy their customer's needs and expectations through: improvement in product quality, increased customer satisfaction, and continues improvement towards world class organizations [1]. Total Quality Management (TQM) represents "Policy Development" which means changes and improvement in the conventional ways drastically, as well as "Daily management" which means daily small improvements. The implementation of TQM is emphasized on two important aspects in Daily Management (DM) and Policy Management (PM) which periodically need to be diagnosed as feedback on continuous improvement of TQM implementation is shown in Figure 1. Sustainable TQM implementation must have an impact on customer satisfaction and company's business performance.

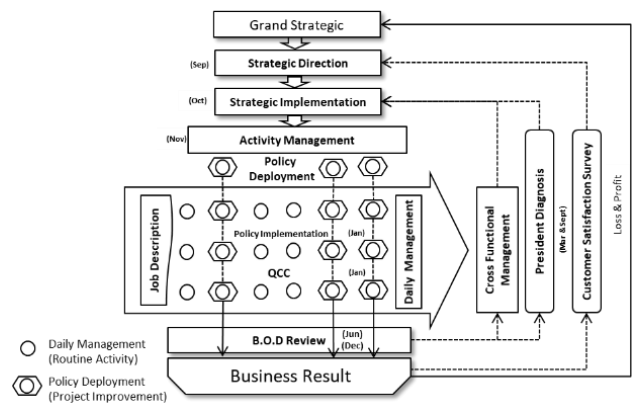


Figure 1 Total Quality Management outline.

Total Quality Management focuses on product and process. It focuses on the company's business, which starts from determining the company's grand strategy and implementation strategy to carrying out the activity management needed to achieve its business performance and customer satisfaction [2-3]. This research ensures the necessary framework so that TQM can be

appropriately implemented and looks for the approaches required to ensure that TQM implementation will impact customer satisfaction and the company's business performance.

This research aims to propose a framework for implementing sustainable TQM and ensure that Daily Management and Policy Management activities are in line with efforts to achieve customer satisfaction and the company's business performance. A particular approach is needed to ensure the successful implementation of TQM to impact customer satisfaction and company business performance.

2. LITERATURE REVIEW

2.1. Company Management System

A company Management System is a management system that involves all employees to manage and improve the quality of business processes through an alignment process between strategy and execution, continuous improvement and innovation to achieve customer satisfaction and increase competitiveness.

Company management systems have functioned as: (1) Guidelines for running the management system, (2) Aligning company goals and strategies to the activity level of each individual, (3) Encouraging improvement and innovation activities throughout the company starting from individual level up to company level [4].

As a system, the company management system is integrated with the company value system, which is a system of values and norms that underlie the company, methods, procedures, policies, and work behaviour of all company employees.

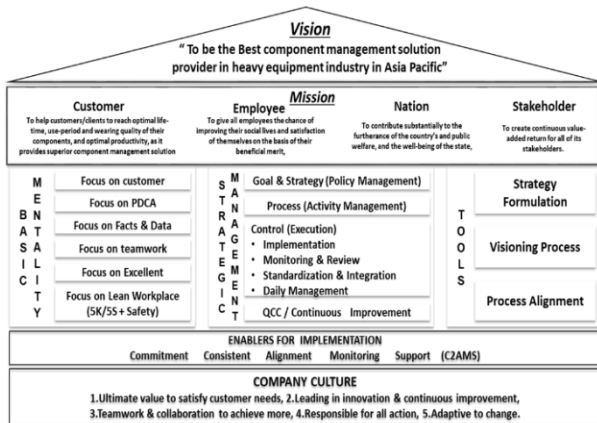


Figure 2 House of Total Quality Management [4]

The Company Management System represented as the House of Total Quality Management is shown in Figure 2 consists of four pillars [4]:

A. Basic Mentality

The mental attitude that underlies the way of thinking and acting following company values. Basic Mentality includes: (1) Focus on Customer, (2) Focus on PDCA, (3) Focus on Fact and Data, (4) Focus on Teamwork, (5) Focus on Excellence, and (6) Focus on Lean Workplace [4].

B. Strategic Management

Strategic management ensures that the process of strategy formulation (Policy Management) through to its translation (Policy Deployment) and execution (Activity Management) is carried out correctly. Improvement and innovation activities are inseparable parts of Policy Management and Activity Management. Strategic Management is carried out by rotating the PDCA cycle at all organizational levels, both at the strategic and operational levels.

The PDCA cycle in Strategic Management is divided into the following 5 phases. There are eight steps within each of these phases, as shown in the following chart shown in Figure 3 [4].

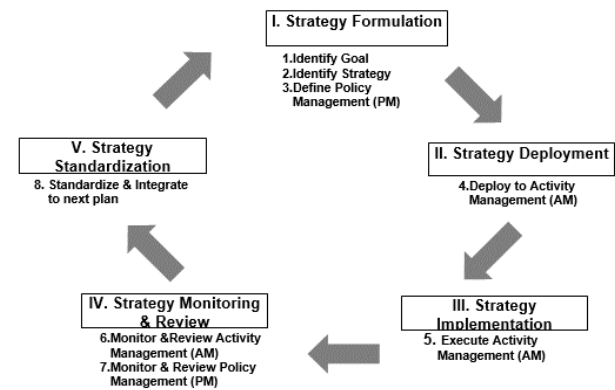


Figure 3 5 phases of Strategic Management

C. Tools

In carrying out each phase of strategic management, several tools are needed so that each stage can produce output as expected. What is expected is not only good output but also correct in the process.

D. Enabler for Implementation

In facing the challenges and obstacles of strategy implementation, companies need enablers. This aspect can help the company provide understanding and acceptance of the strategy by the organization, allocate resources that support the strategy, monitor implementation and continue to learn to improve strategic management.

2.2. Previous Studies

Total quality management (TQM) is an integrated management philosophy aimed at continuously improving products and processes to achieve better customer satisfaction [3].

The past TQM literature reported mixed and ambiguous relationships between TQM practices and an organization's performance. This study aims to develop and propose the conceptual framework and research model of TQM implementation concerning organization performance, consisting of Satisfaction Result and Business Result is shown in Figure 4.

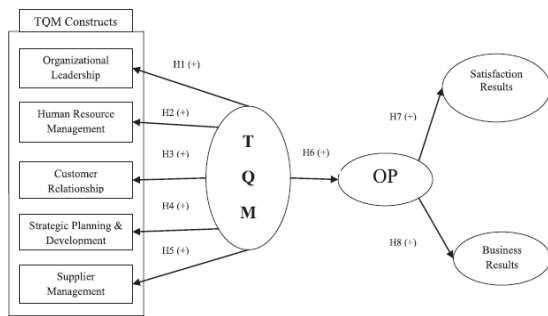


Figure 4 Conceptual research framework linking the TQM and Organization Performance [3]

3. RESEARCH METHODES

3.1. Research Frameworks

The detail framework of the research is shown in Figure 5.

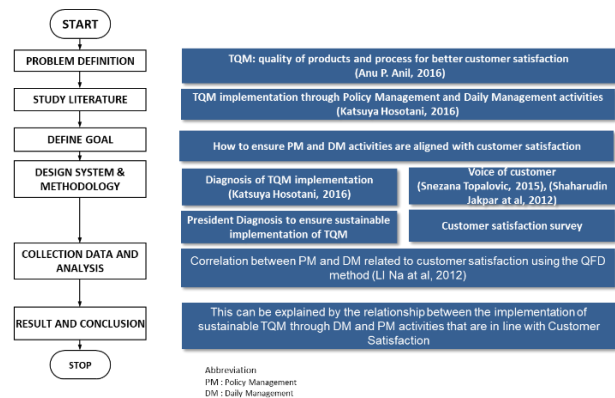


Figure 5 Research framework

3.2. Structured Interview Diagnosis (President Diagnosis)

Top management executives and managers should identify the weak points in the activity processes by comparing them to the activity targets and then comprehensively evaluating the promotion of TQM activities. Both the diagnosed party and the diagnosing

party should bilaterally determine the measures needed. Therefore, self-improvement is required from the diagnosing party as well as from the diagnosed party.

With the President's decisive leadership and all the staff's dedicated efforts and enthusiasm, these activities will lead to a smoother TQM promotion PDCA cycle and enable promotion targets in a shorter period.

Internal diagnosis check sheet:

A. Policy Management Deployment

1. Are Strategic Direction deploy to Strategic Implementation in each Division?
2. Are Strategic Implementation in each division deploy to Activity Management in each Dept./Plant?
3. Are additional B.O.D instructions reflected in the Strategic Implementation (Division) and Activity Management (Department/Plant) in the current year?
4. Do Division Head catch requirements of business situation change?
5. Due to business situation change, do Division Head add or revise their Strategic Implementation?
6. Are the problem/constraint in the previous year is the basis in determining the current Strategic Implementation and Division Target?
7. Do each Division Head understand each target in their Strategic Implementation?
8. Are the descendants of the Strategic Implementation Division made Project Management Improvement? (documented & standardized)
9. Are the problem/constraint in the previous year is the basis in determining the current Activity Management and Dept. Target?
10. Are the target of the Activity Management (Detail Activity Plan) is measured?
11. Are Strategic Implementation managed well & reviewed every month?
12. Are un-achieved result in Strategic Implementation followed by PICA?
13. Do Mgr follow up strategic Implementation every month?
14. Are problems cleared by monthly activity?
15. Do Division Head take action for concretely?

B. Daily Management

1. Are there clear job description in each function applied?
2. Are there relation between job description & control item in Daily Management?
3. Are there clear target (number) in every control item?
4. Are there clear target for every month?
5. Are there any issued PICA for un-achieved result?
6. Are PICA followed up?

C. Improvement Confirmation Review (Every Semester)

7. Do they recognize their problems in their section?
8. Do they take action to solve the problem?
9. Do they make preventive action?

D. Tools

10. Do Division Head understand about BOD Comment?
11. Do they follow-up BOD comment?
12. Are there clear action plan for BOD Comment follow-up?
13. Are there any progress of BOD Comment follow-up?

Internal diagnostics carried out at a leading heavy equipment remanufacturing company in Indonesia related to the initial application of TQM showed in Figure 6.

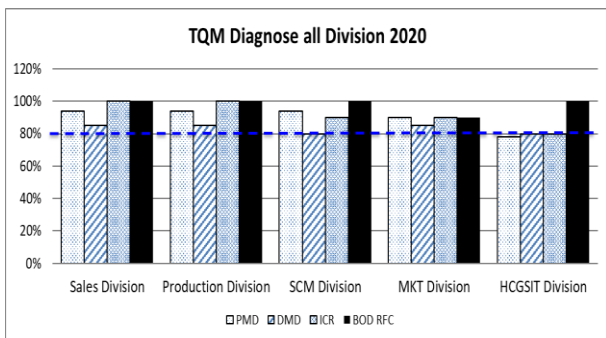


Figure 6 Result of internal diagnosis – All Division

The initial implementation of TQM showed results: show values above 80%, offers a reasonably good value for the initial implementation of TQM.

3.3. Customer Survey

A survey was conducted to see the percentage of service quality and product quality based on customer satisfaction in using company repair services [5].

Measurements are aimed at customers who transact from 2018-2020. To find out the variables of service quality and product quality that affect customer satisfaction.

The purpose of the survey is to determine customer satisfaction as early detection of the root of existing problems, which can hinder organizational performance and be used as a basis for improvement.

The population of respondents is 83 End-Customers and 56 Branches, with three representatives for each customer. With 83 & 56 customers (417 respondents), the target respondents (using the Solvin formula with a margin of error of 10%) are 81 respondents.

A customer satisfaction survey was distributed via SMS and Email to 417 respondents. The Customer Satisfaction Index calculation is done by dividing the weighted total by the nominal scale used then multiplying it by 100 percent.

The CSI formula is as follows:

Table 1 CSI Formula

Perception Value	Interval	Score Interval	Unit Performance
1	1,00 - 2,59	25,00% - 64,99%	= Strongly Disagree
2	2,60 - 3,06	65,00% - 76,60%	= Disagree
3	3,06 - 3,53	76,61% - 88,30%	= Agree
4	3,53 - 4,00	88,31% - 100,00%	= Strongly Agree

Result of Customer Satisfaction Survey Year 2020:

Table 2 Result of Customer Satisfaction Survey Year 2020

No	Variable	Question	CSI
1	Empathy	The company can understand my problems/complaints and can provide solutions to the problems	80,29%
2	Tangible	The company provides components with the best product quality assurance	77,91%
3	Reliability	Remanufacturing services provided by UTR comply with remanufacturing work standards	79,10%
4	Perceived Quality	The company can be trusted because it has the expertise and competence to handle the component problems that I have	79,10%
5	Performance	The productivity of UTR components suits with my equipment requirements	79,76%
6	Aesthetics	I am satisfied with the packaging I received as long as I used the repair services from you	80,98%
7	Responsiveness	The company is fast / responsive in providing my component needs	78,31%
8	Serviceability	I am satisfied with the service provided compared to other remanufacturing companies	76,32%
9	Features	The service variations for the components provided are able to meet the needs of my equipment	76,32%
10	Durability	The life time given is according to my wants and needs	72,35%

11	Assurance	The company provides services and / or products according to the promised time	74,33%
12	Conformance	The components provided have the performance approaching new components	70,37%
13	Reliability	The warranty given at this time (3000 hours / 6 months) is according to my wishes	65,91%
			76,24%

4. RESULT AND DISCUSSION

4.1. Quality Function Deployment

Quality function deployment (QFD) is a method to transform user demands into design quality [6-7], as shown in Figure 7, to deploy the functions forming quality, and to deploy strategies for achieving the design quality into subsystems and parts, and ultimately to specific elements of the manufacturing process [8].

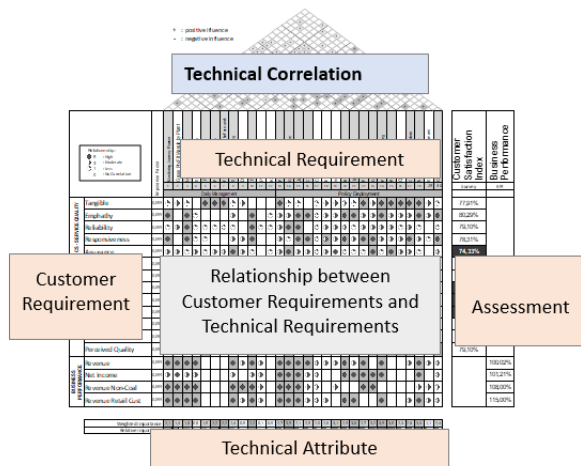


Figure 7 Quality function deployment

The relationship between TQM implementation and its impact on customer satisfaction and business performance is seen using the QFD method with the following provisions:

- Customer Survey and Business Performance was placed as a target on the Customer requirements side.
- Two aspects of TQM: Daily Management and Policy Management, are seen as Technical Requirements.
- The results of the CS Index and achievement of business performance are seen as an assessment/achievement.

4.2. Business Performance Result

A. Defines the Scope of the Business Performance

The implementation of TQM has an impact on company business performance, especially company performance until the end of 2020, as follows:

- All revenue: 820 billion IDR or 100.02% of the target.
- Revenue non-coal: 453.48 billion IDR or 125.27% growth from last year.
- Revenue retail customer: 132.82 billion IDR or 105.18% growth from last year.
- Net income: 13.85 billion IDR or 115.50% of the target.

B. Correlation between Business Performance and Daily Management – Policy Management Activities

First, analyse each daily management initiative or policy management for each business performance by providing relationship values: High (9), Moderate (3), Less (1) dan No Correlation (0).

Check out the examples below:

Table 3 Policy Management - Intensify Top ULTRA through product competitiveness to increase profitability (Example)

Control Point SI	Target	Activity Management (AM)	Check Point AM	Relationship Value
Top ULTRA Component Qty	21 Qty	Define criteria/definition of Top ULTRA	Doc. State	Mod.(3)
		Calculate capacity and Production Cost in Production Plant's Priority	Qty. Plant	Mod.(3)
		Evaluate Contribution Margin (CM) & Gross Profit (GP)	Doc. Eval.	Mod.(3)
		Set development cost alternative to increase CM & GP	Doc. State	High (9)

C. Business Performance and TQM Implementation

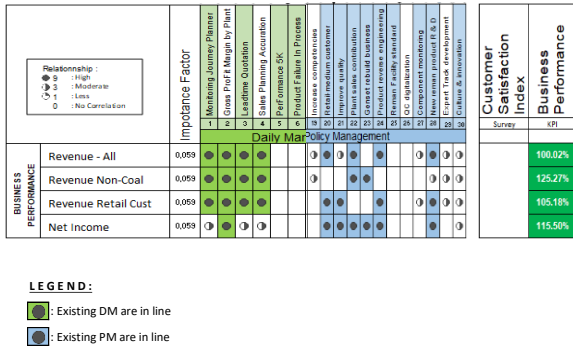


Figure 8 Business performance vs TQM implementation

Analysis:

1. All revenue performance is supported by 6 daily management activities and 8 policy management activities.
2. Revenue non-coal performance is supported by 7 daily management activities and 5 policy management activities.
3. Revenue retail customer performance is supported by 6 daily management activities and 7 policy management activities.
4. Net income performance is supported by 2 daily management activities and 9 policy management activities.
5. In carrying out each phase of strategic management, several tools are needed so that each phase can produce output as expected. What is expected is not only good output but also correct in the process.

The implementation of TQM has an impact on company business performance, especially company performance until the end of 2020, as follows:

1. All revenue: 820 billion IDR or 100.02% of the target.
2. Revenue non-coal: 453.48 billion IDR or 125.27% growth from last year
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4. Net income: 13.85 billion IDR or 115.50% of the target.

4.3. Customer Satisfaction Survey Result

A. Customer Satisfaction Survey and TQM Implementation

In this research, we see the relationship between TQM Implementation through Daily Management and

Policy Management and its impact on the Customer Satisfaction survey with the following results:

1. There are several aspects of the CS Survey results that need to be improved: Assurance, Reliability, Conformance and Durability.
2. The four aspects that need to be improved, there is no significant relationship related to Daily Management: Assurance (1), Reliability (0), Conformance (0) and Durability (2).
3. The four aspects that need to be improved, there are already several Relationships related to Policy Deployment: Assurance (3), Reliability (4), Conformance (2) and Durability (9), but they must be analyzed more in their effectiveness.

B. Modify the TQM Activity to Align with Customer Satisfaction

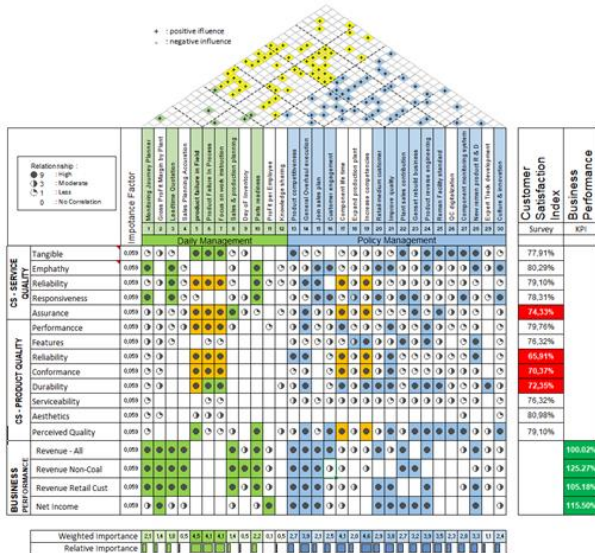
Based on the results of the CS Index in the current year, there are unsatisfactory results on the attributes: Assurance (74.33%), Reliability (65.91%), Conformance (70.37%) and Durability (72.35%). This is in line with the lack of alignment between Daily Management activities against the four attributes or several Policy Management, which must be re-evaluated to be more effective.

Daily Management modifications are carried out as follows:

1. Continuing to use the control board of "Product Failure in Process".
2. Adding the control board of the "Product Failure in Field" control board.
3. Adding the control board of "Daily Inspection".
4. Adding the control board of "Claim Status" to control customer claim status.

Policy Management modifications are carried out as follows:

Existing Policy Management "Component life time" improvement project is shown in Figure 9 that aims to increase component life to be more focused on engine and cylinder products where both components have a significant impact on customer satisfaction and quality.



LEGEND:
 ● Existing DM are in line
 ● Existing PM are in line
 ● Improvements in line

Figure 9 Quality function deployment – after improvement

5. CONCLUSION

- The implementation of TQM has a significant impact on company business performance (as of Dec'2020): revenue (all): 820 bio-IDR (100.02% of the target), and net income: 13.85 bio-IDR (115.50% of the target).
- The CS survey results for the category of service quality showed satisfactory results in line with TQM daily management and policy management activities as seen in the correlation diagram of the QFD method.
- The CS survey results for the category of product quality showed unsatisfactory results so it is necessary to improve the activity of TQM by using the QFD correlation diagram.
- Internal diagnosis by management as a feedback system with a good conformity value above 80%, indicating the implementation of TQM can be sustainable.

6. RECOMMENDATION

In every company annual plan, it is crucial to consider customer satisfaction for next year's activity plans in line with Daily Management and Policy Management activities.

AUTHORS' CONTRIBUTIONS

Bayu Cahyono made contributions as first authors. Data was collected and analysed by Bayu Cahyono and Sumarsono. All authors (Gembong Baskoro, Dena Hendriana, and Henry Nasution) made contributions to the design of the study and the writing of the manuscript.

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