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# ICRES ISCLO

# 2025

*The International Conference On  
Research In Emerging Technologies  
And Strategic Business & 10th  
International Seminar And  
Conference On Learning  
Organization*

## **Conference Theme :**

Accelerating Transformation through Digital  
Innovation, Organizational Agility, and  
Strategic Collaboration for Connected World

**11-12  
December 2025**

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and Conference on Learning Organisation  
(ICRES-ISCLO)**

Theme: “Accelerating Transformation Through Digital Innovation,  
Organizational Agility, and Strategic Collaboration  
for a Connected World”

**Hybrid International Conference**  
**Telkom Corporate University Campus, Bandung, Indonesia**

**December 11-12, 2025**

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and Strategic Business & The 10th International Seminar and  
Conference on Learning Organisation (ICRES-ISCLO)**

**Theme: “Accelerating Transformation Through Digital Innovation, Organizational Agility, and Strategic Collaboration for a Connected World”**

**Editorial Board:**

Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.

Assoc. Prof. Dr. Hendrati Dwi Mulyaningsi

Santi Rahmawati, MSM.

**Cover and layout:**

Finna Zephyrine

Mochammad Fachrizal

Donny Maulana Jefrianto

**Publisher:**

Yayasan Sinergi Riset dan Edukasi

**Office Address:**

Komplek Sinergi Antapani  
Jl. Nyaman 31, RT01 RW23, Bandung 40291, Indonesia  
Contact: (+62) 811227479 / (+62) 8112331733  
Email: [contact@researchsynergy.org](mailto:contact@researchsynergy.org)

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# FOREWORD

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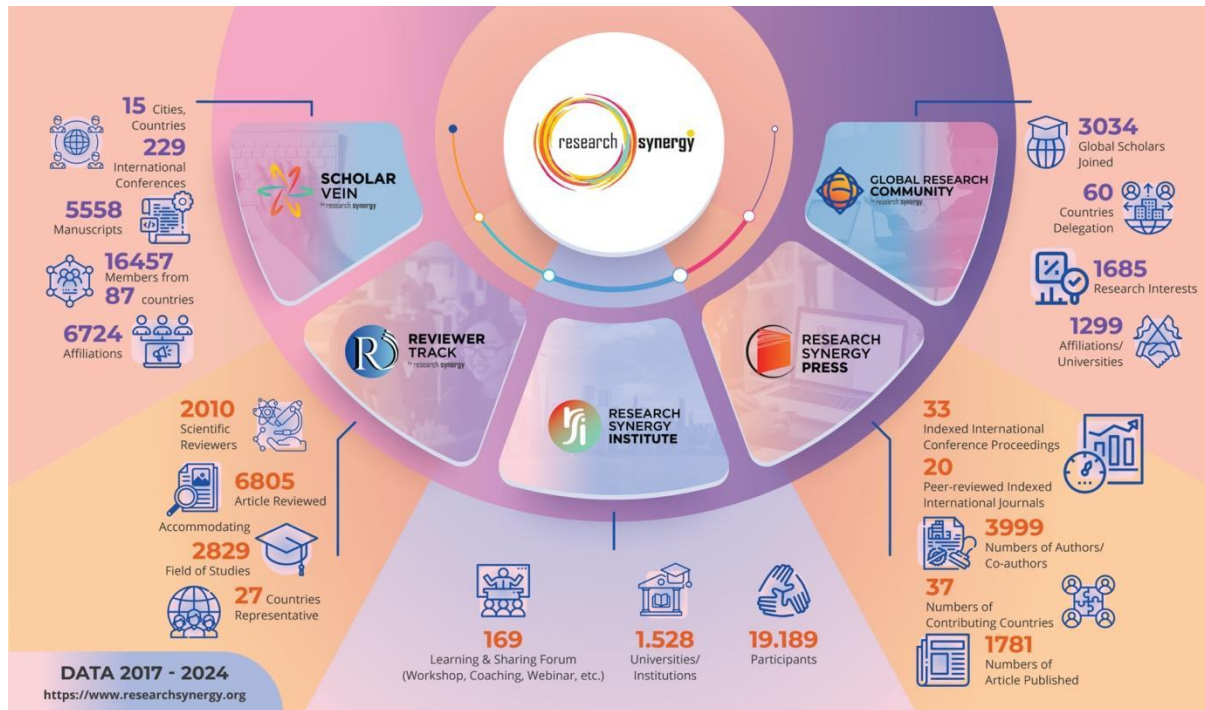


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To become a globally trusted sovereign investment institution that accelerates Indonesia's sustainable economic development and long-term national resilience.

### **Mission**

- To manage Indonesia's sovereign wealth with professionalism, transparency, and strong governance.
- To attract global strategic investments that support national priority sectors and long-term economic growth.
- To promote sustainable, responsible, and high-impact investment practices aligned with Indonesia's development agenda.
- To strengthen partnerships with domestic and international institutions to enhance national competitiveness.

### **Objectives**

- To optimize long-term financial returns while contributing to Indonesia's structural transformation.
- To diversify national investment portfolios and reduce economic vulnerabilities.
- To support strategic projects in infrastructure, digitalization, energy transition, and human capital development.
- To ensure accountable and prudent management of national assets in accordance with global best practices.

### **Core Values:**

- Integrity
- Accountability
- Sustainability
- Professionalism
- Collaboration

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## **Vision**

To become a world-class university that excels in education, research, and innovation in digital technology and creative industries.

## **Mission**

1. To provide high-quality education that develops globally competitive graduates with strong digital competencies.
2. To advance impactful research and innovation that contributes to national and global development.
3. To strengthen collaborations with industry, government, and international partners to enhance applied innovation.
4. To foster an academic environment that promotes ethical conduct, creativity, and entrepreneurship.

## **Objectives**

- To enhance the university's research productivity and global academic recognition.
- To develop innovative learning ecosystems aligned with digital transformation trends.
- To expand international partnerships and accreditation initiatives.
- To contribute to community development through socially oriented innovation and technology solutions.

## **Core Values**

- Integrity
- Excellence
- Innovation
- Collaboration
- Service





## **Vision**

To be the leading digital telecommunications company that accelerates Indonesia's digital future.

## **Mission**

- To deliver world-class digital connectivity, platforms, and services that empower communities and industries.
- To drive digital innovation that enhances productivity, inclusivity, and national competitiveness.
- To expand sustainable digital infrastructure across Indonesia to support equitable development.
- To operate with customer-centricity, operational excellence, and commitment to long-term value creation.

## **Objectives**

- To strengthen Indonesia's digital ecosystem through reliable connectivity and integrated services.
- To enhance business and technological capabilities to compete in the global digital industry.
- To support government initiatives in digital transformation, smart cities, and innovation ecosystems.
- To ensure sustainable growth through responsible business practices and investment in human capital.

## **Core Values**

- Integrity
- Professionalism
- Customer Focus
- Innovation
- Continuous Improvement

<https://www.telkom.co.id/>



## **Vision**

To become a leading and globally recognized university in education, science, and culture.

## **Mission**

1. To provide high-quality education that develops professional educators and experts in various fields.
2. To advance research, innovation, and community service that contribute to national development.
3. To strengthen institutional capacity, governance, and international collaboration.
4. To cultivate scholars with integrity, cultural awareness, and global competitiveness.

## **Core Values**

- Academic Excellence
- Professionalism
- Integrity
- Innovation
- Service to Society



## **Vision**

To become a leading vocational higher education institution in manufacturing technology that is internationally recognized.

## **Mission**

- To deliver applied education in manufacturing and engineering that meets industry standards.
- To develop applied research and innovation that supports industrial competitiveness.
- To provide community service and professional training aligned with technological advancements.
- To foster partnerships with industry, government, and global institutions.

## **Core Values**

- Excellence
- Discipline
- Professionalism
- Innovation
- Industry Collaboration



## **Vision**

To become a reputable postgraduate education institution that produces innovative, ethical, and globally oriented scholars.

## **Mission**

- To provide high-quality postgraduate programs that support academic and professional advancement.
- To promote research and scientific publications that address societal and industrial needs.
- To develop graduates with leadership, analytical, and ethical competencies.
- To strengthen national and international academic cooperation.

## **Core Values**

- Integrity
- Academic Excellence
- Responsibility
- Innovation
- Community Engagement



## **Vision**

To become a world-class business school that develops transformative leaders and entrepreneurs.

## **Mission**

- To deliver innovative business and management education rooted in ethics and leadership.
- To produce impactful research that contributes to business, economic, and societal advancement.
- To promote entrepreneurship, creativity, and interdisciplinary collaboration.
- To engage with industry, government, and global partners to create broader societal impact.

## **Core Values**

- Integrity
- Innovation
- Leadership
- Entrepreneurship
- Collaboration

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## **Vision**

To be a leading educational institution in the Philippines recognized for academic excellence, professional competency, and global competitiveness.

## **Mission**

- To provide quality education that equips students with relevant skills for global employment.
- To foster innovation, integrity, and service-oriented values among learners.
- To maintain strong linkages with industry, government, and international institutions.
- To deliver community-oriented programs that contribute to national development.

## **Core Values**

- Excellence
- Integrity
- Service
- Professionalism
- Global Competence

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# CONFERENCE CHAIR MESSAGE

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Distinguished Participants and Guest,  
Excellencies, Ladies, and Gentlemen

Good morning and a warm welcome to all esteemed keynote speakers, respected presenters, honored guests, and dedicated members of our global academic community. It is with profound appreciation and great enthusiasm that I welcome you to the **1st International Conference on Research in Emerging Technologies and Strategic Business (ICRES)** and the **10th International Seminar and Conference on Learning Organisation (ISCLO)**.

This year's conference carries the transformative theme: **"Accelerating Transformation Through Digital Innovation, Organizational Agility, and Strategic Collaboration for a Connected World."** This theme reflects our shared aspiration to navigate the complexities of digital disruption, foster resilient learning organizations, and strengthen strategic business practices through research-driven innovation and global collaboration.

We are deeply honored to host our distinguished keynote speakers, whose insights and leadership will inspire our collective journey:

- **Prof. Gadaf Rexhepi** – South East European University
- **Parman Sukarno, S.T., M.Sc., Ph.D.** – Vice Rector for Academic Affairs, Telkom University (TelU)
- **Mr. Jayant Barghava** – Indonesia Country Managing Director, Accenture
- **Prof. Dr. H. Didi Sukyadi, M.A.** – Rector, Universitas Pendidikan Indonesia

**ICRES–ISCLO 2025** serves as a strategic platform to unite academics, practitioners, industry leaders, and learning-organization experts to share the latest research findings, best practices, and multidisciplinary perspectives. **ICRES–ISCLO 2025** Organized by **Telkom Corporate University, Research Synergy Foundation, and Telkom University**. Co-hosted by **Universitas Pendidikan Indonesia, Politeknik Manufaktur Bandung, Pascasarjana Universitas Pasundan, Big Data Lab ITB, and World Citi College, Philippines**, and supported by **Scholarvein, Reviewer Track, Research Synergy Institute, Research Synergy Press, Global Research Community, and F1000Research**, this hybrid conference enhances accessibility and fosters inclusive participation—connecting scholars from around the world both onsite in Bandung and online.

Your presence here as speakers, presenters, reviewers, or global attendees—embodies the spirit of scholarly collaboration. Over the next two days, we hope this conference becomes a vibrant space for intellectual exchange, meaningful dialogue, and impactful partnerships that will continue long after the event concludes.

On behalf of the organizing committee, I extend my deepest gratitude to all partners, keynote speakers, reviewers, and participants for your invaluable contribution to the success of **ICRES–ISCLO 2025**.

May this conference be enriching, inspiring, and transformative for each of you. I wish you great success in your presentations, discussions, and collaborations.

Best regards,

***Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.***  
Conference Chair of ICRES-ISCLO

## CONFERENCE CHAIR

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***Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.***

**Senior General Manager, Telkom Corporate University**

## CO-CONFERENCE CHAIR

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***Assoc. Prof. Dr. Hendrati Dwi Mulyaningsih, S.E., M.M.***  
**Founder & CEO of Research Synergy Foundation**

**Associate Professor. Dr. Hendrati Dwi Mulyaningsih** is the chairperson and founder of Research Synergy Foundation that has shown great commitment on creating Global Network and Research Ecosystem. This GNR ecosystem has been developing since 2017 up to the present and having increasing numbers of the member up to more than 35.000 from all around the globe. Her passion in how to create impact and co creation value among all the stake holder of RSF has made her focus on upholding integrity in the scientific process through enhancement of RSF's support- support system as like Reviewer track, Scholarvein, Research Synergy Institute and Research Synergy Press. Thus, her work in this area has made her as the Nominee of Impactful Leadership Awards from Tallberg Foundation Sweden 2019 and 2024

As lecturer, she has been working in the University since 2008 – at present in Indonesia as Associate Professor and she hold her Doctoral Science of Management graduated from School of Business and Management Institute of Technology Bandung (SBM-ITB) and she has strong interest to her research project as well as her research field in Social Entrepreneurship, Social Innovation and Knowledge Management.

As researcher, her work studies and research on this research field made her be invited as reviewer in many reputable Scopus and WOS indexed journals and as keynote speaker in many International Conferences in Philippines, Thailand, Malaysia, Indonesia, Australia, Japan, and US. She also has shown her great passion on writing her research study into some books chapter, papers and contemporary scientific articles that has already been published in Springer, Emerald, Taylor and Francis and in many reputable international publishers. The terrific association between her professional experiences as researcher, lecturer, the certified Trainer & Coach combined with her wider horizon on networking in the research area made her establish the strong commitment on having global learning platform to accelerate knowledge through many workshops and research coaching in Research Synergy Institute as one of RSF's support system.

## OPENING SPEECH

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*Willy Saelan*

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**Chief Human Capital Officer Telkom Indonesia**

## KEYNOTE SPEAKER

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***Parman Sukarno, S.T., M.Sc., Ph.D***

**Vice Rector for Academic Affairs Telkom University (TelU)**

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***Jayant Barghava***

**Indonesia Country Managing Director, Accenture**

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## KEYNOTE SPEAKER

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***Prof. Gadaf Rexhepi***

**South East European University, North Macedonia**

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**Prof. Gadaf Rexhepi** is a Full Professor of Strategy at the South East European University, North Macedonia. He has published several books and more than a hundred articles in some of the highest ranked journal, among which *Journal of Business Strategy and the Environment*, *Journal of Business Research*, *Corporate Social Responsibility and Environmental Management*, *Industrial Marketing Management*, *Sustainable Development*, *Review of Managerial Science*, *Technology in Society* etc. He serves in many journal boards among which in the reputed Journal of Innovation and Knowledge and currently he is serving as Editor of a special issue in Discover Sustainability journal. Starting from 2020 he is member of the Council of National Bank of RNM for seven-year term. He received numerus award among which the Award for Excellence 2016 – Outstanding Paper by Emerald Group Publishing (Journal of Enterprising Communities: People and Places in the Global Economy).



***Prof. Dr. H. Didi Sukyadi, M.A.***

**Rector of Universitas Pendidikan Indonesia**

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## PANELIST SPEAKER

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***Budi Satria Dharma Purba***

**CEO PT. Telekomunikasi Indonesia International**

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***Thiru Nagarajan***

**VP & Head of Human Resource, IBM Asia Pacific**

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***Prof. Dr. Mohamad Yusoff Bin Alias***

**Director of Research Management Centre, Multimedia University, Malaysia**

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## PANELIST SPEAKER

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***Dr. Riza A. N. Rukmana***

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**VP IT Digital Governance & Quality Telkom Indonesia**



***Adir Ginting***

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**Head of Enterprise Business Google Cloud Indonesia**



***Dr. Rifki Sadikin, M.Kom.***

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**Head of Reasearch for Computing, BRIN**

## SESSION CHAIRS

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***Dr. Riko Arlando Saragih***

**Universitas Kristen Maranatha, Indonesia**

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Riko Arlando Saragih was born in Medan. Hold Bachelor and Master degree from Electrical Department Bandung Institute Technology and Doctoral degree from Electrical Department University of Indonesia. Riko serves as an associate professor at Electrical Department Maranatha Christian University for more than 20 years. His expertise is in Machine Learning especially for Face Recognition and Face Anti-Spoofing. Also has interest in Machine Learning for Communication and Digital Signal Processing.



***Oscar Karnalim, Ph.D., SMIEEE***

**Universitas Kristen Maranatha, Indonesia**

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**Oscar Karnalim** is an associate professor and dean of the Faculty of Smart Technology and Engineering, an IEEE senior member, and Editor in Chief of Journal of Educational Technology Systems. He has published over 100 papers in venues such as ACM TOCE and IEEE TLT, earning 1,500+ citations. His work spans software engineering, learning technologies, and AI, supported by international collaborations and multiple grants. A former CTO and award-winning researcher, he has developed widely used tools in academic integrity and programming assessment and remains active in global volunteer roles.



***Dr. Smita Sharma***

**Manipal University Jaipur, India**

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**Dr Smita Sharma** is an Associate Professor at TAPMI School of Business, Manipal University, Jaipur, specialising in Marketing and Digital Transformation. She holds a Ph.D. in Management from the University of Rajasthan and has completed two Post-Doctoral Fellowships, including one at IIT Kanpur. With over two decades of academic and research experience, her teaching expertise spans Digital Marketing, Marketing Analytics, Consumer Behavior, and Research Methodology.

Dr Sharma has published extensively in Scopus- and Web of Science-indexed journals, with recent work focusing on IoT-driven marketing, blockchain adoption in the hospitality industry, and entrepreneurial intentions among students. She has received multiple honors, including a University Gold Medal and has participated in prestigious programs such as the FDP at IIM Ahmedabad.

Beyond teaching, she has contributed to institutional development as Training and Placement Coordinator, Doctoral Review Committee Member, and OBE Coordinator. Her research interests integrate sustainability, technology adoption, and consumer behaviour, reflecting a multidisciplinary approach to management studies.

## SESSION CHAIRS

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***Dr. Aziatul Waznah Ghazali***

**Universiti Kebangsaan Malaysia, Malaysia**

---

**Aziatul Waznah Ghazali** is a senior lecturer in accounting at Universiti Kebangsaan Malaysia (UKM). She holds a Diploma and Bachelor's degree in Accounting from Universiti Teknologi MARA (UiTM), a Master's degree in Accounting from the University of Strathclyde, Scotland, and a second Master's degree obtained in 2014. She later completed her Ph.D. in Accounting at Kingston University London in 2018. Since beginning her academic career as a lecturer at UiTM in 2010, she has served at Universiti Sains Malaysia (USM) before joining UKM. Her research focuses on quantitative studies in financial reporting, corporate governance, auditing, and financial criminology, with additional interests in social enterprises and environmental and sustainability reporting.



***Dr. Vijay Anant Athavale***

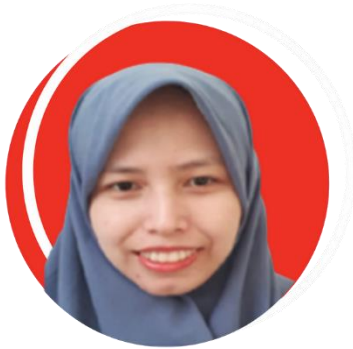
**Walchand Institute of Technology, India**

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International University.

**Dr. Vijay Anant Athavale** is a distinguished academic and researcher in the field of Computer Science and Engineering, with over three decades of experience spanning academia, industry, and academic administration. He holds a Ph.D. in Computer Science & Engineering and has served in key leadership roles including Vice Chancellor of Bennett University and Professor at Symbiosis

International University. His research interests include artificial intelligence, machine learning, and software engineering, with numerous publications and contributions to academic innovation. Dr. Athavale is actively involved in curriculum design, academic accreditation, and fostering industry-academic collaboration, making him a valuable contributor to academic discourse and development.



***Dr. Ade Romadhony***  
**Telkom University**

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## SESSION CHAIRS

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***Dr. Naziatul Aziah Mohd Radzi***

**Universiti Kebangsaan Malaysia, Malaysia**

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**Dr. Naziatul Aziah Mohd Radzi** is a senior lecturer in Center for Sustainable and Inclusive Development Studies, Faculty of Economics and Management, Universiti Kebangsaan Malaysia. Her field of interest is on Sustainability management that includes ESG, Corporate Social Responsibility (CSR) and Circular Economy. Not only that, but her passion is always driven by the subject of Economics Development, Society Well-being and also climate change.



***Dr. Zadrack Fiel***

**Arriesgado College Foundation, Inc., Philippines**

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**Dr. ZADRACK B. FIEL** is a distinguished academic and professional with a strong background in both business management and psychology. He completed a Doctor in Business Management from the University of Immaculate Conception in 2023, following a Master of Science in Psychology from Ateneo de Davao University in 2014, and a Master in Business Administration from De La Salle University-Dasmarias in 2003. Dr. FIEL also holds a Bachelor of Science in Psychology from Trinity University of Asia, which laid the foundation for his academic and professional journey.

With over 20 years of professional experience, Dr. Dr. FIEL has held several leadership positions in academic institutions and companies. Currently, Dr. Dr. FIEL serves as the Head of Research Publication and Community Extension at Arriesgado College Foundation, Inc., a role held since June 2023. Prior to this, Dr. [Full Name] served as a full-time faculty member at St. Mary's College of Tagum, where he/she taught courses in Business Administration and Liberal Arts for a decade.

In addition to his academic career, Dr. Dr. FIEL has accumulated international experience working in the UAE, including roles as an Administrative Officer at Atkins Middle East LLC and a Purchasing Officer at Al Khaleej Group of Companies. He also held leadership positions in the Philippines, including Academic Head at STI-Rosario Cavite and HR Officer at Eagle Ridge Golf and Country Club.

Dr FIEL is an active participant in the academic community, presenting research at prestigious international conferences such as the International Conference on Research in Emerging Technologies and Strategic Business (2025) in Indonesia, the 14th APMC Mindanao Regional Assembly (2025), and the 2nd International Multi-disciplinary Research Congress (2023). Additionally, he/she serves as a reactor at various academic events, sharing insights on topics such as quality management, gender analysis, and research in the field of linguistics.

Through these experiences, Dr. FIEL has demonstrated a commitment to advancing research, education, and professional development, particularly in the areas of business management, psychology, and organizational studies.



***Layung Anindya Prasetyanti, M.S.M., M.Eng.***  
**Universitas Pendidikan Indonesia**

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## SESSION CHAIRS

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***Dr. Nur Aima Shafie***

**UiTM Malaysia, Malaysia**

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**Dr. Nur Aima Shafie** is a senior lecturer and fellow at the Accounting Research Institute (ARI), Universiti Teknologi MARA (UiTM) Shah Alam. She holds a Doctor of Philosophy (Accounting) from Universiti Teknologi MARA (UiTM). Her scholarly work spans indexed journals, book chapters, monographs, and conference proceedings, covering topics such as social enterprise performance, trade-based money laundering, cloud accounting adoption, state-owned enterprise sustainability, climate change risk and ESG reporting, whistleblowing, accounting manipulation, internal audit and fraud detection, and digital auditing. She currently supervises PhD and Masters candidates working on white-collar crime and corporate governance, human capital and e-government performance, ESG funds and sukuk, internal auditors' independence, cloud accounting in SMEs, and microfinance competition and efficiency. In consultancy, Dr Nur Aima has contributed to national-level projects, including regional economic and market profiling and leadership and professional development programmes for senior executives and tax officers in Malaysia.



***Dr. Mukund Sharma***

**BNM Institute of Technology, India**

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**Dr. Mukund Sharma** is a distinguished academician and accomplished academic leader with over two decades of experience in Management education. Dr. Sharma is presently working as Professor and HOD in the Department of Business Administration, BNM Institute of Technology, an Autonomous Institution under Visvesvaraya Technological University, Bangalore. He has a Master degree in Management and Ph.D from University of Mysore in the area of International Finance. Dr. Sharma has authored more than 10 text books and 40 articles in journals of repute. Book titled “Banking and Financial Services” is a recommended book of various universities. He is a recognized Ph.D guide of Visvesvaray Technological University and has successfully guided six candidates. He is on the expert panel of many Indian and foreign Universities to examine and evaluate Doctoral thesis and other courses in management as well. He is a member of the advisory committee of various Institutions and journals. Dr. Sharma has successfully completed three major research projects funded by government agencies and multinational companies apart from consulting two companies.





***Dr. Tutik Inayati***

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**Universitas Pendidikan Indonesia**

## SESSION CHAIRS

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***Dr. Muhammad Irsan***

**Faculty of Informatics, Telkom University, Indonesia**

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**Muhamad Irsan, ST., M.Kom., Ph.D (CSCU., MTCNA., MTA., CEH)** is a lecturer and researcher specializing in cybersecurity, artificial intelligence, and the Internet of Things. He earned his doctoral degree in Computer Science from Universiti Kebangsaan Malaysia, further strengthening his expertise in intelligent systems and secure computing. His professional background spans academia and industry, where he has served as an IT consultant and pentester, contributing to security assessments for various national and corporate institutions.

Dr. Irsan holds multiple professional certifications, including Certified Ethical Hacker (CEH), Certified Secure Computer User (CSCU), MikroTik Certified Network Associate (MTCNA), and Microsoft Technology Associate (MTA). His research interests include cyber defense, machine learning applications, and IoT-based smart systems. Beyond his academic roles, he is actively involved as a speaker and national facilitator, delivering expertise in technology innovation and digital governance.



***Dr. Marmelo V. Abante***

**World Citi College, Philippines**

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**Dr. Marmelo Villanueva Abante** is an education leader, researcher, and innovation advocate serving as the Dean of the Graduate School and College of Information Technology Education at World Citi Colleges–Quezon City, while also leading the Lyceum of Tingloy de San Roque Inc. as its President and CEO. A recipient of multiple academic degrees, including his PhD and MBA, he is deeply involved in curriculum development, accreditation, digital transformation, and research mentoring. Dr. Abante is a Philippine Quality Award (PQA) Senior Assessor and a known proponent of Outcome-Based Education, AI integration in higher education, and community-based capacity-building initiatives. His work spans institutional quality assurance, research publication support, and the development of innovative digital solutions that advance inclusive and industry-responsive education.



***Prof. Kathleen U. Pulmones***

**World Citi College, Philippines**

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**Prof. Kathleen U. Pulmones** is a values-driven academic leader and multidisciplinary marketing professional, currently serving as Dean of the College of Business Administration at World Citi Colleges – Quezon City. With nearly two decades of experience in higher education and industry, she specializes in digital marketing, academic leadership, CRM, compliance, and curriculum innovation aligned

with DepEd and CHED standards.

She is pursuing her Doctor of Business Administration at the Philippine School of Business Administration, where she also finished her MBA and dual BSBA degrees. Her career spans roles in IT, government regulation and service operations. She also heads BEES Marketing as Chief Marketing Consultant, supporting SMEs in branding and digital strategy.

A multilingual educator and AI-MLM Trainer, she advances Personal Social Responsibility through community-based training. Her research interests include Gig Economy Marketing, Community-Based Learning Models, and Educational Technology Integration.

## SESSION CHAIRS

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***Chutinida Phalusuk, Ph.D.***

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**Chulalongkorn Business School,  
Chulalongkorn University, Thailand**

**Chutinida Phalusuk, Ph.D.** is a lecturer in the Department of Marketing, Chulalongkorn Business School, Chulalongkorn University, Bangkok, Thailand. She holds a Ph.D. in Marketing from Newcastle University Business School, UK. She teaches principles of marketing, services marketing, current issues in marketing and marketing management at both undergraduate and graduate levels and is actively involved in course and program development. Her research focuses on services marketing, particularly service failure and recovery, complaint handling, customer emotions and (dis)satisfaction, and service quality in dyadic relationships and service network settings. Methodologically, her work often employs experimental designs, mixed-methods studies, and structural equation modeling.



***Prof. Wassana Bootpo***

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**Faculty of Education, Ramkhamhaeng University, Thailand**



***Profesor Madya Dr. Sylvia @ Nabila Azwa Ambad***

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**Universiti Teknologi MARA, Malaysia**

# MODERATOR

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*Pradisty Herlina Setiabudi*  
**Telkom Indonesia**



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*Rahma Yulia Prastiwi*  
**Telkom Indonesia**

## MASTER OF CEREMONY

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*Santi Rahmawati, S.T., M.S.M.*

**Founder & Director of Global Network and Operation  
Reserch Synergy Foundation**


Santi is a Founder and Chief of Operating Officer (COO) of the Research Synergy Foundation (RSF). She actively engaged with scholars around the world for strengthening the Global Research Ecosystem. As the Director of Scholarvein, she creates, maintains, and develops the integrated system for managing international scientific conference and forum since 2017 up to 2024 and already give benefit to more than 16.457 participants coming from >87 countries. With the combination of engineering and management science educational background, she has built the optimum workflow for scholars to contribute more to the society and humanities. Santi holds her bachelor's degree of industrial engineering from Universitas Indonesia (UI). Furthermore, she had received her Master of Science Management (focusing on Entrepreneurship and Technology Management) from Institut Teknologi Bandung (ITB) in 2015. Santi has appointed as a Gateway Advisor in F1000Research (Scopus Q1) and Taylor & Francis Open Access Advisor (Scopus Q1, Q2 & WOS). She has already been an editor of three published books (both published by Routledge, Taylor & Francis), a reviewer in many reputable international journals, an author and co-authored multiple international research articles and book chapters.


# CONFERENCE PROGRAM


Thursday | December 11, 2025

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CONFERENCE PROGRAM

International Conference on Research in Emerging Technologies and Strategic Business & The 10th International Seminar and Conference on Learning Organisation (ICRES-ISCLO 2025)

Venue Conference: Telkom Corporate University Campus, Bandung, Indonesia

Thursday, 11 December 2025

Jakarta Time (UTC+7)	Dur'	Activity
<div> <div>Main Room:</div> <div>*Please note that ALL conference TIME is in Jakarta Time/ WIB/ UTC+7.</div> <div>Please check your time zone.</div> </div>		<div>Join Zoom Meeting:</div> <div> <a href="https://us06web.zoom.us/j/81061777117?pwd=4Xd08aWZ4kHSbhmTFR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4Xd08aWZ4kHSbhmTFR6pmaFYbjCzZc.1</a> </div> <div>OR</div> <div> <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a> </div> <div>Meeting ID: 810 6177 7117</div> <div>Passcode: ICRES-25</div>
7:00	-	8:00 1:00 Participant Registration & Welcome Snack
8:00	-	8:15 0:15 Welcoming and Conference Agenda announcement by MC
8:15	-	8:25 0:10 <div> <b>Welcoming Speech &amp; Report</b>  <b>Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.</b>                          Conference Chair of ICRES-ISCLO 2025                          Senior General Manager, Telkom Corporate University                     </div>
8:25	-	8:45 0:20 <div> <b>Opening Speech</b>  <b>Willy Saelan</b>                          Chief Human Capital Officer Telkom Indonesia                     </div>
8:45	-	9:00 0:15 <div> <b>Global Research Ecosystem Introduction</b>  <b>Associate Professor Dr. Hendrati Dwi Mulyaningsih, S.E., M.M.</b>                          Co-Conference Chair of ICRES-ISCLO 2025                          Founder &amp; CEO of Research Synergy Foundation                     </div>
9:00	-	9:10 0:10 <div>                         Token of Appreciation to Co-Host by  <b>Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.</b>                          Conference Chair of ICRES-ISCLO 2025                          Senior General Manager, Telkom Corporate University                     </div>
9:10	-	9:15 0:05 <b>Group Photo</b>
9:15	-	9:45 0:30 <div> <b>Keynote Speech :</b>  <b>Parman Sukarno, S.T., M.Sc., Ph.D</b>                          Vice Rector for Academic Affairs Telkom University (TelU)  <i>"Strategic direction of Telkom University in strengthening global collaboration, innovative leadership, and academic contribution in the era of digital connectivity"</i> </div>
9:45	-	9:50 0:05 <div> <b>Token of Appreciation to Keynote Speaker</b>  <b>Introduction to next Keynote Speaker</b> </div>
9:50	-	10:20 0:30 <div> <b>Keynote Speech :</b>  <b>Prof. Gadaf Rexhepi</b>                          South East European University, North Macedonia  <i>"Investigating the responsibilities of digital organizations in facing sustainability challenges: Developing an empirical framework and measurement model for corporate digital responsibility"</i> </div>
10:20	-	10:25 0:05 <div> <b>Token of Appreciation to Keynote Speaker</b>  <b>Introduction to Panel Discussion Day 1</b> </div>
10:25	-	11:30 1:05 <div> <b>Panel Discussion 1: Leveraging Research in Emerging Technologies for Strategic Business Advantage and Industry Leadership (ICRES)</b>                          - Panelist 1: Budi Satria Dharma Purba - CEO PT Telekomunikasi Indonesia International (Telin)                          - Panelist 2: Thiru Nagarajan - VP &amp; Head of Human Resource, IBM Asia Pacific                          - Panelist 3: Prof Dr. Mohamad Yusoff Bin Alias, Director of Research Management Centre, Multimedia University - MMU Malaysia                          - Moderator: Rahma Yulia Prastiwi - Telkom Indonesia                     </div>
11:30	-	11:35 0:05 <div> <b>Token of Appreciation to Panelists &amp; Moderator - Panel Discussion Day 1</b>  <b>Main Event Closing</b> </div>
11:35	-	13:00 1:25 <div> <b>Lunch &amp; Prayer Break, moving time to paper presentation location</b>  <i>(Video played: )</i> </div>

Academic Parallel Presentation Session				
13:00	-	15:15	2:15	<b>Parallel Session 1: Paper Presentation</b> <b>each room 8 presenters (10' present, 5' Q&amp;A)</b>  <b>On-Site Room: Harmonize 1, Harmonize 2, Harmonize 3, Harmonize 4</b> <b>Virtual Room: Virtual Room 1, Virtual Room 2, Virtual Room 3, Virtual Room 4</b>
15:15	-	15:45	0:30	<b>Coffee Break &amp; Prayer Break</b>
15:45	-	16:50	1:05	<b>Parallel Session 2: Paper Presentation</b> <b>each room 4 presenters (10' present, 5' Q&amp;A)</b>  <b>On-Site Room: Harmonize 1, Harmonize 2, Harmonize 3</b>
16:50	-	16:55	0:05	<b>Moving to next session</b>
16:55	-	17:15	0:20	<b>Distribution of Certificate of Presentation - Day 1</b> <b>Session Chair Recognition</b>
17:15	-	17:25	0:10	<b>Closing Remarks of ICRES-ISCLLO 2025 Day 1</b> <b>Information about Day 2 agenda</b>
<div> <div>Supported by :</div> <div>     </div> <div>       </div> </div>				



SESSION 1 (DAY 1)		
Thursday, December 11, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 1, Session 1 Room: Harmonize 1		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Riko Arlando Saragih - Universitas Kristen Maranatha, Indonesia		
Track Artificial Intelligence		
Paper ID	Presenter	Paper Title
ISC25101	Setyo Budianto	A Systematic Review of Artificial Intelligence Integration in Strategic Management Processes
ISC25134	Fizri Adiyesa	Redefining the Future of Work: A Proposed Design for Intelligent Surveillance Systems
ISC25151	Marshaniswah Syamsul	Development of an AI RAG Chatbot for Telecommunication Device Testing Services
ISC25122	Evan Naratama	Transforming Telco Competitive Intelligence With Agentic AI: A Conceptual Paper
ISC25164	Muhammad Ilham Fadhillah	The Role of Artificial Intelligence in Solving Gender, Disability, and Social Inclusion (GEDSI) Issues in the Aquaculture Sector: A Systematic Literature Review and Future Agenda
ISC25168	Bagus Aginsa	Comparative Analysis of Retrieval-Augmented Generation Using OCR and Vision-Based LLMs for PowerPoint Materials
Thursday, December 11, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 1, Session 1 Room: Harmonize 2		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Oscar Karnalim, Ph.D., SMIEEE - Universitas Kristen Maranatha, Indonesia		
Track Information technology		
Paper ID	Presenter	Paper Title
971028	Asep Hadian	Precision Cooling System for Telkom's Critical Facilities: Energy Efficiency Optimization through International Standard Review
ISC25166	Dinah Kamilah Ulfa	Make Data Chaos Become Useful by Implementing Information Extraction and Pre-formatting
ISC25160	Fajar Eko Prasetyo Utomo	Deconstructing ConWeave: An Ablation Study of Probing and Reordering Overheads in RDMA Networks
920462	Kiswanto	Embedding Edge AI in GPON ONT for Smart Access Point Optimization and Autonomous Network Management
Track Smart City		
Paper ID	Presenter	Paper Title
ISC25115	Made Kevin Bratawisnu	Forecasting Sectoral Carbon Emissions in the United Kingdom Using a Daily Time Series Approach
718466	Robie Elliz L. Tizon	AniQ-AniQ: A Portable Air Quality Monitoring Device for Enhanced Commuter and Vulnerable Population Safety in Urban Environments
Track Technology and Innovation Management		
Paper ID	Presenter	Paper Title
879207	Andi Wahyudi	Comparative Analysis of Power Consumption between OLT Brand A and OLT Brand B
ISC25121	Deisna Rahmaningtyas	Comparative Performance Analysis of Optical Encryption Platforms and Implementation Strategies in Telecommunication Industry

Thursday, December 11, 2025		
ICRES-ISCLC, Onsite Academic Presentation, Day 1, Session 1 Room: Harmonize 3		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Smita Sharma-Manipal University Jaipur, India		
Track Sustainable development		
Paper ID	Presenter	Paper Title
ISC25104	Irmadela Nindyadiasti Rizkika Fitriani	Chronic Illness, Work, and the Accounting Profession: A Narrative Inquiry from Indonesia
471433	Naziatul Aziah Mohd Radzi	Too Good to Be True: Exploring the Influences of Esg on Financial, Operational and Market Competitiveness
287862	Suhaila Saad	Understanding Indirect Costs and Coping Behaviors in Dialysis Care: Insights for Sustainable Healthcare Innovation
ISC25138	Ratna Wulan Dari	Sustainable Administrative Transformation: System Dynamics of Green Office Paperless Adoption in Higher Education
ISC25127	Virda Ramadhani Putri	E-Waste Management in Office Environments: A Systematic Literature Review
Track Finance		
Paper ID	Presenter	Paper Title
405430	Mukund Sharma	Investors Perception Towards Gold ETF: An Empirical Investigation

Thursday, December 11, 2025		
ICRES-ISCLC, Onsite Academic Presentation, Day 1, Session 1 Room: Harmonize 4		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Aziatul Waznah Ghazali-Universiti Kebangsaan Malaysia, Malaysia		
Track Auditing		
Paper ID	Presenter	Paper Title
ISC25150	Sadam Al Rasyid	Evidence-Grounded Hybrid Framework for ISO/IEC 17025 Audits
Track Accounting		
Paper ID	Presenter	Paper Title
ISC25102	Rahmanda Nofal Arif	Industry-Specific Sustainability Reporting: Evaluating the Adoption of SASB Framework in the Asia-Pacific Region
ISC25105	Rian Zakaria	The Role of ESG Performance and Operational Efficiency in the Relationship Between Intellectual Capital and Firm Value
ISC25116	Yusuf Hendriarto	The Rationality of Debit and Credit Rules in the Accounting Equation
ISC25155	Adi Akbar	Integration of TAM3 and UTAUT Models to Measure Organizational Readiness in Vocational Higher Education Institutions
Track Corporate Governance		
Paper ID	Presenter	Paper Title
ISC25113	Agnesia Candra Sulayani	Mapping the Landscape of Leadership GRC (Governance, Risk, and Compliance): A Bibliometric Approach
Track Public and Corporate Governance		
Paper ID	Presenter	Paper Title
ISC25126	Yaya Mulyana Abdul Aziz	Artificial Intelligence in Civil Service Talent Management Capacity: Reconstructing Dynamic Governance
Track Entrepreneurship		
Paper ID	Presenter	Paper Title
ISC25158	Zadrack Fiel	Entrepreneurial Self-Efficacy, Entrepreneurial Creativity, Strategic Management Practices as Regressors of Firm Performance in Davao Region

VIRTUAL SESSION 1 (Day 1)		
Thursday, December 11, 2025		
ICRES-ISCLC, Online Academic Presentation, Day 1, Session 1 Virtual Room 1		
Join Zoom Meeting: <a href="https://us06web.zoom.us/j/81061777117?pwd=4XdlO8aWZ4kH5bhmTFR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4XdlO8aWZ4kH5bhmTFR6pmaFYbjCzZc.1</a> OR <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a> Meeting ID: 810 6177 7117 Passcode: ICRES-25		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Marmelo V. Abante - World Citi College, Philippines		
Track Cybersecurity		
Paper ID	Presenter	Paper Title
435116	Adzkia Rahma	Attack Pattern Analysis and SQL Injection Detection Using a Random Forest Classifier
517651	Athala Angwyn	Implementation and Analysis of the Effectiveness of Cloud-Based Web Application Firewall (WAF) in Mitigating Web Attacks: A Case Study of Cloudflare
Track Artificial Intelligence		
Paper ID	Presenter	Paper Title
ISC25188	Niken Prasasti Martono	Low-Cost Deep Learning Framework for Indoor Localization of Dairy Cows
Track Smart City		
Paper ID	Presenter	Paper Title
995243	I Ketut Agung Enriko	Adaptive Strategy for Sustainable Flood Mitigation Through IoT-Based Green Infrastructure in the Way Balau Sub-Watershed
Track Technology and Innovation Management		
Paper ID	Presenter	Paper Title
565049	Camila Tasya Aulia	Decentralized IoT Monitoring using Edge Computing and LoRa for Sustainable Grape Cultivation
Thursday, December 11, 2025		
ICRES-ISCLC, Online Academic Presentation, Day 1, Session 1 Virtual Room 2		
Join Zoom Meeting: <a href="https://us06web.zoom.us/j/81061777117?pwd=4XdlO8aWZ4kH5bhmTFR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4XdlO8aWZ4kH5bhmTFR6pmaFYbjCzZc.1</a> OR <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a> Meeting ID: 810 6177 7117 Passcode: ICRES-25		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Prof. Kathleen U. Pulmones - World Citi College, Philippines		
Track Marketing		
Paper ID	Presenter	Paper Title
ISC25146	Iqbal Hanif	Market Segmentation, Differentiation, and Positioning for Telkom InfraCo: Capturing Indonesia's Growing ISP Market
ISC25139	Lamia Rahim Laibi	Multi-Branch Transformers for Stock Market Prediction using Previous Market Data and news articles
ISC25131	Marshanda Azahra Yasir	Unraveling The Impact of Social Media Marketing Activities on Behavioral Engagement: Brand Awareness and Brand Image as mediators
ISC25187	Ni Made Ariasih	An S-D Logic Perspective on Relationship Marketing and Value Co-creation in B2B Facility Management
960355	Jerome Euclid Sosa	Leveraging Client-Sponsored Feasibility Studies for Evaluating Small Business Performance
204660	Melanie Convento	Understanding the Pink Tax: A Study on the Awareness of Female Business Administration Students
Track Strategic Management		
Paper ID	Presenter	Paper Title
ISC25112	Henry Boyke Sitompul	A Strategic Approach to Enhancing Patient Safety through Clinical Staff Compliance Culture
ISC25175	Ryan John Mercado, Dr. Ronald A. Gonzales	Rising Together: Enhancing the Competitive Culture through CCC Valiants' First National LCUAA Experience with a Big Delegation

Thursday, December 11, 2025		
ICRES-ISCLO, Online Academic Presentation, Day 1, Session 1 Virtual Room 3		
Join Zoom Meeting: <a href="https://us06web.zoom.us/j/81061777117?pwd=4XdoO8aWZ4kHSbhmTFR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4XdoO8aWZ4kHSbhmTFR6pmaFYbjCzZc.1</a> OR <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a> Meeting ID: 810 6177 7117 Passcode: ICRES-25		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Asst. Prof. Wassana Bootpo, Ph.D. - Faculty of Education, Ramkhamhaeng University, Thailand Chutinida Phalusuk, Ph.D. - Chulalongkorn Business School, Chulalongkorn University, Thailand		
Track Public and Corporate Governance		
Paper ID	Presenter	Paper Title
ISC25180	Dr. Regina G. Almonte, Prof. Mary Rose Montano	Development of a Quality Manual for the City College of Calamba: A Framework for Institutional Integrity
Track Sustainable development		
Paper ID	Presenter	Paper Title
ISC25124	John Mark Saldivar	Theory of Transformative Ethical Leadership: A Deductive Axiomatic Study
ISC25221	Chona Sigue	Advancing SDG 4, 9, and 17 through Strategic Digital Advertising among Selected Startup Enterprises in Quezon City
885121	Yeni Sumantri	Comparative Study of Solar Drying Technology and Traditional Sigiran Method on Shallot Post-Harvest Performance
Track Operational Efficiency		
Paper ID	Presenter	Paper Title
ISC25183	Andang Ashari	The Assurance Document Acceleration Program (ADAP): A Breakthrough in Management Resolution for Assurance Document Discrepancies with The Purpose of Enhancing Operational Efficiency
Thursday, December 11, 2025		
ICRES-ISCLO, Online Academic Presentation, Day 1, Session 1 Virtual Room 4		
Join Zoom Meeting: <a href="https://us06web.zoom.us/j/81061777117?pwd=4XdoO8aWZ4kHSbhmTFR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4XdoO8aWZ4kHSbhmTFR6pmaFYbjCzZc.1</a> OR <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a> Meeting ID: 810 6177 7117 Passcode: ICRES-25		
Time: 13:00 - 15:15 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Profesor Madya Dr. Sylvia @ Nabila Azwa Ambad-Universiti Teknologi MARA, Malaysia		
Track Digital transformation		
Paper ID	Presenter	Paper Title
397371	Nadhira Salsabila Vanka	Design and Implementation of an IoT-Based Keychain with Emergency Notifications for the Prevention and Handling of Emergency Situations in Real Time
600468	Kathleen Pulmones	Digital Matching Systems as Tools for Student-Led Marketing Consultations with MSMEs: Fostering Innovation and Employability
495135	Marmelo V. Abante	Evaluating Public Information Systems: Enhancing Transparency, Efficiency, and Citizen Engagement in Digital Governance
Track Learning Organization		
Paper ID	Presenter	Paper Title
ISC25120	Mia Amelia	Bridging the Human-Digital Divide: Towards a Digital Humanistic Learning Organization
Track Smart City		
Paper ID	Presenter	Paper Title
ISC25185	Pramila Jakhar	IoT and Smart Living: The Changing Role of Marketing

SESSION 2 (Day 1)		
Thursday, December 11, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 1, Session 2 Room: Harmonize 1		
Time: 15:45 - 16:50 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Vijay Anant Athavale-Walchand Institute of Technology, India (To be confirm) Angelina Prima Kurniati, Ph.D. - School of Computing, Telkom University		
Track Cybersecurity		
Paper ID	Presenter	Paper Title
ISC25110	Yeris Permata Octarina	Systematic Literature Review : Employee behavior on data protection and cybersecurity
ISC25114	Akhmad Aryandi	Examining Challenges in Applying Bias Codebook to Cybersecurity-Related Behavior Survey Items
ISC25165	Wahyu Febri Ramadhy	Trust the Graph? Hidden Triggers and Defenses in Telecom Churn Prediction
ISC25157	Syaiful Andy	Automated Memory Forensics Using Volatility and YARA for Ransomware Detection










  

Thursday, December 11, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 1, Session 2 Room: Harmonize 2		
Time: 15:45 - 16:50 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Nazatul Aziah Mohd Radzi - Universiti Kebangsaan Malaysia, Malaysia		
Track Innovation Management		
Paper ID	Presenter	Paper Title
ISC25133	Nabila Priscandy Poetri	Balancing Exploration and Exploitation: Organisational Ambidexterity in an Indonesian State-Owned Enterprise (SOE)
ISC25119	Richard Alberto	Future-Oriented Leadership Style Mapping for Subsidiaries of Digital Telecommunications Companies
371595	Indarta Priyana	Strengthening Employee Performance through Green Organizational Culture and Engagement: Evidence from a Learning Organization in Indonesia
Track Strategic Management		
Paper ID	Presenter	Paper Title
ISC25161	Anas Teguh Syahadat	Anticipating the Future of Indonesia's Digital Telco: Scenario Planning and Strategic Agility in TelkomGroup's Initiatives



# CONFERENCE PROGRAM

Friday | December 12, 2025

<a href="https://icres.events/">https://icres.events/</a>				Organized by :    				Co-Hosted by:     			
CONFERENCE PROGRAM International Conference on Research in Emerging Technologies and Strategic Business & The 10th International Seminar and Conference on Learning Organisation (ICRES-ISCLO 2025) Venue Conference: Telkom Corporate University Campus, Bandung, Indonesia											
Friday, 12 December 2025											
Jakarta Time (UTC+7)		Dur'		Activity							
<b>Main Room:</b> <i>*Please note that ALL conference TIME is in Jakarta Time/ WIB/ UTC+7. Please check your time zone.</i>				Join Zoom Meeting: <a href="https://us06web.zoom.us/j/81061777117?pwd=4XdO8aWZ4kHSbhmTfR6pmaFYbjCzZc.1">https://us06web.zoom.us/j/81061777117?pwd=4XdO8aWZ4kHSbhmTfR6pmaFYbjCzZc.1</a> OR <a href="https://bit.ly/ICRES-25-Zoom">https://bit.ly/ICRES-25-Zoom</a>  Meeting ID: 810 6177 7117 Passcode: ICRES-25							
7:30	-	8:00	0:30	Participant Registration & Welcome Coffee							
8:00	-	8:05	0:05	Opening Ceremony (Welcome Remark) Marilyn Morales Obod, LPT, EDD Research Director, World Citi Colleges Philippines							
8:05	-	8:35	0:30	Keynote Speech : Prof. Dr. H. Didi Sukyadi, M.A. Rector of Universitas Pendidikan Indonesia  "Strengthening Initiative, Authenticity, and Usefulness (SINAU) for a Connected World"							
8:35	-	8:40	0:05	Token of Appreciation to Keynote Speaker Introduction to next Keynote Speaker							
8:40	-	9:10	0:30	Keynote Speech : Jayant Bhargava Country Managing Director at Accenture Indonesia  "AI: A Declaration of Autonomy"							
9:10	-	9:15	0:05	Token of Appreciation to Keynote Speaker Introduction to Panel Discussion Day 2							
9:15	-	10:20	1:05	Panel Discussion 2: Fostering Collaborative and Adaptive Organizations through Knowledge Integration (ISCLO)  - Panelist 1: Dr. Riza A. N. Rukmana - VP IT Digital Governance & Quality Telkom Indonesia - Panelist 2: Adir Ginting - Head Enterprise Sales of Google Indonesia - Panelist 3: Dr. Rifki Sadikin, M.Comp. - Head of Research for Computing, National Research & Innovation Agency (BRIN) - Moderator: Pradisty Herlina Setiabudi - Telkom Indonesia							
10:20	-	10:25	0:05	Token of Appreciation to Panelists & Moderator, Panel Discussion Day 2 Main Event Closing							
10:25	-	10:35	0:10	Short Break Moving time to paper presentation location							
10:35	-	11:40	1:05	Paralel Session 3: Paper Presentation each room 4 presenters (10' present, 5' Q&A)  On-Site Room: Harmonize 1, Harmonize 2, Harmonize 3							
11:40	-	13:25	1:45	Lunch & Friday prayer break							
13:25	-	15:30	2:05	Paralel Session 4: Paper Presentation each room 8 presenters (10' present, 5' Q&A)  On-Site Room: Harmonize 1, Harmonize 2, Harmonize 3, Harmonize 4							
15:30	-	15:55	0:25	Presenter Certificate Distribution							
15:55	-	16:30	0:35	Coffee break, Prayer Break, & Score Recapitulation							
16:30	-	17:00	0:30	Awarding Ceremony, Group Photo & Farewell							
17:00	-	17:30	0:30	Closing Speech of ICRES-ISCLO 2025 Day 2 Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng., Conference Chair of ICRES-ISCLO 2025 Senior General Manager, Telkom Corporate University							
Supported by :				         							

SESSION 3 (DAY 2)		
Friday, December 12, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 2, Session 3 Room: Harmonize 1		
Time: 10:35 - 11:40 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Zadrack Fiel - Arriesgado College Foundation, Inc., Philippines		
Track Digital HR Transformation		
Paper ID	Presenter	Paper Title
ISC25117	Richard Alberto	AI-Driven Ambidextrous Leadership for Future-Ready Organizations: A Case Study of Telkom Indonesia
942500	Wahyu Winarto	Differentiating Neurocognitive Profiles and Executive Functions: A Comparative Study of Learning Experts and Non-Learning Experts in a Corporate University
ISC25169	Nabila Yasfa Azahra	Digital Organizational Culture and Employee Wellbeing: A Systematic Scoping Review of Technostress, Burnout, and Work Modalities in the Digital Age
ISC25171	Anita Dwinata Lubis	Can AI-generated questions be trusted to meet human quality standards? Judging AI-Generated Assessment Items.
Friday, December 12, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 2, Session 3 Room: Harmonize 2		
Time: 10:35 - 11:40 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Layung Anindya Prasetyanti, M.S.M., M.Eng. - Universitas Pendidikan Indonesia		
Track Operations Management		
Paper ID	Presenter	Paper Title
ISC25163	Aldi Wiranata	Harmonizing National Metrology: An Analysis of the 2025 Indonesian Optical Fiber Inter-Laboratory Comparison
ISC25106	Lia Muliawaty	Entrepreneurial Capacity Development Strategy in Islamic Boarding Schools, Garut Regency
ISC25162	Ariesta Mirania Fabiola	Determining Factors for Net Promotor Score in Riau Islands: Partial Least Squares Approach in Telkom Indonesia's Home Internet Customers through Year 2020 - 2023
ISC25172	Fiko Rahardito Baskoro	Determining Factors for Net Promotor Score in Riau Islands: Marketing Aspect in Telkom Indonesia's Home Internet Customers through Year 2020 - 2023
Friday, December 12, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 2, Session 3 Room: Harmonize 3		
Time: 10:35 - 11:40 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Nur Aima Shafie - UiTM Malaysia, Malaysia		
Track Public and Corporate Governance		
Paper ID	Presenter	Paper Title
ISC25154	Aziatul Waznah Ghazali	Does Quality of Governance and Financial Development Stimulate Foreign Direct Investment (FDI)? A Response to Income Classification Evidence
917623	Wandy Zulkarnaen	The Effect of Competency on Job Satisfaction and Its Implications on the Performance of the General Election Commission (Kpu) Commissioners in West Java Province
Track Corporate Governance		
Paper ID	Presenter	Paper Title
ISC25137	Agnesia Candra Sulyani	Navigating Licensing Obligations in Network Infrastructure: Legal Insights from PT. XYZ
ISC25123	Muhammad Bayhaqi Irwansyah	Star-Making Product Governance: The Catalyst for a Healthier Product Portfolio

SESSION 4 (DAY 2)		
Friday, December 12, 2025		
ICRES-ISCLO, Onsite POSTER Academic Presentation, Day 2, Session 4 Room: Harmonize Hall		
Time: 13:25 - 15:30 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Judging Committee: Dr. Zadrack Fiel - Arriesgado College Foundation, Inc., Philippines		
Track Learning Organization - Case Study		
Paper ID	Presenter	Paper Title
449984	Ilham Himawan	Creating Shared Value Through Digital Health Ecosystem : A Case Study of Telkom Employee Social Activity to Intervention Stunting in Southwest Papua
Track Strategic Management - Case Study		
Paper ID	Presenter	Paper Title
725378	Furi Diah Ayu Hapsari	Navigating the Blue Ocean: How Telkom Indonesia Can Swim in the Emerging Space Economy
Track Accounting		
Paper ID	Presenter	Paper Title
229856	Nur Aima Shafie	Effect of Information Technology and Information Sharing on Supply Chain Finance Performance of Smes in China: The Mediating Role of Digital Supply Chain Capabilities
Track Strategic Workforce Planning		
Paper ID	Presenter	Paper Title
164976	Grace Elisabeth Lawas Lawu	Implementing BUMN's Employee Well-Being Policy: Baseline Survey and Strategic Well-Being Program for Telkomsigma
Track Learning Organization		
Paper ID	Presenter	Paper Title
411409	Siti Radhiatan Mardiah Daulay	Operationalizing a Learning Culture: Implementing a Learning Organization Framework in Indonesia's Ministry of Finance
Track Business Model Innovation - Case Study		
Paper ID	Presenter	Paper Title
ISC25182	Ryan Achmad Arianto Ekasaputra	Escaping the Commodity Trap: Telkom's Wholesale NaaP Strategy for Autonomous Network Transformation and High-Margin API Monetisation
Track Digital transformation		
Paper ID	Presenter	Paper Title
ISC25210	Rahma yulia Pratiwi	Augmented reality (AR) as Software as service in fashion retail industry
Track Artificial Intelligence		
Paper ID	Presenter	Paper Title
ISC25141	Fakhrol Ridha	Rethinking User Experience in the Age of AI: Speed, Insight and Trust



Friday, December 12, 2025		
ICRES-ISCL0, Onsite Academic Presentation, Day 2, Session 4 Room: Harmonize 1		
Time: 13:25 - 15:30 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Mukund Sharma - BNM Institute of Technology, India		
Track Digital Transformation		
Paper ID	Presenter	Paper Title
ISC25107	Mhd. Rizky Ferianda	User Acceptance of MySIIS app: An Extended UTAUT Model and In-Depth Interview Approach in Telkom Regional 2
ISC25135	Humam Baskara	Unpacking Institutional and Narrative Barriers in Indonesia's Digital Transformation
ISC25136	Aisyah	Evolving Beyond Connectivity: How Asia-Pacific Telcos Leverage AI and Platform Integration for Sustainable Growth
ISC25130	Tegar Arrayid	The Impact of Digital Workplace Technologies on Employee Productivity and Well-Being in Hybrid Office Environments: A Systematic Literature Review
ISC25181	Nur Arifah	Driving ESG Integration Through Digital Transformation: A Strategic Framework for Sustainable Business in Indonesia's State-Owned Enterprises
Track Agile Practices		
Paper ID	Presenter	Paper Title
ISC25186	I Putu Agus Arya Alit Suanlara	The Impact of Teamwork on Organisational Performance, Moderated by Team Learning: A Case Study of The Ministry of Finance of The Republic of Indonesia (MoF)
Friday, December 12, 2025		
ICRES-ISCL0, Onsite Academic Presentation, Day 2, Session 4 Room: Harmonize 2		
Time: 13:25 - 15:30 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Tutik Inayati - Universitas Pendidikan Indonesia		
Track Learning Organization		
Paper ID	Presenter	Paper Title
ISC25159	Imam Suhadi	Beyond Ranking: Humanized Forced Distribution And Rewards As Enablers of A Learning Culture
ISC25152	Rifi Wijayanti Dual Arifin	Assessing Digital Transformation Readiness in Vocational Higher Education: A Mixed-Method Analysis of an Indonesian Polytechnic Institution
ISC25129	Ridwan Yusuf Suryo Gumilang	Building A Human-Centered Learning Organization: Linking Digital Leadership, Psychological Safety, And Learning Agility to Organizational Resilience
ISC25125	Rizka Zeny	Navigating Transformation: Autoetnographic Insights Into Learning and Systemic Limits in Organizational Change
ISC25144	Martini Setiawan	A New Paradigm in Pre-Retirement Programs for State-Owned Enterprises: A Systematic Literature Review Based on the PRISMA 2020 Framework
Track Learning in Digital Eras		
Paper ID	Presenter	Paper Title
ISC25118	Anggita Sari Dewi	Human Development in Digital Transformation: The Role of Internal Coaching Service in Fostering Employee Well-being and Learning Organization Practices

Friday, December 12, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 2, Session 4 Room: Harmonize 3		
Time: 13:25 - 15:30 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Dr. Muhamad Irsan - Faculty of Informatics, Telkom University, Indonesia		
<b>Track Cloud Computing</b>		
Paper ID	Presenter	Paper Title
ISC25184	Yohana Jayanti Aruan	Optimization of Fixed Broadband Network Topologies through the Implementation of Multi-Access Edge Computing (MEC) as a virtual Content Delivery Network (vCDN) in Indonesia
<b>Track Data Analytic</b>		
Paper ID	Presenter	Paper Title
ISC25108	Woromita Fathlistya	A Case Study of Talent Acquisition Analytics: Prehire Talent Assessment as a Predictive Talent Acquisition Strategy
ISC25176	Ivan Muhammad Siegfried	Anomaly Detection Techniques in Telecommunication Networks: A Comprehensive Review
<b>Track ICT 4.0</b>		
Paper ID	Presenter	Paper Title
ISC25109	Muhammad Isnain Hartanto	Unlocking 5G Private Networks in Emerging Markets: Industry Prioritization, ROI, and Commercialization Strategy for Indonesia
<b>Track Smart Industry Platforms</b>		
Paper ID	Presenter	Paper Title
ISC25156	Sadam Al Rasyid	Building a Connected Environmental Test House: ESP32 Integration for Real-Time Monitoring and Telegram Alerts
Friday, December 12, 2025		
ICRES-ISCLO, Onsite Academic Presentation, Day 2, Session 4 Room: Harmonize 4		
Time: 13:25 - 15:30 (UTC+7) *Please note that ALL conference TIME is in Jakarta time UTC+7. Please check your time zone.		
Session Chair: Layung Anindya Prasetyanti, M.S.M., M.Eng. - Universitas Pendidikan Indonesia		
<b>Track Strategic Management</b>		
Paper ID	Presenter	Paper Title
ISC25128	Agista Saraswati	Implementing Behavioural Approach in Asian Telco Industry Organization Transformation
ISC25170	Sagari Tazya	Intergenerational Communication Management Strategies to Enhance Collaboration and Productivity: A Scoping Review in Modern Office Environments
ISC25149	Alya Nur Aisha	An OKR-Based Performance Evaluation Model for Logistics Branch Operations
<b>Track Marketing</b>		
Paper ID	Presenter	Paper Title
ISC25143	Smita Sharma	An evaluation of the future of the Internet of Things and experiential marketing
ISC25140	Erika Fontaron	Branding in the Era of Clicks and Clout: A Quantitative Analysis of User-Generated Content and Paid Social Media Campaigns on Brand Image
<b>Track Business Model Innovation</b>		
Paper ID	Presenter	Paper Title
ISC25167	Annasya Syadzwinia	Digital Enablers of Business Model Innovation for Sustainability: A Conceptual Review in the Context of Indonesian Firms
ISC25147	Muhammad Rafii Naufal	A Strategic Roadmap for Indonesia's Digital Connectivity: Overcoming the High-Cost Low-Quality Paradox

# Track: Artificial Intelligence

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Strengthening **C**ontributions.

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# A Systematic Review of Artificial Intelligence Integration in Strategic Management Processes

| Setyo Budianto  
Telkom Indonesia

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## Abstract

**Background** – The adoption of Artificial Intelligence (AI) in strategic management is a fast-changing area. Historically dependent on human intuition, strategic management is now being transformed by AI tools, including machine learning and predictive analytics, which are reshaping every stage from analysis through evaluation. Despite this evolution, the scholarly work on AI in strategy is fragmented, with no systematic review that thoroughly consolidates existing knowledge or pinpoints critical research deficiencies.

**Purpose** – This study conducts a systematic literature review to synthesize the existing knowledge regarding the role of AI integration in strategic management processes. It aims to answer three main questions: identifying the key AI applications across each strategic management phase, outlining the main benefits and challenges of this integration, and pinpointing the critical research gaps for future academic work.

**Design/methodology/approach** – A systematic literature review (SLR) followed PRISMA Statement guidelines for transparency. We searched Scopus, Web of Science, and Google Scholar, focusing on peer-reviewed, English-language articles from 2015 to 2025. The search combined Artificial Intelligence and Strategic Management terms. Starting with 251 articles, multi-stage screening yielded a final corpus of 50 articles. Data was extracted and analyzed using thematic analysis to synthesize knowledge.

**Findings** – The review found AI mainly enhances the strategic analysis phase in data-intensive tasks like market forecasting and competitor analysis. In strategy formulation, AI is a robust decision-support system, though its role in qualitative strategy is developing. Major hurdles are lack of skilled talent, high costs, and algorithmic bias. The findings suggest augmented intelligence, combining human and AI capabilities for effective collaboration.

**Research limitations** – A key limitation of this review is the limited number of empirical studies in the existing literature, which makes it challenging to draw definitive conclusions about the long-term impact of AI on organizational performance. Additionally, the review was limited to English-language articles, which may exclude valuable insights from non-English research.

**Originality/value** – This research provides a systematic literature review designed to consolidate existing knowledge on how AI is integrated into strategic management. The core finding is the suggestion of a new model—augmented intelligence—that emphasizes the effective collaboration between human and AI capabilities.

*Keywords: Artificial Intelligence, Strategic Management, Systematic Literature Review, Decision-Making, Competitive Advantage*

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# Rethinking User Experience in the Age of AI: Speed, Insight and Trust

| Fakhurul Ridha  
Telkom Indonesia

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## Abstract

**Background** – Artificial Intelligence (AI) is transforming how organizations operate and design digital services. Beyond customer-facing applications, AI is increasingly embedded in internal workflows, enabling faster decision-making and predictive insights. However, most research on AI and User Experience (UX) focuses on external users, leaving a gap in understanding how internal users within large organizations adopt and trust AI systems. This study addresses that gap by exploring AI adoption and user experience from an internal perspective, emphasizing explainability and trust as key human-centered factors in enterprise contexts.

**Purpose** – This study aims to examine how AI reshapes UX practices through the framework of Speed, Insight, and Trust. It highlights the operational benefits and adoption challenges that emerge when predictive AI systems are integrated into internal workflows within a large telecommunications enterprise.

**Design/methodology/approach** – A conceptual and case-based approach was employed. The case study was conducted at Witel Jakarta Outer, a regional operational unit under Telkom Indonesia Regional 2, responsible for managing connectivity and digital product services. The site was selected as a pilot project under a Deputy Director directive due to its readiness for AI integration. The internally developed predictive AI model supported three processes: (1) Sales—lead and product recommendations, (2) Activation—automated order validation, and (3) Assurance—churn prediction up to two months in advance. Data were collected from system performance metrics and qualitative feedback from internal users.

**Findings** – The pilot results showed that potential leads generated increased from 22,000 to 66,000, order verification time decreased from 1.42 to 0.96 hours, and churn risks were predicted two months earlier. Despite these gains, internal teams hesitated to fully adopt AI recommendations, revealing challenges of trust and explainability.

**Research limitations** – The study is based on a single one-month pilot in one organizational context, which may limit generalizability. Broader empirical research across multiple settings is needed to validate the findings.

**Originality/value** – By framing AI's impact through Speed, Insight, and Trust, this study provides a practical lens for evaluating AI-driven UX in enterprise settings. It bridges conceptual discussion with real-world implementation, emphasizing that AI's success depends not only on performance but also on internal trust and adoption.

*Keywords: User Experience, Artificial Intelligence, Intelligent Digital Services, Design Iteration*

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# Redefining the Future of Work: A Proposed Design for Intelligent Surveillance Systems

| Fizri Adiyesa  
Telkom Indonesia

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## Abstract

**Background** – Artificial Intelligence (AI) has transformed workplace, supporting productivity and workflow optimization. As surveillance systems evolve into Intelligent Surveillance Systems (ISS), organizations gain tools for performance monitoring and safety assurance. Yet, their widespread adoption raises significant ethical and technical risks, and no standardized framework currently guides their implementation.

**Purpose** – This review proposes a design and critical evaluation of ISS in workplaces, emphasizing their potential applications and ethical risks.

**Design/methodology/approach** – This review adopts the Design Science Research (DSR) framework as a workflow guide to structure the problem identification and solution design process. DSR provides the logical progression for defining issues, designing artifact-based solutions, and evaluating their implications. Within this workflow, an Input–Process–Output (IPO) model is used to conceptualize the Intelligent Surveillance System. The IPO model analyze the problem at each stage of system operation, and guides the review of ethical and technical alternatives to address them. Through this integration, DSR shapes how the research evolves, while IPO defines what aspects of the system are critically analyzed and redesigned.

**Findings** – The study identifies a series of critical issues in the implementation of ISS within workplaces, synthesized through a systematic literature review using the PRISMA method. Five major concerns were found: (1) privacy violations and data misuse; (2) emotional labour harms; (3) relationship interference; (4) false perception of security; and (5) technological and socio-cultural biases. Each stage of Input–Process–Output model embeds ethical and technical safeguards design. The Input Stage introduces bias-reduction mechanisms through calibration across demographic groups and multi-sensor integration. Next, the Process Stage integrates Explainable AI (XAI) and blockchain-based smart contracts to promote transparency and data control. The Storage Stage employs edge computing and privacy-preserving techniques. Output Stage emphasizes fairness-aware performance monitoring with feedback mechanisms.

**Research limitations** – Further empirical validation and governance-oriented studies are needed to examine long-term social implications and regulatory pathways for ISS.

**Originality/value** – The originality of this research lies in proposing a design-science-driven architecture for ISS that prioritizes fairness and transparency with IPO model. It contributes both a analytical and a practical blueprint for ethically integrating AI surveillance in workplaces.

*Keywords: Intelligent Surveillance Systems, Organizational Fairness, Explainable AI, Privacy*

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# Transforming Telco Competitive Intelligence with Agentic AI: A Conceptual Paper

| Evan Naratama<sup>1</sup>, Fairuz Habibah Ramdhani<sup>1</sup>, Wida Zahra Novalina<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Telecommunication companies face strong pressures not only from competitors within the sector but also from substitute providers, such as software and digital companies. External factors, including technological advancements, competitor actions, and digital disruptions, must be identified and understood to formulate strategies to remain competitive. Competitive intelligence (CI) is a strategic initiative undertaken by organisations to understand the external environment that can influence their competitiveness. However, classic competitive intelligence processes are often inefficient and ineffective in today's dynamic era since they take significant time to collect data from various sources and analyse multiple types of data, posing the risk of being late in anticipating threats or opportunities.

**Purpose** – By integrating agentic AI technology into competitive intelligence systems, telecommunication companies can improve their agility and competitiveness in a rapidly changing industry landscape.

**Design/methodology/approach** – This conceptual paper applies the first three steps of Design Science Research (DSR), comprising problem identification, objective setting and the design of high-level system architecture as the artifact, supported by theoretical justification derived from existing literature. The designed artifact illustrates how agentic AI can enhance telecommunication companies' ability to investigate, analyse, and respond to external changes in a more timely manner and autonomously.

**Findings** – This study examines the capabilities of agentic AI in enhancing competitive intelligence and proposes a six-layer system architecture. The theoretical justification highlights potential impacts in accordance with the Balanced Scorecard perspectives, covering financial performance, customer value, internal business processes, and learning and growth.

**Research limitations** – As a conceptual study, this paper does not explain solution demonstration and empirical performance measurement. The business context in this paper is limited to telecommunication industry. Future research can reveal the impact of proposed architecture through implementation in telecommunication business.

**Originality/value** – This paper proposes a potential agentic AI use case to strengthen competitive intelligence practices in the highly dynamic telecommunication industry.

*Keywords: Agentic AI, Competitive Intelligence, ICT Business, Telecommunication, Strategic Management*

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# Comparative Analysis of Retrieval-Augmented Generation Using OCR and Vision-Based LLMs for PowerPoint Materials

| Bagus Aginsa  
PT Telkom

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## Abstract

**Background** – Organizations often store their internal knowledge in PowerPoint presentations, which combine textual content with visuals such as charts, diagrams, and etc. Traditional text-based retrieval systems struggle to extract meaningful context from such documents. Recent advancements in multimodal Large Language Models (LLMs) offer new opportunities to process visual and textual data simultaneously, potentially outperforming conventional OCR-based approaches.

**Purpose** – This research aims to compare the effectiveness of two RAG pipelines, that is Optical Character Recognition (OCR) and Vision-based LLMs in retrieving and generating contextually relevant information from PowerPoint files.

**Design/methodology/approach** – This research will compare the contextual understanding and accuracy of the RAG using two approaches: Optical Character Recognition (OCR)-based RAG and Vision-based LLMs. PowerPoint slide materials serve as the dataset, encompassing both text-heavy and visually rich content. The slide set is processed into a vector database through the respective pipelines. Eight Q&A tasks per pipeline are used to assess how accurately each approach retrieves and interprets contextual information. Evaluation focuses on contextual relevance and retrieval precision derived from similarity search outcomes.

**Findings** – Early findings indicate that vision-based LLMs offer better contextual understanding and response accuracy during inference. However, incorporating visual data into the vector database is more time-consuming.

**Research limitations** – - Limited dataset may affect generalizability - Small Vision LLM is used to the lack of GPU resources affect the result of extraction - Evaluation focused on English-Indonesia language content

**Originality/value** – This paper compares OCR-based and Vision-based RAG for PowerPoint files (in pdf format), inspired by the author's real-world challenges in extracting insights from internal company slides, and offers practical solutions for better AI-driven document understanding.

*Keywords: RAG, OCR, Vision-based LLM, PowerPoint retrieval*

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# The Role of Artificial Intelligence in Solving Gender, Disability, and Social Inclusion (GEDSI) Issues in the Aquaculture Sector: A Systematic Literature Review and Future Agenda

| Muhammad Ilham Fadhilah<sup>1</sup>, Sunu Widiyanto<sup>1</sup>, Andreas Recki Prasetyo<sup>1</sup>, Rora P. Sari<sup>1</sup>, Hamzah Ritchi<sup>1</sup>

<sup>1</sup>Universitas Padjadjaran, Indonesia

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## Abstract

**Background** – Aquaculture plays a critical role in food security amid growing population demands and environmental pressures. Artificial Intelligence has been supporting the aquaculture sector in enhancing sustainability, boosting productivity, streamlining operations, and improving economic viability. Although Artificial Intelligence research in aquaculture has advanced technically, its implications for gender, disability, and social inclusion (GEDSI) remain underexplored. highlighting the need for a comprehensive systematic literature review (SLR) to uncover these connections.

**Purpose** – This study aims to develop a comprehensive understanding of the implications of Artificial Intelligence for social inclusivity and address gender, disability, and social inclusion (GEDSI) issues in the aquaculture sector.

**Design/methodology/approach** – This study uses a Systematic Literature Review (SLR) approach by applying PRISMA to synthesize and retrieve the relevant literature. Following the PRISMA protocols, 28 highly relevant articles addressing the main focus of this study were identified using Scopus and Web of Science databases

**Findings** – The findings showed that the adoption of AI can indirectly reduce the GEDSI issues in the aquaculture sector because it is necessary to change the social norms (the root of these issues) in this sector. In addition, the collaboration between all stakeholders will be a powerful booster to enhance AI adoption to reduce GEDSI issues in the aquaculture sector

**Research limitations** – This study only uses two databases, so potentially missing related studies on other databases becomes a major limitation of this study.

**Originality/value** – Based on our knowledge, this study presents the first systematic literature review (SLR) examining the impact of artificial intelligence (AI) adoption on gender, disability, and social inclusion (GEDSI) in the aquaculture sector

*Keywords: Aquaculture, Artificial Intelligence, Gender, Disability, Social Inclusion*

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# Development of an AI RAG Chatbot for Telecommunication Device Testing Services

| Marshaniswah Syamsul<sup>1</sup>, Sadam Al Rasyid<sup>2</sup>, Aldi Wiranata<sup>1</sup>, Gunadi Dwi Hantoro<sup>1</sup>,  
Koredianto Usman<sup>2</sup>, Yudha Indah Prihatini<sup>1</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>Telkom University

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## Abstract

**Background** – A telecommunication device testing service in Indonesia provides testing and certification for various communication equipment. As demand for rapid, digital-first communication increases, traditional inquiry channels such as email and phone calls remain inefficient and create delays in customer service. Artificial Intelligence (AI)-based conversational systems offer an opportunity to enhance accessibility, accelerate information delivery, and support the broader digital transformation of technical testing organizations.

**Purpose** – This study aims to design and implement an AI-powered customer service chatbot that enables clients and potential customers to obtain real-time information related to testing services, pricing, and submission procedures. The chatbot integrates a Retrieval-Augmented Generation (RAG) pipeline to ensure factual, context-aware responses based on internal documentation.

**Design/methodology/approach** – The system was developed using a Python-based architecture consisting of FastAPI middleware, WAHA (WhatsApp HTTP API) for communication, and the Qwen3-32B large language model running locally via Ollama as the core reasoning engine. A vector database was used to store and retrieve relevant service documents, enabling RAG to supply grounded context to the language model. Incoming messages are processed through the RAG pipeline, combined with domain-specific prompts, and answered automatically through WhatsApp. Functional testing was conducted to verify message flow, retrieval accuracy, and end-to-end system performance.

**Findings** – The implemented chatbot successfully delivers automated responses to common inquiries regarding testing services and pricing, demonstrating effective integration of RAG for factual grounding. The system operates reliably in real-time messaging environments and reduces manual workload by handling routine questions automatically. The local deployment of Qwen3-32B through Ollama also demonstrates the feasibility of running high-capacity language models for domain-specific customer service tasks without relying on external cloud LLM APIs.

**Research limitations** – This prototype currently supports text-based interactions, limited document coverage, and basic retrieval without advanced personalization. Future work may incorporate conversational memory, fine-tuned domain models, integration with internal databases or CRM systems, and evaluation with larger user groups.

**Originality/value** – This research presents a practical implementation of a domain-specific AI chatbot for technical testing environments, offering a replicable workflow for organizations seeking to digitalize customer interaction using locally deployed LLMs. The integration of WhatsApp-based communication, RAG, and on-premise AI models contributes to more efficient customer engagement within device testing services.

*Keywords: AI Chatbot, Retrieval-Augmented Generation, Qwen3-32B, Workflow Automation, Telecommunication Device Testing Service*

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# Low-Cost Deep Learning Framework for Indoor Localization of Dairy Cows

| Niken Prasasti Martono<sup>1</sup>, Andre Rivianda Daud<sup>2</sup>

<sup>1</sup>Tokyo University of Science, <sup>2</sup>Universitas Padjajaran

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## Abstract

**Background** – Accurate indoor localization of dairy cows is fundamental for monitoring individual behavior, improving animal welfare, and optimizing farm management. Conventional systems, such as RFID or ultra-wideband sensors, are often expensive, invasive, and difficult to maintain, particularly for small-scale farmers. Recent advances in computer vision and deep learning offer a promising alternative for cost-effective and non-contact localization using video data.

**Purpose** – This study proposes a low-cost deep learning framework for real-time localization of dairy cows in indoor barns and to provide an accessible solution that maintains high accuracy without requiring wearable sensors or complex hardware installations.

**Design/methodology/approach** – Video footage was captured from a fixed surveillance camera installed in a dairy barn housing cows. A YOLOv8-based object detection model was trained to identify individual cows under various lighting and occlusion conditions, and the image annotation was done manually. Detected bounding boxes were projected onto barn floor coordinates using a homography transformation to estimate cow positions. Model performance was evaluated in terms of mean average precision (mAP), localization error, and processing speed.

**Findings** – The proposed framework achieved a detection accuracy above 80% ( $mAP@0.5 = 0.91$ ) with an average localization error of approximately 0.3 m. The system operated at near real-time speed on a low-cost GPU setup, demonstrating strong potential for affordable deployment.

**Research limitations** – The current experiment was limited to a single barn and a small number of cows, with manual camera calibration. Future improvements will include scaling to multiple environments, incorporating automated calibration, and integrating identity tracking to enable continuous behavior analysis.

**Originality/value** – This research introduces a practical, low-cost framework that leverages deep learning for indoor cow localization without relying on wearable devices. The approach supports precision livestock farming by enabling non-invasive, scalable monitoring, especially beneficial for smallholder and resource-limited dairy farms.

*Keywords: Computer Vision; Deep Learning; YOLOv8; Indoor Localization; Dairy Cows; Precision Livestock Farming*

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# Track: Accounting

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Industry-Specific Sustainability Reporting: Evaluating the Adoption of SASB Framework in the Asia-Pacific Region

| Rahmanda Nofal Arif<sup>1</sup>, Mansee Gupta<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>University of Sydney

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## Abstract

**Background** – Sustainability has become a central concern in global business, especially after major events such as the Paris Agreement and the COVID-19 pandemic, which emphasized the urgency of balancing environmental responsibility with long-term economic resilience. In response, sustainability reporting has gained momentum worldwide, driven by increasing regulatory expectations and growing recognition of its link to corporate performance. Most companies still rely on general frameworks such as the Global Reporting Initiative (GRI) or the Sustainable Development Goals (SDGs). While these provide comprehensive coverage, their flexibility often results in selective disclosures, reducing transparency and comparability. The Sustainability Accounting Standards Board (SASB) offers a more industry-specific approach, providing standardized guidance across 11 sectors and 77 industries. However, SASB adoption in the Asia-Pacific remains limited, reducing comparability across companies within the same industry. This study therefore evaluates SASB adoption and compliance in the region, focusing on the Technology and Communication sector. It compares adopters with non-adopters to examine disclosure practices, assess alignment with industry materiality, and highlight the implications of using industry-specific versus general sustainability frameworks.

**Purpose** – To assess how thoroughly SASB adopters apply industry-specific disclosure topics and metrics, and to compare their reporting practices with non-adopters that using general sustainability frameworks only.

**Design/methodology/approach** – A compliance assessment approach was used, applying two indices: the Disclosure Topic Compliance Index (DTCI) to measure topic coverage and the Disclosure Metric Compliance Index (DMCI) to assess the use of both qualitative and quantitative metrics. These indices were applied to 32 Asia-Pacific Technology and Communication companies, including both SASB adopters and non-adopters.

**Findings** – SASB adopters demonstrated significantly higher compliance with industry-specific topics and metrics, particularly in quantitative measures. Non-adopters tended to emphasize narrative disclosures, resulting in less comparability and consistency.

**Research limitations** – The study focus on a single sector and modest sample size limits generalization. Future research may extend the analysis to other sectors or examine barriers to adopting quantitative sustainability metrics.

**Originality/value** – This study adds to limited literature on industry-specific sustainability reporting in the Asia-Pacific region. It provides empirical insights into the practical benefits of SASB adoption, emphasizing how structured, industry-specific standards enhance the quality and reliability of sustainability information for investors and regulators.

*Keywords: Sustainability Reporting, Compliance Index, SASB, Industry-specific , Asia-pacific*

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# The Rationality of Debit and Credit Rules in the Accounting Equation

| Yusuf Hendriarto<sup>1</sup>, Agnesia Candra Sulyani<sup>1</sup>, Refina Nida Nafila<sup>2</sup>

<sup>1</sup>PT. Telekomunikasi Indonesia, <sup>2</sup>Sekolah Bisnis dan Manajemen ITB

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## Abstract

**Background** – Debit and credit are fundamental concepts in accounting. However, understanding these concepts remains a challenge because accounting education often emphasizes memorization rather than comprehension. As a result, learners lose interest in studying accounting and find it difficult to connect debit and credit with broader accounting concepts such as financial statements and decision-making.

**Purpose** – This study aims to develop a learning method that strengthens the logical understanding of debit and credit rules within the accounting equation.

**Design/methodology/approach** – The study uses bibliometric analysis to examine research on accounting learning, which has been increasing from year to year and visualization techniques that help explain the logic behind debit and credit rules. It builds on the core idea of the book Visual Financial Canvas, which presents a way to visualize financial transactions as flows entering and leaving the accounting equation from the right-hand side, supported by practical examples.

**Findings** – Financial Inflow Event: When financial value enters from the right-hand side of the accounting equation, assets (debit) and liabilities or equity (credit) increase, illustrating balanced recording. Financial Outflow Event: When financial value exists, assets (credit) and liabilities, equity, or revenue (debit) decrease, maintaining logical balance in line with accounting principles. Circular Flow Event: This event occurs when value moves within assets—one asset decreases (credit) while another increases (debit)—showing balanced internal movement. Inflow–Outflow Event: This event takes place on the liabilities and equity sides, where an increase in one account is matched by a decrease in another, preserving logical balance. Financial transaction, begins on the credit side as the first location for recording flowing funds and ends on the debit side.

**Research limitations** – This study focuses only on individual transactions and does not cover the full accounting cycle. Future research should analyze a complete sequence of accounting cycles to strengthen students' understanding of the accounting process as a whole.

**Originality/value** – Visualizing the accounting equation as a “bucket,” where financial transactions are shown as flows entering and leaving from the right-hand side, offers a simpler and more logical way to understand how debit and credit rules work.

*Keywords: accounting; double-entry bookkeeping; t-accounts; visualization; visual learning; debit and credit rationalization*

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# Integration of TAM3 and UTAUT Models to Measure Organizational Readiness in Vocational Higher Education Institutions

| Rifi Wijayanti Dual Arifin<sup>1</sup>, Adi Akbar<sup>1</sup>, Emma Dwi Ariyani<sup>1</sup>, Eugenia Cherrima<sup>1</sup>, Ennelis Widne Pratiwi<sup>1</sup>

<sup>1</sup>Politeknik Manufaktur Bandung, Indonesia

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## Abstract

**Background** – As digital transformation reshapes organizations and educational systems, assessing readiness has become vital to ensuring successful adoption and sustained use of new technologies. Traditional models often address isolated dimensions without capturing the interplay between them. To address this gap, this study integrates the Technology Acceptance Model 3 (TAM3) and the Unified Theory of Acceptance and Use of Technology (UTAUT) into a unified framework that conceptualizes readiness as both a psychological state and an organizational condition.

**Purpose** – This study aims to develop and validate an integrative measurement instrument based on TAM3 and UTAUT constructs for assessing organizational readiness for digital transformation. It seeks to test the instrument's reliability and validity and to identify the constructs that most strongly influence readiness among respondents actively engaged in digital system use within the institution.

**Design/methodology/approach** – A quantitative design was employed using a structured survey administered to 65 respondents involved in digital system utilization and related activities. Six key constructs were measured using a five-point Likert scale. Data were analyzed with SmartPLS 4.0 to evaluate reliability (Cronbach's Alpha), convergent validity (factor loadings and AVE), and discriminant validity (cross-loadings).

**Findings** – All constructs demonstrated strong reliability ( $\alpha = 0.905\text{--}0.965$ ) and validity indicators (loadings  $> 0.70$ ). Behavioral Intention, Attitude Toward Use, and Performance Expectancy emerged as dominant predictors of readiness, confirming that user motivation and perceived usefulness are key drivers of technology adoption readiness. The results validate the integrated TAM3–UTAUT model as a robust instrument for capturing multidimensional readiness.

**Research limitations** – The study is limited to a single institutional context. Future research should validate the model across broader organizational settings and user groups.

**Originality/value** – This research introduces and validates an integrative readiness measurement instrument combining TAM3 and UTAUT constructs. The instrument is theoretically grounded yet practically adaptable, providing a reliable tool for organizations seeking to assess and enhance readiness for digital transformation.

*Keywords: Organizational readiness, TAM3, UTAUT, vocational education, PLS-SEM*

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# The Role of ESG Performance and Operational Efficiency in the Relationship Between Intellectual Capital and Firm Value

| Rian Zakaria<sup>1</sup>, Nadia Anridho<sup>1</sup>

<sup>1</sup>Universitas Airlangga

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## Abstract

**Background** – This study addresses the inconclusive empirical relationship between Intellectual Capital (IC) and firm value in emerging markets by asking: How does IC influence firm value, and what roles do operational efficiency and ESG performance play in this relationship within the context of post-regulatory Indonesia? The study is grounded in the resource-based theory and reflects the increasing relevance of sustainability-oriented management in emerging economies

**Purpose** – This study examines the effect of Intellectual Capital on Firm Value through Operational Efficiency, with ESG Performance moderating the link between Operational Efficiency and Firm Value. It aims to clarify how IC contributes to firm value creation in a post-regulatory Indonesian context, where sustainability disclosure and ESG practices are becoming institutionalized

**Design/methodology/approach** – The study employs a quantitative explanatory design using a moderated mediation model (PROCESS Model 14). Data were collected from 274 non-financial Indonesian firms with available ESG performance scores from Bloomberg during the observation period 2021–2023. The analysis was conducted using the PROCESS macro in RStudio, allowing for simultaneous estimation of indirect and conditional effects

**Findings** – Results indicate that Intellectual Capital enhances Firm Value indirectly through Operational Efficiency, but has no significant direct effect on Firm Value. Furthermore, Environmental and Social Performance significantly moderate the mediation pathway, strengthening the indirect relationship between IC and firm value through operational efficiency when ESG performance is high

**Research limitations** – The study focuses on Indonesian firms with available ESG performance data, which limits the sample size and generalizability of the findings. Future research could broaden the scope by including firms from various sectors or employing longitudinal data to capture the dynamic evolution of IC, ESG, and firm performance over time

**Originality/value** – This study offers a novel framework by positioning Operational Efficiency as a mediator and ESG Performance as a strategic moderator in the link between Intellectual Capital and Firm Value. The study's originality also lies in the use of post-regulatory Indonesian data, following the OJK mandate on sustainability reporting, capturing how firms integrate IC and ESG practices to enhance value creation in emerging markets

*Keywords: Sustainable Value Creation, ESG Integration in Corporate Strategy, Environmental Efficiency Mediation*

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# Effect of Information Technology and Information Sharing on Supply Chain Finance Performance of Smes in China: The Mediating Role of Digital Supply Chain Capabilities

| Wang Jia<sup>1</sup>, Nur Aima Shafie<sup>1</sup>, Eley Suzana Kasim<sup>1</sup>

<sup>1</sup>Accounting Research Institute, UiTM Malaysia

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## Abstract

**Background** – Chinese SMEs continue to struggle to secure bank financing due to information asymmetry and credit risk, with total loan demand reaching RMB 104.3 trillion in H1 2024 but only about 40% fulfilled. At the same time, supply chain finance (SCF) is expanding rapidly, RMB 41.3 trillion in 2023 and on track to lead the global market by 2027, yet academic inquiry into how SCF mechanisms actually serve SMEs remains limited. Digitalization is accelerating within SCF, with penetration rising from 5% in 2018 to 30% in 2022 and projected to hit 50% by 2027, but the specific ways digital tools and information sharing enhance SCF performance are still not well understood.

**Purpose** – Assess how information technology affects SMEs' supply chain finance (SCF) performance in China. Assess how information sharing affects SMEs' SCF performance in China. Examine how information technology and information sharing influence digital supply chain capabilities (DSCC). Determine how DSCC affects SMEs' SCF performance in China. Test whether DSCC mediates the effects of information technology and information sharing on SMEs' SCF performance in China.

**Design/methodology/approach** – This quantitative survey distributed 500 questionnaires to SMEs and obtained 430 usable responses (86%). Data were cleaned in SPSS and analyzed in SmartPLS using SEM to test the hypotheses.

**Findings** – Information resources boost SCF performance among Chinese SMEs. Both information technology and information sharing directly improve SCF and digital supply chain capability (DSCC), enhancing governance, collaboration, and digital capability. DSCC mediates the link between information resources and SCF performance, with significant mediation through collaboration and digital capability, but not through governance.

**Research limitations** – Limited sample size and coverage, determined with help from one SCF platform service provider. ♦Future research should expand the sample size and cover more regions and industries for better generalization.

**Originality/value** – Expands signaling theory from a firm-level focus to dynamic, real-time signaling across supply chains, enhancing signal credibility and reducing financing risk. Advances RBV by illustrating how IT and IS, transformed into DSCC, sustain performance improvements.

*Keywords: Digital supply chain capabilities, information sharing, information technology, supply chain performance*

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# Track: ICT 4.0

Connecting **I**deas,  
Strengthening **C**ontributions.

Supported by:



# Unlocking 5G Private Networks in Emerging Markets: Industry Prioritization, ROI, and Commercialization Strategy for Indonesia

| Muhammad Isnain Hartanto<sup>1</sup>, Stuart Revell<sup>2</sup>

<sup>1</sup>Telkom Indonesia, Indonesia, <sup>2</sup>RTACS Ltd, United Kingdom

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## Abstract

**Background** – 5G private networks present significant opportunities for emerging markets such as Indonesia to accelerate economic growth and support the country's Vision 2045. However, their adoption raises practical uncertainties regarding implementation models and monetization strategies within the constraints of Indonesia's industrial and regulatory ecosystem.

**Purpose** – This study evaluates the value, feasibility, and commercialization approaches for 5G private networks in Indonesia by identifying priority sectors and quantifying potential business benefits.

**Design/methodology/approach** – A mixed-methods approach was applied by integrating quantitative market and ROI analysis with qualitative insights derived from 23 semi-structured interviews involving telecom operators, technology vendors, regulators, and representatives from vertical industries. To ensure analytical consistency, qualitative insights were quantified through a scoring framework for prioritizing industries based on strategic relevance, digital readiness, and economic potential. Analytical tools included PESTLE and SWOT assessments, a decision matrix for sector ranking, business model canvas evaluation, and return-on-investment (ROI) calculations.

**Findings** – Findings indicate that the mining sector presents the strongest case for early adoption, driven by productivity, safety, and operational efficiency requirements. Realization of this value requires alignment between industry challenges, targeted value propositions, and a feasible business model. The study recommends a telco-led managed service approach to capitalize on existing infrastructure investments. With the flexibility of 5G Service-Based Architecture, it offers the flexibility required to integrate multi-vendor environments and diverse network functions.

**Research limitations** – The research is limited by its Indonesia-focused scope, concentration on top GDP-contributing industries, and reliance on quantified qualitative insights, which may limit sample diversity. Broader quantitative testing and cross-country benchmarking are suggested for future validation.

**Originality/value** – This study offers an ROI-driven justification for 5G private network deployment in emerging vertical markets and provides actionable direction for telecom operators, policymakers, and industrial stakeholders in Indonesia.

*Keywords: 5G Private Network, Industrial Digitalization, Return on Investment (ROI), Telecommunications Strategy, Indonesia*

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# Track: Data Analytic

Connecting **Ideas**,  
Strengthening **Contributions**.

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# **Strategy and Implementation of Enhancing Scientific Publications Towards International Accreditation: A Case Study of the Geophysical Engineering Study Program**

**| Wahyu Hidayat<sup>1</sup>, Uli Ulfa<sup>1</sup>, Maman Rohaman<sup>1</sup>, Wrego Seno Giamboro<sup>1</sup>**

<sup>1</sup>UPN “Veteran” Yogyakarta, Indonesia

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## **Abstract**

Scientific publication is one of the primary indicators of academic quality and institutional reputation in higher education. This article discusses strategies and the implementation of enhancing scientific publications in the Geophysical Engineering Study Program as part of the effort toward international accreditation. The research method employed is a case study with a qualitative-descriptive approach through interviews, questionnaires, document analysis, and observation of academic activities. The findings indicate that the main challenges in publication include limited writing skills, lack of global collaboration, and the high workload of the three pillars of higher education (teaching, research, and community service). Key success factors for publication are research data quality, academic writing skills, and access to international references. This article proposes strategies such as writing workshops, mentoring systems, strengthening collaborations, providing incentives, and improving research infrastructure. Implementing these strategies not only increases the quantity and quality of publications but also strengthens the study program's position in achieving international

*Keywords: Scientific publication, international accreditation, Geophysical Engineering*

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# A Case Study of Talent Acquisition Analytics: Prehire Talent Assessment as a Predictive Talent Acquisition Strategy

| Woromita Fathlistya<sup>1</sup>, Andre Nurrohman<sup>1</sup>, Irma Ulfah Ardanissa<sup>1</sup>, Martina Dwi Mustika<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Talent acquisition is essential for organizations to achieve their goals by securing the right talent. While effective talent acquisition reduces costs and time-to-hire, its real impact comes from improving hire quality. In recent years, analytics has become increasingly relevant in enhancing talent acquisition quality by enabling organizations to make more objective, data-driven, and evidence-based decisions throughout the hiring process. However, many organizations still rely on SOP-driven selection frameworks built upon legacy criteria that remain unevaluated in terms of their empirical validity or predictive power for future employee performance. This study addresses this gap by applying talent acquisition analytics to develop more data-driven, predictive, and effective selection methods aligned with organizational goals.

**Purpose** – This study focuses on empirically identifying successful predictors of job performance in the talent acquisition process (i.e., prehire talent assessment).

**Design/methodology/approach** – Data from 758 employees' were collected from prehire to current performance during 2013 to 2018 using various psychological measurements. Predictive analytics was conducted using classification tree analysis in R to identify key predictors of employee performance.

**Findings** – Classification tree analysis of 40 prehire talent assessment criteria revealed three key predictors of candidates' future performance, with a classification accuracy rate of 43.2%. The strongest predictors were work attitude (importance score: 126.97), work involvement (importance score: 98.02), and job knowledge (importance score: 83.23).

**Research limitations** – The study was limited by incomplete data integration across systems and years, inconsistent criteria naming, and rating bias due to the dominance of mid-scale scores. Future research could enhance model accuracy by using integrated systems, balanced sample data, and multi-method statistical analysis.

**Originality/value** – For many years, talent acquisition has only focused on the prehire talent assessment process. By incorporating both prehire and post-hire data, this study offers a longitudinal perspective that may identify the most predictive criteria in employees' performance, therefore making the talent acquisition process to be more effective in selecting candidates who are likely to demonstrate strong performance over time.

*Keywords: People analytics, predictive analytics, prehire talent assessment, talent acquisition analytics, employees' performance*

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# Track: Digital Transformation

Connecting **I**deas,  
Strengthening **C**ontributions.

Supported by:



# Evaluating Adoption of a Sales Digitization Application Using Modified UTAUT and In-Depth Interviews<sup>1</sup>

| Mhd. Rizky Ferianda<sup>1</sup>, Siska Noviaristanti<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>Telkom University

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## Abstract

**Background** – Digital transformation in the telecommunications sector has accelerated the use of enterprise systems such as the Sales Digitization Application. Despite its mandatory implementation, challenges in usability, credibility, and organizational support persist, requiring a deeper understanding of adoption behavior.

**Purpose** – This study analyzes factors influencing the adoption of Sales Digitization Application by extending the Unified Theory of Acceptance and Use of Technology (UTAUT) with two additional constructs: Perceived Credibility (PC) and Perceived Organizational Support (POS).

**Design/methodology/approach** – An explanatory sequential mixed-method design was applied. Quantitative data from 365 employees of a National Telecom Company were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The measurement model was tested for convergent and discriminant validity as well as reliability, followed by structural model evaluation. The qualitative phase, through six semi-structured interviews, was used to validate and explain the quantitative results.

**Findings** – Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), and PC significantly influence Behavioral Intention (BI), while Effort Expectancy (EE) is not significant. Both BI and FC significantly affect Use Behavior (UB), whereas POS does not moderate the BI–UB relationship. The model explains 69% of the variance in BI and 74% in UB, indicating strong predictive power. Qualitative findings emphasize users' expectations for reliability, ease of access, and transparent communication as key factors supporting adoption.

**Research limitations** – This study focuses on one regional context and uses cross-sectional data, limiting generalization. Future research could employ longitudinal or cross-regional comparative designs to observe behavioral evolution and contextual variation.

**Originality/value** – This research extends UTAUT by integrating trust (PC) and organizational support (POS) in a mandatory-use environment. It contributes to theory by identifying boundary conditions of organizational support and provides managerial implications for digital transformation strategy, emphasizing credibility, infrastructure reliability, and performance outcomes to sustain technology adoption.

*Keywords: Digital transformation, UTAUT, Perceived Credibility, Perceived Organizational Support, Mixed methods*

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## Unpacking Institutional and Narrative Barriers in Indonesia's Digital Transformation

| Dimas Ihsan Rashidi<sup>1</sup>, Humam Baskara<sup>1</sup>

<sup>1</sup>Telkom Indonesia



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## Abstract

**Background** – Indonesia has invested heavily in digitalisation, yet ICT4D research indicates that those investments rarely address deeper constraints such as institutional fragmentation, power asymmetries, and policy narratives that equate “transformation” with inclusion. Therefore, this research will investigate why Information and Communication Technology (ICT) solutions in Indonesia fail to deliver inclusive development, focusing on Malinau Regency in North Kalimantan as a case study area to explore how digital transformation can benefit the most vulnerable populations.

**Purpose** – This research examines why ICT has struggled to deliver inclusive development, identifies the mechanisms through which technology-government misalignment produces inequality & suggests the conditions on which ICT can enhance people’s capabilities.

**Design/methodology/approach** – Primary data were collected through in-depth semi-structured interview and online questionnaires. The data collection focused on individuals residing in Malinau Regency, North Kalimantan, Indonesia. One semi-structured interview was conducted with an expert, while 19 online questionnaires were completed, featuring both closed- and open-ended questions. A thematic analysis approach was then used to identify patterns and concepts within the data. The analysis resulted in six key themes: Infrastructure, Affordability, Human Capacity, Socio-Economic Fit, and Participation and Voice.

**Findings** – Market-led ICT programmes prioritise rapid scale and visible outputs, which sidelines equitable access & meaningful use. The inclusion gap arises from five mechanisms: (1) narrative proxies that treat connectivity uptake as inclusion, (2) institutional misalignment with overlapping mandates, weak boundary resources, and uneven accountability, (3) architecture and data frictions such as low interoperability, vendor lock-in, and inconsistent data governance, (4) capability deficits including limited skills, affordability constraints, and thin local support, and (5) perverse incentives that reward outputs over outcomes. Counter-cases indicate that state-enabled and community-anchored designs using open standards, interoperable systems, local capacity building, and clear accountability broaden capabilities and produce more durable public value.

**Research limitations** – The research's qualitative, desk-based approach with a small sample size offers analytical generalisability but not statistical significance; its purposive sampling and interpretive nature may introduce selection bias and subjectivity.

**Originality/value** – This research highlights that fostering digital transformation in rural contexts goes beyond simply providing access to technology. It underscores the importance of policy initiatives addressing institutional & socio-political dimensions, particularly when digitizing public services or scaling government agendas.

*Keywords: digital transformation, ICT4D, institutional barriers, governance, digital inclusion*

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## Evolving Beyond Connectivity: How Asia-Pacific Telcos Leverage AI and Platform Integration for Sustainable Growth

| Aisyah  
Telkom Indonesia

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## Abstract

**Background** – The Asia-Pacific telecommunications industry is undergoing a rapid transformation driven by advances in artificial intelligence (AI), cloud computing, and digital ecosystems. Traditional infrastructure-based business models (long reliant on connectivity revenues) are increasingly challenged by over-the-top (OTT) platforms, shrinking margins, and fast-paced technological innovation. As a result, digital transformation has become essential for telcos to sustain competitiveness, though the pace and effectiveness of adoption differ widely across markets and organizational contexts.

**Purpose** – This study investigates how telecommunications companies in the Asia-Pacific region maintain competitiveness amid technological disruption. It focuses on how digital transformation, ecosystem orchestration, and AI integration reshape business models and enable long-term resilience. The objective is to identify strategic pathways that support telcos' transition from network operators to digital ecosystem enablers capable of creating both economic and social value.

**Design/methodology/approach** – A comparative qualitative approach was employed, combining data triangulation from ten peer-reviewed studies, industry reports, and case analyses of leading Asia-Pacific telcos—Telkom Indonesia, Singtel, NTT, China Mobile, and Reliance Jio. Drawing on the Dynamic Capabilities framework (Teece, 2007) and Ecosystem Orchestration Theory (Jacobides et al., 2018), the research used thematic coding and a comparative matrix to identify recurring patterns in strategic agility, AI adoption, and inter-firm collaboration that enhance digital transformation outcomes across regional contexts.

**Findings** – Three dominant survival strategies emerge: (1) platform diversification through integrated digital ecosystems combining connectivity, fintech, and cloud services; (2) AI-driven analytics to enhance operational efficiency and customer experience; and (3) collaborative governance models linking telcos with startups, governments, and technology partners. Firms integrating these dimensions, such as Jio and Singtel, demonstrate stronger revenue resilience and innovation capacity, while lagging firms face declining market share.

**Research limitations** – The study relies on secondary qualitative data from five major cases; future work could incorporate longitudinal or quantitative analyses.

**Originality/value** – By linking digital ecosystem orchestration with dynamic capability development, this study offers a comparative framework for understanding how Asia-Pacific telcos adapt to AI-driven disruption and evolve into sustainable digital ecosystem orchestrators.

*Keywords: Telecommunications, Digital Transformation, Artificial Intelligence, Ecosystem Orchestration, Asia-Pacific*

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# The Impact of Digital Workplace Technologies on Employee Productivity and Well-Being in Hybrid Office Environments: A Systematic Literature Review

| Tegar Arrasyid<sup>1</sup>, Tutik Inayati<sup>1</sup>, Ratna Wulan Dari<sup>1</sup>, Virda Ramadhani Putri<sup>1</sup>

<sup>1</sup>Universitas Pendidikan Indonesia

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## Abstract

**Background** – The rapid adoption of hybrid work models has accelerated digital workplace technologies implementation, creating new dynamics in employee productivity and well-being. Organizations increasingly invest in digital solutions without comprehensive understanding of their multifaceted workforce impacts.

**Purpose** – This study identifies, analyzes, and synthesizes empirical findings regarding digital workplace technologies' impact on employee productivity and well-being in hybrid environments, and identifies key moderating factors influencing these relationships.

**Design/methodology/approach** – A systematic literature review following PRISMA guidelines was conducted using the Scopus database. Keywords and Boolean operators related to digital workplace, productivity, well-being, and hybrid environments were employed. Inclusion criteria comprised empirical research (2020-2025), focus on digital workplace technologies, and measurable employee outcomes. From 330 initially identified articles, 52 passed staged screening. Data analysis employed thematic synthesis methodology to systematically identify recurring patterns and develop analytical themes across studies with diverse methodological approaches.

**Findings** – Digital workplace technologies enhance productivity through efficient collaboration and flexibility, yet simultaneously risk creating technostress and digital fatigue. Employee well-being is positively influenced by technologies supporting work-life balance but negatively affected by digital overload and boundary blurring. Key moderating factors include digital literacy, organizational support, and leadership style.

**Research limitations** – The review's focus on a single database (Scopus) and five year timeframe may limit comprehensiveness. The heterogeneity of methodologies across studies ranging from quantitative surveys to qualitative case studies with varying sample sizes, contexts, and measurement instruments constrains direct comparability of findings and prevents statistical meta-analysis, thereby limiting the strength of causal inferences that can be drawn about technology impacts.

**Originality/value** – This research conceptualizes the "digital workplace paradox" where technology serves as both enabler and potential stressor. It develops a multi-level contingency model integrating individual, organizational, and technological factors shaping digital workplace outcomes. Practical contributions include evidence-based implementation strategies focusing on human-centered design, digital literacy programs, and integrated well-being policies.

*Keywords: Digital workplace, employee productivity, well-being, hybrid work, technostress*

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# Driving ESG Integration Through Digital Transformation: A Strategic Framework for Sustainable Business in Indonesia's State-Owned Enterprises

| Nur Arifah

PT Telkom Indonesia (Persero) Tbk

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## Abstract

**Background** – The increasing demand for sustainability and corporate accountability has made Environmental, Social, and Governance (ESG) integration a strategic necessity for modern organizations. In Indonesia, State-Owned Enterprises (SOEs) play a crucial role in achieving national sustainability goals. However, ESG initiatives within SOEs often remain fragmented and compliance-oriented. At the same time, the rise of digital transformation offers new opportunities to enhance transparency, efficiency, and stakeholder engagement through data-driven decision-making

**Purpose** – This paper explores how digital transformation can act as a strategic enabler of ESG integration in Indonesian SOEs. It aims to propose a practical framework that connects digital capabilities—such as data analytics, automation, and collaborative platforms—with sustainability outcomes

**Design/methodology/approach** – A qualitative, applied research design using thematic synthesis was employed. The data set included corporate sustainability reports from major Indonesian SOEs within the last five years, industry and consulting reports from the past decade, and international journal articles from the past ten years. Open and axial coding were used to derive three core themes forming the proposed framework.

**Findings** – The resulting Digital-Driven ESG Strategic Integration Framework consists of three pillars: (1) Digital Leadership and Culture — embedding ESG targets in digital dashboards and executive scorecards; (2) Technology-Enabled ESG Monitoring and Reporting — applying IoT, AI, and automated MRV (Measurement–Reporting–Verification) systems for real-time data assurance; and (3) Collaborative Ecosystems for Sustainable Innovation — leveraging supplier data exchange portals and co-innovation hubs to enhance transparency and collective accountability. These mechanisms strengthen organizational agility and ESG performance alignment.

**Research limitations** – This study is limited by its reliance on secondary data and thematic synthesis, which may not capture all operational complexities of ESG practices in SOEs. Future research should empirically validate the framework through surveys or comparative case studies.

**Originality/value** – This paper contributes a novel, practical framework for understanding how digital transformation can accelerate ESG integration within state-owned enterprises in developing economies. It bridges theoretical gaps between digitalization and sustainability while offering actionable insights for policymakers, corporate leaders, and sustainability practitioners aiming to transform compliance-based ESG approaches into digitally empowered, value-driven strategies

*Keywords: ESG Integration, Digital Transformation, Strategic Framework, Sustainability Strategy, State-Owned Enterprises*

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# Design and Implementation of an IoT-Based Keychain with Emergency Notifications for the Prevention and Handling of Emergency Situations in Real Time

| Nadhira Salsabila Vanka<sup>1</sup>, Muhamad Irsan<sup>1</sup>

<sup>1</sup>Faculty of Informatics, Telkom University, Bandung, Indonesia

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## Abstract

**Background** – the background establishes the social relevance of the study by highlighting the ongoing issue of sexual violence, the technological need for an efficient and portable security system, and the proposed solution—an IoT-based keychain that can send emergency alerts in real time. This research seeks to provide a practical, low-cost, and accessible device for enhancing personal safety.

**Purpose** – the abstract's purpose is to highlight the development, objectives, and effectiveness of an IoT-based security system, demonstrating its potential to enhance personal safety through innovative technology.

**Design/methodology/approach** – The methodology for this research combines design, integration, and rigorous testing to develop a reliable IoT-based keychain for personal security. Through detailed testing, including GPS accuracy, SMS delivery time, and battery performance, the system's effectiveness in providing quick and accurate emergency alerts is confirmed. This methodology ensures the creation of a practical, portable, and efficient device to enhance personal safety, especially in emergency situations.

**Findings** – personal safety in emergency situations.

**Research limitations** – These limitations indicate that while the IoT-based keychain is a promising tool for enhancing personal safety, certain factors—such as network dependency, GPS performance in challenging environments, and battery life—need to be addressed in future iterations. Overcoming these limitations will increase the system's effectiveness and make it more versatile for a wider range of users and use cases.

**Originality/value** – The originality of this research lies in its innovative integration of IoT technologies into a compact, portable personal security device that addresses both the technical and practical needs of real-time emergency response. Its value extends beyond technical novelty, as it directly contributes to improving public safety, particularly in environments with limited resources, by offering an affordable, reliable, and user-friendly solution.

*Keywords: keychain, Internet of Things (IoT), GPS module, GSM module, personal security system*

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# Augmented reality (AR) as Software as service in fashion retail industry

| Anas Teguh Syahadat<sup>1</sup>, Rahmah Shabrina<sup>1</sup>, Rahma Yulia Prastiwi<sup>1</sup>, Sophia Khana<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Telkom Indonesia, the nation’s largest digital telecommunications company, is accelerating its transformation toward becoming a digital services leader. One emerging opportunity is integrating Augmented Reality (AR) as a Software as a Service (SaaS) solution for the fashion retail industry. Indonesia’s Augmented and Virtual Reality market is projected to grow from USD 60 million in 2017 to over USD 760 million by 2030, with AR software representing the largest and fastest-growing category, approximately doubling every three years. This momentum highlights vast untapped potential for industry-specific AR platforms, particularly in fashion and personal care. These factors create favorable conditions for scalable and accessible AR adoption among small and medium enterprises (SMEs) as Telkom Indonesia New Market Segmentation.

**Purpose** – This initiative accelerates Telkom digital transformation, supports SME empowerment, and builds a new creative technology ecosystem. It strengthens Telkom’s leadership while fostering local innovation in the growing AR economy.

**Design/methodology/approach** – This study adopts a quantitative descriptive approach using business radar analysis to explore Telkom’s strategic positioning in emerging B2B digital markets. The analysis benchmarks Telkom’s innovation readiness and revenue structure against regional ICT peers including Singtel, PLDT, KT, and AIS that have begun diversifying into enterprise-focused digital services such as cloud, AI, and immersive technology. A business model canvas was also developed to assess the feasibility and scalability of Telkom’s proposed AR Builder SaaS.

**Findings** – The proposed AR Builder SaaS enables fashion brands to create AI-personalized, no-code virtual try-ons integrated with E-Commerce. For Telkom, it introduces recurring revenue through subscriptions and managed services, supporting its transition from connectivity provider to digital enabler. This initiative accelerates Indonesia’s digital transformation and builds a new creative technology ecosystem. It strengthens Telkom’s leadership while fostering local innovation in the growing AR economy.

**Research limitations** – Current Study focuses on fashion retail and assumes sufficient technological infrastructure. Future research should examine cross-sector scalability and adoption challenges in lower-connectivity regions.

**Originality/value** – This research pioneers the concept of AR as SaaS tailored for Indonesia’s fashion market, combining AR, AI, and LNCD technologies to position Telkom as a catalyst for enterprise digital transformation in Southeast Asia.

*Keywords: Augmented Reality, Virtual Try On, Software As a Service*

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# Digital Matching Systems as Tools for Student-Led Marketing Consultations with MSMEs: Fostering Innovation and Employability

| Kathleen Pulmones<sup>1</sup>, Marmelo Abante<sup>1</sup>, Yeo Sook Fern<sup>2</sup>

<sup>1</sup>World Citi Colleges Quezon City, <sup>2</sup>Multimedia University

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## Abstract

**Background** – The acceleration of digital transformation in the Philippines has reshaped collaborations between academic institutions and MSMEs to enhance skills development and innovation. However, most student-led marketing consultations remain informal and short-term, limiting their role in job readiness and MSME growth. This study is grounded in Project SUSTAIN (Start-Up Service and Tech Advancement Incubation Network), a College of Business Administration initiative launched in 2023 to support start-up businesses after the COVID-19 pandemic. Backed by the administration and involving key institutional stakeholders, Project SUSTAIN reflects the institution's commitment to innovation, entrepreneurship, and community-focused academic–industry collaboration.

**Purpose** – This study aims to bridge this gap by developing a Digital Matching System that connects Business Administration students with MSMEs through structured, data-driven marketing engagements.

**Design/methodology/approach** – Anchored on System Development Life Cycle (SDLC), Technology Acceptance Model (TAM), Job Readiness and Employability Skills Framework, and Triple Helix Innovation Model, the study integrated system design, user acceptance, and skills assessment. The prototype matched MSMEs with students based on profiles and interests, fostering relevant, mutually beneficial consultations. This approach supports structured, technology-driven experiential learning, enhancing employability and innovation readiness in higher education in the Philippines.

**Findings** – The Digital Matching System improved student-MSME matching, enhanced employability skills, increased MSME satisfaction and engagement, promoted innovation in marketing solutions, strengthened academe-industry collaboration, and demonstrated feasibility for wider adoption in the Philippine context.

**Research limitations** – The study evaluated a prototype with a limited sample and scope, short engagement cycles, and basic system features, which may affect scalability and generalizability. Future research should pilot the platform at scale, integrate advanced functionalities, involve key stakeholders, and evaluate long-term impact on workforce readiness, MSME performance, and industry–academe collaboration.

**Originality/value** – This study is novel in leveraging a Digital Matching System to optimize student-led marketing consultation, linking academic skills with real MSME needs. It delivers value by boosting student employability, driving innovative marketing solutions, and strengthening industry partnerships, while providing MSMEs cost-effective, data-driven support and scalable collaboration opportunities.

*Keywords: Digital Matching System, Job Readiness, System Development Life Cycle (SDLC), Technology Acceptance Model (TAM), Triple Helix Model*

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# Evaluating Public Information Systems: Enhancing Transparency, Efficiency, and Citizen Engagement in Digital Governance

| Rowena L. Gracilla<sup>1</sup>, Florinda G. Vigonte<sup>1</sup>, Marmelo V. Abante<sup>1</sup>

<sup>1</sup>World Citi Colleges Quezon City

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## Abstract

**Background** – Public Information Systems (PIS) are fundamental to e-governance, embodying the digital transformation in the collection, management, and dissemination of public data by governments through information and communication technologies (ICTs). This study presents an adaptable evaluation framework for the public sector, delivering practical insights for the development of inclusive, secure, and citizen-centric digital information systems, particularly pertinent to developing countries seeking to improve governance through technology.

**Purpose** – This review seeks to define Public Information Systems, outline their vision and evaluation objectives, identify foundational pillars, present global best practices, examine common barriers to effective evaluation, and analyze the Philippine Identification System (PhilSys) as a practical case study that contributes to the literature on digital governance in the Philippines.

**Design/methodology/approach** – A narrative review method was used to qualitatively synthesize insights from scholarly literature, academic books, and official government publications and platforms, including international digital governance reports and national e-government initiatives. Materials from the previous 10–15 years were chosen to reflect post-pandemic digital governance and Public Information System advancement. Search phrases included “Public Information Systems,” “digital governance,” “citizen engagement,” “evaluation of digital platforms,” and “data privacy in public administration.”

**Findings** – This paper uses a qualitative synthesis of relevant literature and case examples to define PIS evaluation's main goals—efficiency, transparency, and citizen participation—based on five pillars: accessibility and inclusivity, security and data privacy, interoperability, system efficiency, and user experience.

**Research limitations** – Challenges in evaluating Public Information Systems were Data Privacy and Security Risks, Technological Infrastructure Gaps, Digital Divide, Bureaucratic Resistance, Ethical Concerns, and Lack of Evaluation Standards.

**Originality/value** – This document highlights Estonia, South Korea, and the UK's best practices, using the Philippine Identification System (PhilSys) as a case study. The review addresses data privacy risks, technological infrastructure deficiencies, the digital divide, and institutional resistance. The conclusion emphasizes inclusive, secure, and citizen-centric Public Information Systems and makes policy recommendation.

*Keywords: e-government, evaluation framework, Philsys, public information systems, transparency*

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# Track: Innovation Management

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Balancing Exploration and Exploitation: Organisational Ambidexterity in an Indonesian State-Owned Enterprise (SOE)

| Nabila Priscandy Poetri

Telkom Indonesia

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## Abstract

**Background** – Organisational ambidexterity, the ability to balance exploration and exploitation, is essential for companies' long-term survival. While extensively studied in private sector firms, research on State-Owned Enterprises (SOEs) remains scarce, despite their unique institutional governance constraints.

**Purpose** – This study investigates how organisational ambidexterity is operationalised within State-Owned Enterprises (SOEs), including the modes adopted and the organisational characteristics that influence them. It further explores how SOE-specific institutional features shape both ambidexterity activities and the modes through which they are enacted.

**Design/methodology/approach** – This study employs a qualitative single-case study approach. Ten semi-structured interviews were conducted with employees occupying various roles and levels at a large Indonesian SOE involved in ambidexterity initiatives. Following that, the data will be analysed using an inductive approach and thematic analysis.

**Findings** – Findings show that the State-Owned Enterprise (SOE) employed both structural and contextual ambidexterity, resulting in a hybrid configuration, where structural separation facilitated exploration through a dedicated innovation program, while contextual mechanisms enabled individuals to engage in both innovation and operational work. Key organisational characteristics, including leadership and management, operational mechanisms, people capabilities and collaboration, behavioral and social, and corporate resources, shaped these initiatives. However, SOE-specific elements such as government mandates, stable employment, bureaucratic structures, institutional pressure, and political appointment influenced both the design and execution of ambidexterity initiatives, sometimes enabling innovation but often constraining its continuity.

**Research limitations** – Although the research highlights causal links between SOE features, organisational characteristics, and ambidexterity activities and modes, these relationships are inferred from thematic patterns instead of being validated through statistical analysis. Future studies could utilise mixed-methods or quantitative techniques to examine the intensity and direction of these relationships, thereby strengthening the robustness of the findings.

**Originality/value** – The study highlights a gap in the existing literature, namely, current studies rarely distinguish how organisational characteristics influence ambidexterity activities, which are exploration and exploitation, and how they impact modes, whether it is structural, contextual, or hybrid approaches. This study's findings not only bridge existing gaps but also reveal how distinctive SOE features, such as political appointments, institutional pressures, and stable employment, influence organisational traits. Future research should thoroughly examine these relationships across various organisational forms.

*Keywords:* Organisational ambidexterity, exploration, exploitation, structural ambidexterity, contextual ambidexterity

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# **Empowering Sustainable Engagement through Green Transformational Leadership: Insights from a Learning Organization in Indonesia**

**| Indarta Priyana<sup>1</sup>, Yusuf Arifin<sup>1</sup>**

<sup>1</sup>Universitas Pasundan

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## **Abstract**

This study explores how Green Organizational Culture (GOC) shapes Employee Performance (EP) through the mediating role of Green Employee Engagement (GEE) in a sustainable education service organization. The study is based on the theoretical foundations of Organizational Behavior and Green Human Resource Management (GHRM) within the framework of Learning Organization and Digital Leadership. Data were collected from 258 branch managers across Indonesia using proportional cluster random sampling. Employing Structural Equation Modeling (SEM-LISREL 8.80), results demonstrate that (1) GOC significantly and positively influences GEE, (2) GEE significantly influences EP, and (3) GEE fully mediates the relationship between GOC and EP. These findings suggest that a strong green culture enhances employees' affective and cognitive engagement toward environmentally responsible behaviors, leading to superior performance. The study contributes theoretically by integrating green culture and engagement into the learning organization perspective and practically by providing insights for digital education leaders to reinforce green values, sustainability innovation, and employee empowerment.

*Keywords: Green Organizational Culture, Green Employee Engagement, Employee Performance, ESG, SDGs, Learning Organization.*

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# Future-Oriented Leadership Style Mapping for Subsidiaries of Digital Telecommunications Companies

| Richard Alberto<sup>1</sup>, Ahmad Zaeni<sup>2</sup>, Nurwulansari<sup>2</sup>, Anissa Rizki<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>Telkom Corporate University Center

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## Abstract

**Background** – Digital telecommunications companies (DTCs) operate in increasingly complex ecosystems shaped by Artificial Intelligence (AI), the rollout of 5G and 6G networks, and the growing imperative for sustainability. In multi-subsidiary environments, strategic misalignment between leadership characteristics and business strategies often results in inefficiency, resistance to transformation, and underperformance in innovation.

**Purpose** – This study develops a Future-Oriented Leadership Mapping Framework that aligns subsidiary business strategies with corresponding leadership traits and archetypes. The framework aims to enhance organizational agility, digital competitiveness, and long-term sustainability across

**Design/methodology/approach** – Using a qualitative–analytical case study design, this research integrates the Big Five Personality Traits (OCEAS) with leadership archetypes (Alpha–Sigma) to develop a hybrid mapping model across four strategic clusters—Selective, Strengthen, Defend/Digitalize, and Rethink. The qualitative approach was chosen due to its suitability for exploratory conceptual integration, allowing in-depth contextual analysis within an emerging-market SOE ecosystem. Quantitative indicators (e.g., innovation rate, customer retention, and OPEX efficiency) were derived through conceptual benchmarking against prior industry studies (McKinsey, 2023; Deloitte, 2022; World Economic Forum, 2023), ensuring analytical grounding and external validity.

**Findings** – The mapping reveals clear leadership–strategy alignment patterns. Alpha and Gamma leaders best fit Selective clusters, driving innovation and bold investments. Beta and Delta leaders align with Strengthen clusters, emphasizing empathy, stability, and customer loyalty. Gamma and Omega leaders are suited to Defend/Digitalize clusters, focusing on operational efficiency and risk control, while Alpha and Omega leaders are most effective in Rethink clusters, leading turnaround and divestment initiatives. Empirical benchmarks indicate up to 40% higher innovation, 25% improvement in customer retention, and 10–15% OPEX reduction when leadership–strategy alignment is achieved.

**Research limitations** – The study is limited to a single corporate ecosystem and applies conceptual mapping rather than quantitative validation. Future research should employ longitudinal and psychometric analyses to empirically test the leadership–performance relationship.

**Originality/value** – This paper presents a novel hybrid integration model linking the Big Five Personality Framework with leadership archetype theory, bridging scientific personality constructs with applied leadership taxonomies. The proposed framework offers an actionable tool for developing future-ready leaders who integrate innovation, efficiency, and resilience to sustain competitive advantage in digital transformation contexts.

*Keywords: Leadership Mapping, Big Five Personality Traits, Digital Telecommunication, Organizational Sustainability, Future-Oriented Leadership.*

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# Track: Smart City

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Forecasting Sectoral Carbon Emissions in the United Kingdom Using a Daily Time Series Approach

| Made Kevin Bratawisnu<sup>1</sup>, Fizri Adiyesa<sup>1</sup>

<sup>1</sup>PT Telkom Indonesia

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## Abstract

**Background** – Accurate and timely forecasting of carbon emissions is essential for supporting evidence-based climate policy and achieving national decarbonisation goals. The United Kingdom has pledged to reach net zero emissions by 2050, which requires detailed monitoring and short-term prediction of sectoral emission dynamics. However, most existing studies rely on aggregated or low-frequency data that overlook daily fluctuations and sector-specific patterns.

**Purpose** – This study develops a daily forecasting framework for carbon emissions across six major sectors in the United Kingdom: domestic aviation, ground transport, industry, international aviation, power, and residential. It identifies the most suitable forecasting models for each sector and evaluates their effectiveness in capturing emission behaviour.

**Design/methodology/approach** – Daily carbon dioxide emission data from the Carbon Monitor project, covering January 2023 to February 2025, were analysed. Five time series models were employed: Naive, Simple Exponential Smoothing, Holt’s Linear Trend, TBATS, and ARIMA. Each model was trained on 80 percent of the dataset and tested on the remaining 20 percent. Model performance was evaluated using Mean Absolute Error, Root Mean Square Error, Mean Absolute Percentage Error, and Mean Error. Seasonal-Trend Decomposition using Loess was applied to identify additive and multiplicative seasonal patterns.

**Findings** – Model performance varied by sector. TBATS achieved the highest accuracy for domestic aviation and ground transport, ARIMA performed best for industry, international aviation, and power, while Holt’s Linear Trend model was most suitable for the residential sector. Additive seasonality dominated in the power and residential sectors, whereas multiplicative patterns appeared in aviation and transport.

**Research limitations** – The study focuses on univariate models and does not include external predictors such as temperature, fuel prices, or policy measures. Future research could integrate these factors through multivariate extensions like ARIMAX or hybrid ensemble approaches to capture policy shocks, weather-driven energy demand, and behavioural shifts.

**Originality/value** – This research provides comparison of the sector-specific daily forecasting frameworks for carbon emissions in the United Kingdom. By comparing multiple time series models and integrating structural decomposition, the study offers methodological and practical insights for policymakers and analysts to design more responsive and targeted climate strategies.

*Keywords: Time Series Forecasting, Carbon Emissions, Sectoral Analysis, STL Decomposition, Climate Policy*

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# Adaptive Strategy for Sustainable Flood Mitigation Through IoT-Based Green Infrastructure in the Way Balau Sub-Watershed

| I Ketut Agung Enriko<sup>1</sup>, Indah Prastiwi<sup>2</sup>, Muhammad Nabhaan Ramadhan<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>Institut Teknologi Sumatera

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## Abstract

**Background** – Bandar Lampung City faces recurring floods every rainy season, particularly in the middle segment of the Way Balau Sub-watershed, Way Halim Permai. Flooding is triggered by high rainfall intensity, reduced river basin capacity, limited green open space, and improper land use, resulting in poor water absorption and severe runoff.

**Purpose** – This study aims to design a riparian landscape based on green infrastructure as a flood mitigation strategy and to propose an integration framework with the Internet of Things (IoT) to optimize stormwater management in a sustainable manner.

**Design/methodology/approach** – A mixed-method approach was employed, combining field observation, interviews, and primary and secondary data analysis. Flood vulnerability mapping was conducted using a scoring system with parameters including slope, soil type, rainfall, land use, and elevation. The planning refers to the Spatial Planning Regulation (RTRW) of Bandar Lampung City (2021–2041) and the Ministerial Regulation of PUPR No. 28/2015 concerning river borderlines.

**Findings** – The analysis indicates that the Way Balau Sub-watershed is categorized as flood-prone, particularly due to dense settlements in riparian zones and limited infiltration areas. Among several green infrastructure elements—bioswales, rain gardens, riparian buffers, wetlands, infiltration wells, and retention ponds—the retention pond has the most significant impact on runoff management. The proposed design integrates the retention pond with IoT systems featuring water level sensors, automated gates, and data monitoring dashboards using LoRaWAN or 4G-LTE communication. This integration enables real-time control and early flood warnings, enhancing the overall resilience of the area.

**Research limitations** – The study focuses on site planning and IoT integration concepts for flood mitigation but does not include detailed hydrological modeling or discharge analysis.

**Originality/value** – This research provides an innovative model combining landscape-based green infrastructure with IoT technology for adaptive, sustainable flood mitigation in urban riparian environments.

*Keywords: Green Infrastructure, IoT Integration, Flood Mitigation, Riparian Landscape, Smart Water Management*

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# Track: Corporate Governance

Connecting **Ideas**,  
Strengthening **Contributions**.

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# Mapping the Landscape of Leadership GRC (Governance, Risk, and Compliance): A Bibliometric Approach

| Agnesia Candra Sulyani<sup>1</sup>, Zahra Kasya Akbar<sup>2</sup>, Risyando Ramdhan Manovandi<sup>3</sup>,  
Richard Alberto<sup>1</sup>

<sup>1</sup>Telkom Corporate University Center, <sup>2</sup>Telkom University, <sup>3</sup>Universitas Pelita Bangsa

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## Abstract

**Background** – The growing complexity and volatility of global business necessitate a more coordinated and strategic approach to governance. Today's primary model is the Governance, Risk, and Compliance (GRC) framework, which helps business meet, goals, handle uncertainty, and uphold ethical criteria. Leadership plays a pivotal role in aligning GRC practices with organizational goals through ethical conduct, transparency, and cultural reinforcement. However, fragmented GRC functions remain a challenge, reducing overall effectiveness.

**Purpose** – highlighting its strategic importance and identifying emerging trends and conceptual gaps. It emphasizes how leadership theory informs GRC integration, particularly in fostering compliance culture and strategic alignment.

**Design/methodology/approach** – Using Scopus and Web of Science (WoS), this study applies bibliometric analysis to map leadership literature in the GRC context (2019–2024). It shows growth from 60,124 to 105,137 papers, affirming leadership's strategic role in driving change. Digital technologies support ethical leadership in building resilient organizations. However, incomplete metadata, limited keywords, and reliance on quantitative methods may bias trend analysis by emphasizing dominant themes while overlooking cultural and ethical aspects.

**Findings** – The research reveals a rising academic interest in leadership-GRC integration, with more focus on digital technologies including business intelligence, machine learning, and artificial intelligence. These ideas assist ethical leadership in helping to create robust and obedient businesses. Human leadership is still vital for encouraging a compliance culture and strategic alignment even in light of technical developments. Among GRC operations, fragmentation continues to impede optimum implementation.

**Research limitations** – This study faces limitations such as incomplete metadata, limited keyword scope, and a short publication window (2019–2024). The use of quantitative methods and focus on technological themes may reduce contextual depth and underrepresent cultural and ethical aspects. These constraints could bias trend interpretation by emphasizing dominant, measurable topics while overlooking emerging or nuanced perspectives.

**Originality/value** – This study offers a fresh perspective on leadership within GRC domain by applying bibliometric analysis to follow research trends from 2019 to 2024. It presents a multidimensional approach combining technology innovation, strategic alignment, and ethical leadership. Additionally offering methodological insights for overcoming metadata constraints, the study helps to theoretically advance leadership-GRC integration, therefore creating the ground for further research and practical uses.

*Keywords: Leadership, Governance, Risk, Compliance, Bibliometric*

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# Star-Making Product Governance: The Catalyst for a Healthier Product Portfolio

| Muhammad Bayhaqi Irwansyah<sup>1</sup>, Albert Agung Tri Hatmaka<sup>1</sup>, Agista Rully Saraswati<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

Product proliferation represents a critical challenge for large telecommunications, IT services, and digital conglomerates, frequently leading to overlapping offerings, internal cannibalization, and operational inefficiencies. This study investigates how a Star-Making Product Governance approach can restructure a fragmented product portfolio into a more focused and strategically aligned landscape. Applying the DMAIC methodology, the research integrates analytical tools including the BCG Matrix, Business–Product Alignment, eTOM-based role mapping, and resource reallocation to systematically diagnose and address proliferation issues. A case study of Company X uncovers a portfolio exceeding 900 products, where nearly 800 contribute less than 30% of total value, with underlying causes rooted in siloed governance and ineffective customer request mechanisms. The findings underscore the necessity of group-wide product governance supported by a standardized product taxonomy, clear role delineation, and product-level profit-and-loss accountability, with strategic alignment cascading from the business portfolio downward. Key interventions include strengthening role clarity through eTOM and reinforcing top-down governance via CEO oversight and a dedicated Product Council. The results demonstrate that disciplined product governance is instrumental in reducing inefficiencies and enabling the emergence of high-impact “star” products, reflected in a roadmap to retire more than 40% of the portfolio and a focused plan to develop five future flagship offerings. Notably, this portfolio streamlining also coincides with a positive rebound in Company X’s stock price, indicating broader organizational and market-level impact.

*Keywords: Product Governance; Product Portfolio; Rationalization; Resource Reallocation*

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# Navigating Licensing Obligations in Network Infrastructure: Legal Insights from PT. XYZ

| Agnesia Candra Sulyani<sup>1</sup>, Nurwulansari<sup>1</sup>, Pretty Siska Budhiyati<sup>1</sup>, Yusuf Hendriarto<sup>1</sup>

<sup>1</sup>Telkom Corporate University Center

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## Abstract

**Background** – As digital transformation accelerates, organizations must ensure all partnerships and service offerings comply with national telecommunications laws. In Indonesia, there are several legislative instruments and licensing conditions that make up the complicated regulatory scene. Limited regulatory understanding among regional managers and procedural inefficiencies cause PT. XYZ, a network infrastructure company, to struggle to understand and meet licensing requirements.

**Purpose** – This case study aims to clarify licensing obligations for network infrastructure providers and offer practical insights for navigating regulatory complexities. By examining PT. XYZ's experience, it contributes to a broader understanding of legal compliance in network service provisioning.

**Design/methodology/approach** – The research is framed as a qualitative case study including document analysis and regulation review. Internal SOPs, national laws (such as Law No. 36/1999 and Ministry Regulation No. 5/2021) and compliance mechanisms were analysed. ISO 31000:2018 was used as a basis to determine control effectiveness (risk management principles). This approach captures the context and process complexity of legal compliance in situ. Furthermore, in order to enrich analysis and support robustness, qualitative data might be integrated by means of stakeholder interviews or triangulation to gain more profound insights and enhance validity.

**Findings** – The study identifies two main compliance challenges: people-related, where regional stakeholders lack understanding of licensing regulations; and process-related, involving complex, time-consuming procedures that hinder compliance and efficiency. These require extensive documentation, regulator coordination, and often cause delays, increasing risk. PT. XYZ addressed these through three strategies: regulatory socialization, contractual safeguards, and cross-functional policy integration. These measures improved compliance, reduced legal exposure, enhanced governance, and strengthened risk anticipation.

**Research limitations** – The study is limited by its single-case focus, which may affect generalizability. Reliance on internal documentation and lack of stakeholder interviews reduces interpretive depth and external validation. Including perspectives from regulators or partners would strengthen validity and provide richer insights into compliance challenges.

**Originality/value** – This study strengthens understanding of legal compliance in network infrastructure by presenting a structured approach to licensing risk management. It bridges regulatory theory with practice, offering a replicable compliance model and emphasizing integration of legal awareness and risk management into organizational processes.

*Keywords: Legal compliance, Telecommunications law, Network infrastructure, Licensing obligations, Risk management*

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# Track: Learning Organization

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Bridging the Human–Digital Divide: Towards a Digital Humanistic Learning Organization

| Mia Amelia<sup>1</sup>, Imam Suhadi<sup>1</sup>

<sup>1</sup>PT Telekomunikasi Indonesia, Tbk

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## Abstract

**Background** – Despite the growing body of research on digital transformation, existing research remain fragmented between technological adoption and human-centered learning. Leadership theories emphasize vision and inspiration, while digital transformation literature focuses on systems and readiness. Yet, how organizations simultaneously nurture human growth and digital adaptability remains conceptually underexplored. Current frameworks rarely integrate Transformational Leadership (TL), Psychological Safety (PS), Digital Mindset (DM), and Learning Organization (LO) in one model.

**Purpose** – This research addresses the human–digital integration gap by developing and empirically testing the concept of the Digital Humanistic Learning Organization (DHLO)—a human-centered system harmonizing leadership, psychological safety, and digital mindset to foster collective learning and adaptability in digital transformation contexts.

**Design/methodology/approach** – Data were collected from 100 employees of PT Telkom Indonesia, a state-owned enterprise undergoing large-scale digital transformation. Using a quantitative explanatory design and Partial Least Squares Structural Equation Modeling (SmartPLS), the study examined causal paths among Transformational Leadership (TL), Psychological Safety (PS), Digital Mindset (DM), and Learning Organization (LO). Reliability and validity were confirmed, and model strength was assessed using key fit and predictive indices.

**Findings** – The model reached good fit (SRMR = 0.087; NFI = 0.695). TL significantly influenced PS ( $\beta = 0.694$ ,  $p < 0.001$ ) and LO ( $\beta = 0.525$ ,  $p < 0.001$ ). PS partially mediated the TL–LO link ( $\beta_{\text{indirect}} = 0.238$ ,  $p < 0.001$ ), confirming that leadership fosters learning through trust and empowerment. DM's indirect effect on LO was positive but not significant ( $\beta = 0.053$ ,  $p = 0.201$ ), indicating that digital cognition alone cannot replace leadership-driven safety. The model showed strong explanatory power ( $R^2_{\text{LO}} = 0.770$ ) and predictive relevance ( $Q^2_{\text{LO}} = 0.485$ ).

**Research limitations** – This study's cross-sectional, single-organization design limits causal inference and generalizability. Longitudinal and cross-industry research are recommended to validate the DHLO model and examine its evolution across digital maturity levels.

**Originality/value** – This study introduces the Digital Humanistic Learning Organization (DHLO) framework, that integrating humanistic and digital paradigms to extend transformational leadership theory into the digital era. It highlights that digital transformation succeeds not through technology, but through psychologically safe, trust-based, and value-driven leadership—particularly relevant for high power-distance, collectivist contexts such as Asian state-owned enterprises.

*Keywords: Transformational Leadership; Psychological Safety; Digital Mindset, Learning Organization*

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# Building A Human-Centered Learning Organization: Linking Digital Leadership, Psychological Safety, And Learning Agility to Organizational Resilience

| Imam Suhadi<sup>1</sup>, Ridwan Yusuf Suryo Gumilang<sup>1</sup>, Martulan Suryanto Naibaho<sup>1</sup>

<sup>1</sup>PT Telkom Indonesia, Tbk

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## Abstract

Various studies on digital transformation look at resilience as adopting new technology and being agile, but often overlook how human learning helps organizations renew their business. This study presents the Human-Centered Learning Organization (HCLO) model, which views resilience as a process shaped by human learning at different levels. Based on our analysis on digital leadership, psychological safety, and organizational learning, the model suggests that organizations become more resilient when leaders' views and treat digital changes as opportunities for organizational reflection, trust, and shared learning.

A survey of 161 employees from a large telco company was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that digital leadership has strong effect on psychological safety ( $\beta = 0.688$ ,  $p < 0.001$ ), which then boosts both learning agility ( $\beta = 0.329$ ,  $p = 0.003$ ) and learning organization ( $\beta = 0.416$ ,  $p < 0.001$ ). Although learning agility by itself does not predict resilience, collective learning has a significant positive effect ( $\beta = 0.409$ ,  $p = 0.030$ ). The indirect effect of digital leadership on resilience, through psychological safety and collective learning, is also significant ( $\beta_{\text{indirect}} = 0.117$ ,  $p < 0.05$ ), confirming a mediation relationship.

This study contributes a conceptual framework and hopes to shift the focus from system-driven to human-learning-driven resilience, showing how digital leadership turns technology-focused adaptation into reflective, trust-based renewal. The HCLO framework contributes to the discussion of digital leadership by framing resilience as an outcome of ongoing human learning, rather than a technical result.

*Keywords: Digital Leadership, Psychological Safety, Learning Agility, Learning Organization, Organizational Resilience*

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# Navigating Transformation: Autoethnographic Insights Into Learning and Systemic Limits in Organizational Change

| Merysa Merysa<sup>1</sup>, Rizka Zeny<sup>2</sup>

<sup>1</sup>University of Bristol, <sup>2</sup>Telkom Indonesia

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## Abstract

**Background** – Corporate business transformation is often viewed as strategic and proof of agility. Nevertheless, change is a continual dance between innovation and systemic limitation (Senge, 1990, 1999). When Telkom Indonesia announced its strategic corporate transformation (5 Bold Moves) in 2022, it aimed to address the increasing market disruption and drive business growth. However, this transformation also affects various aspects of the organization, including employees' experience in facing corporate transformation alongside how ideal change management should be conducted.

**Purpose** – This paper aims to examine corporate transformation through the experiences of two employees and to understand how learning, resistance, and adaptation interact. By situating personal narratives within the learning organization (Senge, 1990, 1999) and change management literature, this study aims to highlight the tensions between ideal organizational change rhetoric and the complexities of employees' lived experiences.

**Design/methodology/approach** – This paper employs an autoethnographic approach (Doloriert & Sambrook, 2012) by drawing on reflective dialogues and personal narratives to analyze transformation across hierarchical levels. While most studies in change management present findings derived from observation and interviews, critical autoethnography offers dialogic reflection. This method enables the juxtaposition of diverse interpretations of the same corporate transformation.

**Findings** – Three interrelated themes were concluded from the analysis of the authors' experiences. First, structural complexity hinders organizational change: the multilayered hierarchies that were initially designed for coordination have constrained transparent communication and eventually obscured the vision of change itself. Second, resistance as double-edged factor: the tension stemming from limited access to information about change can be equally useful or hinder employees' growth, creating another hurdle to the envisioned future change. Third, misalignment between employees' needs and envisioned change: there are aspects of business-driven change that may not align with the employees' needs. This will make change harder to execute since employees, as the smallest unit of the organization, cannot embrace those changes willingly.

**Research limitations** – As autoethnography study, the findings offer interpretive rather than generalizable insights.

**Originality/value** – Through lived experience, the paper reframes organizational learning as an oscillation between vision and constraint. It demonstrates autoethnography as a rigorous, ethical method for examining how systemic limits and human sense-making co-produce change.

*Keywords: learning organization, organizational learning, corporate transformation, employee experience, autoethnography*

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# A New Paradigm in Pre-Retirement Programs for State-Owned Enterprises: A Systematic Literature Review Based on the PRISMA 2020 Framework

| Martini Setiawan<sup>1</sup>, Nabilah Kienda Aliffah<sup>1</sup>

<sup>1</sup>PT Telkom Indonesia

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## Abstract

**Background** – Employees in state-owned enterprises (SOEs) often face emotional, cognitive, and social challenges when approaching retirement. Despite the existence of formal pre-retirement programs, most initiatives remain administrative in nature, focusing mainly on financial or procedural preparation rather than fostering self-reflection and lifelong learning. This gap often leads to anxiety, disengagement, and a lack of purpose during the transition to post-employment life. A learning-based approach is therefore essential to enable employees to perceive retirement not as an endpoint, but as a meaningful phase of personal renewal and contribution.

**Purpose** – This study aims to explore the organizational responsibility of SOEs in facilitating learning-oriented pre-retirement programs and to develop a conceptual model that enhances the effectiveness, relevance, and sustainability of such initiatives within the Indonesian context.

**Design/methodology/approach** – A Systematic Literature Review (SLR) was conducted in accordance with the PRISMA 2020 guidelines to ensure rigor, transparency, and replicability. A total of 42 peer-reviewed journal articles published between 2010 and 2025 were reviewed, sourced from major academic databases—Scopus, Web of Science, ScienceDirect, and Google Scholar. The inclusion criteria were limited to studies focusing on state-owned enterprises (SOEs) and closely related public-sector organizations that discuss organizational learning, employee transition, and retirement preparedness. Thematic analysis was applied to identify recurring constructs, practices, and learning gaps specifically within SOE retirement programs.

**Findings** – The review highlights two dominant learning gaps in current SOE practices: the reflective learning gap (limited self-awareness and meaning-making) and the individual learning gap (lack of tailored or experiential learning). In response, the study introduces a three-pillar pre-retirement learning model—Reflective Readiness, Skill Renewal, and Transition Alignment—to be implemented as a one-to-three-year learning journey that integrates psychological, professional, and social readiness.

**Research limitations** – As a conceptual review, the study is based on secondary data and has not yet undergone empirical validation. Future research should examine its application in diverse SOE environments.

**Originality/value** – This study reframes retirement from an administrative process into a learning-oriented transformation, positioning it as a strategic phase for sustaining human capital and organizational continuity.

*Keywords: Pre-retirement learning, Organizational learning, State-Owned Enterprise (SOE), Reflective readiness, Transition alignment*

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# Assessing Digital Transformation Readiness in Vocational Higher Education: A Mixed-Method Analysis of an Indonesian Polytechnic Institution

| Emma Dwi Ariyani<sup>1</sup>, Rifi Wijayanti Dual Arifin<sup>1</sup>, Jonathan Stanley Panjaitan<sup>1</sup>, Mukhlis<sup>1</sup>

<sup>1</sup>Politeknik Manufaktur Bandung

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## Abstract

**Background** – Digital transformation has become a strategic imperative for higher education institutions, particularly in vocational contexts where technology integration must align with practical learning and industrial collaboration. While many institutions adopt enterprise resource planning (ERP) systems to improve efficiency, the success of such initiatives depends not only on infrastructure but also on human and organizational readiness. Vocational higher education institutions (VHEIs) often face unique challenges that make readiness assessment critical to achieving sustainable transformation.

**Purpose** – This study aims to evaluate the level of digital transformation readiness in a vocational higher education institution by integrating quantitative and qualitative evidence. Specifically, it seeks to identify how human, organizational, and technological factors interact to shape readiness and to develop a diagnostic framework that supports strategic improvement and capacity building.

**Design/methodology/approach** – A mixed-method sequential explanatory design was employed. The quantitative phase utilized a validated TAM3–UTAUT instrument to assess six constructs through a survey of academic and administrative staffs. Reliability and validity were confirmed using Cronbach’s Alpha and factor loadings. The qualitative phase involved semi-structured interviews with key stakeholders to explore contextual enablers and barriers. Findings from both phases were integrated using an Organizational Readiness Matrix (ORM) to visualize readiness levels and gaps.

**Findings** – Results indicate moderate-to-high readiness across all constructs, with mean scores ranging from 3.45 (EE) to 4.25 (PE). Human readiness, including motivation, attitude, and behavioral intention, achieved high scores, reflecting strong confidence in digital systems. Organizational and technological readiness remained transitional due to inconsistent infrastructure and communication flow. The ORM revealed a maturity gap between individual engagement and institutional capability. Leadership commitment, ongoing training, and reliable IT infrastructure were identified as the most influential enablers of readiness progression.

**Research limitations** – The study focuses on a single institution, which may limit generalizability. Future research should extend validation across multiple institutions and examine readiness evolution longitudinally.

**Originality/value** – This study contributes a validated mixed-method readiness framework and a diagnostic instrument integrating TAM3 and UTAUT constructs. The instrument can be applied broadly across organizations seeking to assess and strengthen digital transformation readiness, offering both analytical rigor and practical utility for institutional leaders.

*Keywords: Digital transformation, organizational readiness, mixed-method, vocational higher education, ERP*

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# Operationalizing a Learning Culture: Implementing a Learning Organization Framework in Indonesia's Ministry of Finance

| Siti Radhiatan Mardiah Daulay<sup>1</sup>, I Putu Agus Arya Alit Suantara<sup>1</sup>

<sup>1</sup>Financial Education and Training Agency, Ministry of Finance

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## Abstract

**Background** – Entering its third phase of bureaucratic reform in 2013, the Indonesian Ministry of Finance (MoF) recognized that effective knowledge management is essential for resilience and change. However, the lack of a systematic approach has led to knowledge loss and inconsistent development policies, highlighting the need for a stronger learning culture. While most studies have focused on linking learning culture (LC) to performance outcomes, research on how organizational LC evolves—particularly in the public sector—remains underexplored.

**Purpose** – Thus, this study aims to examine how MoF operationalizes its learning culture through the implementation of Learning Organization (LO) principles. Specifically, it seeks to analyze the ministry-wide strategies adopted to embed learning practices within organizational activities and assess how MoF's LO framework influences the cultivation of a learning culture throughout the ministry.

**Design/methodology/approach** – Through document analysis, quantitative and qualitative data from regulations, reports, and executive summaries spanning multiple years were categorized according to specific themes within the existing LO framework. The procedure involved identifying, appraising, and synthesizing documentary evidence that allows authors to pinpoint milestones, highlight key contributors, and explore possibilities for further research.

**Findings** – The findings suggest that the interaction among the ten LO components has been instrumental in fostering the MoF's learning culture. Higher maturity scores correspond to a strong learning culture, showcasing the effective integration of policies, systems, and HR practices that enhance adaptability and enable sustained change. The results highlight the importance of establishing a clear vision, committed leadership, infrastructure investment, and aligning HR policies with organizational goals. Overall, these results provide valuable insights for applying LO principles in the public sector and offer a practical approach for facilitating learning-driven transformation in complex government organizations.

**Research limitations** – Generalization to other institutions is limited by the distinct context of the MoF, while the evolving metrics pose challenges for longitudinal analysis. Future studies should consider comparative research in other entities.

**Originality/value** – To the best of the author's knowledge, this research is the first to empirically examine how LO initiatives and learning culture are managed in Indonesia's public sector, focusing on ministerial regulations and institutional mechanisms for measuring LO maturity.

*Keywords: Learning Organization, Public Sector, Learning Culture, Knowledge Management, Managing Change*

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# Beyond Ranking: Humanized Forced Distribution And Rewards As Enablers of A Learning Culture

| Imam Suhadi<sup>1</sup>, Laura Lahindah<sup>2</sup>

<sup>1</sup>PT Telkom Indonesia, <sup>2</sup>Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University

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## Abstract

**Background** – The accelerating pace of digital transformation has compelled organizations to balance technological advancement with human adaptability. While digitalization promises efficiency, it simultaneously heightens the need for continuous learning, reflection, and collaboration across hierarchical boundaries. Yet, the paradox of performance management persists: systems designed to enhance accountability often suppress openness and learning. Traditional appraisal mechanisms emphasize compliance and control, limiting opportunities for reflection and knowledge exchange. This enduring tension between accountability and adaptability underscores the need for appraisal models that can fulfill both evaluative and developmental purposes.

**Purpose** – This study examines how a Humanized Forced Distribution (HFD) model—combining the structural discipline of forced distribution with 360° feedback—can foster learning-oriented behavior even without fully developed dialogic feedback mechanisms. Drawing on Organizational Justice, Experiential Learning, and Learning Organization theories, it explores how fairness perceptions and reward credibility transform evaluative routines into reflective practices.

**Design/methodology/approach** – A quantitative explanatory design used survey data from 322 employees of PT Graha Sarana Duta, the subsidiaries of PT Telkom Indonesia, which implemented the HFD system between 2017 and 2019. The data, collected retrospectively in 2025, capture employees' perceptions of fairness and learning derived from that period. Partial Least Squares Structural Equation Modeling (PLS-SEM) tested direct and mediated relationships among HFD, Reward System, and Learning Culture.

**Findings** – Results reveal that HFD exerts a strong positive effect on the reward system ( $\beta = 0.81$ ,  $p < 0.001$ ) and indirectly enhances learning culture through rewards ( $\beta = 0.42$ ,  $p < 0.001$ ;  $R^2_{\text{learning}} = 0.53$ ). When appraisal processes are perceived as fair and reinforced by credible rewards, they encourage trust, reflection, and collaboration—core behaviors underpinning collective learning.

**Research limitations** – This cross-sectional, retrospective design relies on employee recall of experiences from 2017–2019, and dialogic feedback mechanisms were not yet institutionalized. Although this limits causal interpretation, the findings highlight how structural fairness can trigger early learning behaviors even without active dialogue. Future research should employ longitudinal or mixed-method designs to examine the shift from structural to dialogic learning.

**Originality/value** – This research contributes to the learning organization discourse by illustrating how humanized performance systems can reconcile fairness and accountability with adaptive learning imperatives in digital transformation contexts. It positions HFD as a structural foundation for developing reflective learning cultures in evolving organizations.

*Keywords: Humanized Forced Distribution (HFD); Organizational Justice; Reward System; Learning Culture; The Learning Organization*

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# Creating Shared Value Through Digital Health Ecosystem: A Case Study of Telkom Employee Social Activity to Intervention Stunting in Southwest Papua

| Ilham Himawan  
Telkom Indonesia

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## Abstract

**Background** – Stunting remains a significant challenge in Southwest Papua, with traditional community health systems ineffective in addressing child growth monitoring. This study explores how Telkom Indonesia – Witel Papua Barat, through its employee-driven Corporate Social Responsibility (CSR) program, implemented a collaboration quadruple helix among stakeholders—communities, government, academia, and business. This case aims to demonstrate how technology-enabled CSR can create shared social and business value by a digital application (Baby Pos) within local health ecosystems.

**Purpose** – - Stunting as an ongoing health challenge in Indonesia, 30.5% The highest prevalence of stunted children in Southwest Papua province is below the national 19.8%. - Weakness of the traditional Posyandu, - Unsustainable of CSR Integration. - Market penetration in West Papua is very challenging.

**Design/methodology/approach** – This study employed a single instrumental case study design (Yin, 2014; Stake, 1995) to examine Telkom Indonesia Witel Papua Barat's TESA program as an exemplar of digital-health-ecosystem-enabled CSR intervention for stunting reduction in Sorong and Aimas districts, Southwest Papua. Data were collected over a 12-month pilot period (17 October 2024 – November 2025) using multiple sources: participant observation, semi-structured interviews, FGDs, program documents, Baby Pos app analytics. Thematic analysis using Braun & Clarke (2006) 6-phase framework.

**Findings** – - Cadres gained time for counseling over admin tasks ; integrated data enabled decision-making. - Students applied innovations in real settings. - TESA is an employee-leadership capability development program, built to foster employee agility and a digital working culture. - Business shift: From CSR to B2B pipeline

**Research limitations** – The study was limited to a one-year pilot across five Posyandu sites, with challenges including limited internet infrastructure, data protection risk and varying levels of digital literacy among users. These factors may affect scalability and generalizability.

**Originality/value** – This research demonstrates how a state-owned enterprise can transform CSR from philanthropy into a shared value strategy through digital health innovation and quadruple-helix collaboration. The Baby Pos initiative illustrates a replicable model for CSR-driven digital health interventions that simultaneously advance SDGs and business sustainability.

*Keywords: Corporate Social Responsibility; Digital Learning Organization; Digital Health Ecosystem; Stunting; Value Creation,*

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# Track: Technology and Innovation Management

Connecting **I**deas,  
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# Comparative Performance Analysis of Optical Encryption Platforms and Implementation Strategies in Telecommunication Industry

| Deisna Rahmaningtyas<sup>1</sup>, Lesmin Nainggolan<sup>1</sup>, Gunadi Dwi Hantoro<sup>1</sup>

<sup>1</sup>PT Telkom Indonesia

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## Abstract

**Background** – Optical encryption has emerged as a critical security mechanism for telecommunication operators seeking to protect in-flight data across fiber optic networks. Despite growing adoption, limited comparative research exists on the practical performance differences between major vendor platforms and real-world implementation strategies employed by telecommunication companies. As cybersecurity threats intensify and regulatory compliance requirements expand, network operators need essential knowledge of optical encryption's capabilities and deployment strategies.

**Purpose** – This study aims to evaluate and compare the performance capabilities of three leading optical encryption platforms through controlled laboratory testing, and to identify best practices for optical encryption implementation based on analysis of telecommunication operator deployment strategies. The research seeks to provide evidence and practical guidance for operators planning optical encryption deployments.

**Design/methodology/approach** – The research employs a mixed-method approach combining laboratory experimentation with qualitative desk study analysis. Laboratory trials were conducted using standardized test environments to evaluate optical encryption performance across three OTN/DWDM platforms. Key performance indicators including latency, throughput, and signal quality were measured using RFC 2544 testing methodology and OTN performance monitoring tools. The desk study component involved analysis of case studies, white papers, and industry reports documenting optical encryption implementations by telecommunication operators globally.

**Findings** – Laboratory results demonstrate measurable performance variations between the three vendor platforms in terms of performance and operational characteristics. All three platforms successfully implemented AES-256-GCM encryption at various speed interfaces with negligible impact on network performance. Desk study analysis identified three primary deployment models: Encrypted Transport Infrastructure-as-a-Service, Fully Managed Optical Encryption Services, and hybrid approaches combining both strategies.

**Research limitations** – This study is constrained by laboratory testing conditions that may not fully replicate complex production network environments with multiple optical impairments and diverse traffic patterns. The desk study relies on publicly available documentation, which may not capture proprietary implementation details or confidential performance metrics from telecommunication operators.

**Originality/value** – This research provides multi-vendor comparative analysis combining laboratory performance testing of optical encryption platforms with examination of real-world telecommunication operator deployment strategies. The study bridges the gap between vendor specifications and practical implementation guidance, offering empirical performance data and actionable insights for network operators evaluating optical encryption solutions.

*Keywords: Optical encryption, Layer-1 encryption, network security, AES-256-GCM*

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# Decentralized IoT Monitoring using Edge Computing and LoRa for Sustainable Grape Cultivation

| Camila Tasya Aulia<sup>1</sup>, Muhamad Irsan<sup>1</sup>

<sup>1</sup>Telkom University

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## Abstract

**Background** – Agriculture in tropical climates such as Indonesia faces challenges in maintaining stable air temperature and soil moisture, especially for sensitive crops like grapes. Unstable microclimate conditions can reduce productivity and quality. To address this, an IoT-based monitoring system combined with Edge Computing and LoRa communication technology is proposed to enable real-time environmental monitoring without internet dependency. This system aims to provide farmers with accurate and continuous data to support better decision-making in vineyard management.

**Purpose** – This study aims to design and implement an IoT-based system for monitoring air temperature and soil moisture in grape cultivation using Edge Computing and LoRa, so that data transmission and processing become efficient and reliable in areas with limited internet access.

**Design/methodology/approach** – The research methodology was conducted experimentally using DHT22 and Soil Moisture sensors connected to an Arduino Nano and LoRa SX1278 for data transmission, and an ESP32 as the edge node. The data was processed locally before being sent to Firebase for storage and Telegram for real-time notifications. Evaluation was performed based on reading accuracy, transmission stability up to a distance of 5 meters, and latency reduction under field conditions in a vineyard

**Findings** – The system successfully monitors soil temperature and humidity in real time, displays results locally and remotely, and improves farmers' responsiveness without relying on an internet connection.

**Research limitations** – System performance is still affected by LoRa signal strength, environmental interference, and power consumption. Further research could focus on improving network range, energy efficiency, and integrating more advanced data analysis.

**Originality/value** – The originality of this research lies in the integration of Edge Computing and LoRa for a self-sufficient, real-time environmental monitoring system in vineyards with limited infrastructure. This solution offers an affordable, reliable, and practical approach to supporting smart agriculture in rural areas.

*Keywords: Edge Computing, LoRa, IoT, Smart Farming, Microclimate Monitoring*

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# Comparative Analysis of Power Consumption between OLT Brand A and OLT Brand B

| Andi Wahyudi<sup>1</sup>, Gunadi Dwi Hantoro<sup>1</sup>, Pipin Aripin<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Energy efficiency of Optical Line Terminals (OLTs) is crucial for reducing Operational Expenditure (OPEX), yet standardized, cross-vendor comparisons of power consumption are scarce. The lack of transparent test scenarios and consistent metrics (e.g., watts per module, watts per user) hinders evidence-based procurement and network planning.

**Purpose** – This study compares OLT Brand A and Brand B power consumption under idle and full traffic scenarios, using watts per module and watts per user.

**Design/methodology/approach** – The methodology involved laboratory measurements with a calibrated power analyzer under strictly controlled environmental conditions. Configurations were standardized, including module type, Power Supply Unit (PSU) redundancy, and a 1G Uplink (UL) / Downlink (DL) traffic profile. Measurements were taken after thermal stabilization, and data were analyzed for absolute differences (delta W), ratios, and confidence intervals.

**Findings** – Findings indicate that OLT Brand A consistently consumed more power than Brand B in both idle and full traffic states. While sensitivity analysis points to potential contributions from hardware design, PSU/fan efficiency, and internal energy management policies, granular component-level measurements are required to determine the specific root causes for this discrepancy.

**Research limitations** – Limitations include a laboratory setting with constrained modules, users, and observation time; real-world field performance may vary. Further research is recommended in operator central offices using diverse, real-world traffic profiles, detailed telemetry for causal analysis, and expansion to other PON technologies like XG-PON and XGS-PON.

**Originality/value** – This study's value lies in its reproducible, cross-vendor comparison using standardized metrics under extreme load conditions. The findings provide a reference for operators to estimate OPEX, aid in device procurement evaluations, and support more environmentally sound network capacity planning.

*Keywords: OLT, power consumption, xPON, energy efficiency*

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# Track: Strategic Management

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# Implementing Behavioural Approach in Asian Telco Industry Organization Transformation

| Agista Saraswati  
PT. Telkom Indonesia

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## Abstract

**Background** – Amid disruption by digital platforms, Asian telecommunications firms are pursuing innovative strategies. Investing in the Internet of Things (IoT) ecosystem—driven significantly by behavioural data analytics—presents a promising opportunity. Applying behavioural principles can reposition these organizations as agile service providers and strengthen customer loyalty in the fiercely competitive broadband sector.

**Purpose** – 1. Synthesize behavioural approaches applied to organizational transformation within the Asian telecommunications (Telco) industry. 2. Assess the applicability of behavioural interventions in customer service to mitigate churn. 3. Evaluate the influence of behavioural transformation on profitability in Asian Telco firms.

**Design/methodology/approach** – This literature review employs a dual analytical framework for conceptual clarity and methodological precision. Secondary benchmarking systematically analyzes publicly available documents—annual reports, press releases, and analyst reports—from Asian Telco firms undergoing digital transformation (e.g., Indosat Ooredoo, NTT Docomo, Telkom Indonesia) to map transformation strategies against revenue outcomes, establishing an industry performance baseline. In contrast, primary exploration synthesizes existing qualitative studies, including published interviews and focus group insights from PT. Telkom Indonesia, to uncover contextual behavioural mechanisms and implementation enablers. A behavioural approach is defined as the targeted use of behavioural economics, psychology, and organizational behaviour principles—such as nudges, bias mitigation, and incentive design—to drive stakeholder alignment and adaptation. This distinction strengthens analytical depth: benchmarking quantifies outcomes, while exploration reveals processes. Integrative thematic coding and hypothetical modelling bridge findings to identify priorities, barriers, and scalable interventions in Telco digital transformation.

**Findings** – The review reveals that behavioural approaches prioritize nudging employee adaptability and reducing customer churn through personalized incentives, yet face barriers such as cultural resistance and data silos in Asian Telco contexts. Benchmarking indicates that firms integrating behavioural diagnostics (e.g., bias-aware change management) achieve 1.5–2× higher revenue growth from digital initiatives compared to structure-focused peers. Exploratory insights from Telkom Indonesia highlight untapped potential in gamified training and loss-aversion framing to accelerate transformation.

**Research limitations** – 1. Scarcity of comprehensive secondary data. 2. Restricted availability of behavioural analytics data 3. Confidentiality constraints in accessing secondary sources.

**Originality/value** – 1. Pinpointing key priorities and obstacles in behavioural science applications within the Asian Telco sector. 2. Delivering actionable insights to help Telco operators and consultants embed behavioural strategies in Asian organizational transformation.

*Keywords: behavioural science, Telco industry, organization transformation, customer service, churn mitigation*

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# Intergenerational Communication Management Strategies to Enhance Collaboration and Productivity: A Scoping Review in Modern Office Environments

| Sagari Tazya

Universitas Pendidikan Indonesia

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## Abstract

**Background** – The modern workplace encompasses multiple generations—Baby Boomers, Generation X, Millennials, and Generation Z—each with distinct communication styles. While generational diversity strengthens organizational capacity, mismanaged differences cause communication barriers and reduced productivity. Despite extensive literature, research remains fragmented with limited comprehensive frameworks, creating gaps in systematic understanding of strategies bridging generational differences in contemporary offices.

**Purpose** – This scoping review systematically maps literature on intergenerational communication management strategies in modern offices, examining their contribution to collaboration and productivity.

**Design/methodology/approach** – Following Arksey and O'Malley's framework with PCC structure, this review searched Scopus using Boolean strings combining intergenerational communication, workplace, and collaboration/productivity keywords. Inclusion criteria encompassed peer-reviewed English articles addressing intergenerational communication strategies. PRISMA guided study selection. Data extraction covered study characteristics, population, concepts, context, and findings, analyzed descriptively and thematically.

**Findings** – Analysis of 38 articles (2016-2025) revealed six interconnected themes ( $\kappa=0.87$ ): Digital & Technology (23.7%), Intergenerational Learning (23.7%), Emotional Intelligence & Soft Skills (23.7%), Inclusive Organizational Practices (26.3%), Innovative Engagement Methods (18.4%), and Contextual Factors (36.8%). Technology functions as both enabler and barrier, requiring hybrid approaches. Bidirectional learning through reverse mentoring emerged as critical. Contextual Factors emerged as the central meta-theme shaping all implementations. Research evolved from problem identification to sophisticated understanding of mechanisms and future preparation.

**Research limitations** – This review identified gaps including limited empirical studies on specific implementations, scarcity of longitudinal research, minimal non-Western context studies, and insufficient Generation Z integration research. Rapidly evolving workplace dynamics may limit temporal relevance of earlier studies. Future research should explore cross-cultural comparative studies examining strategy performance across diverse cultural contexts, particularly non-Western settings, and practical implementation frameworks accounting for cultural nuances.

**Originality/value** – This review identified gaps including limited empirical studies on specific implementations, scarcity of longitudinal research, minimal non-Western context studies, and insufficient Generation Z integration research. Rapidly evolving workplace dynamics may limit temporal relevance of earlier studies. Future research should explore cross-cultural comparative studies examining strategy performance across diverse cultural contexts, particularly non-Western settings, and practical implementation frameworks accounting for cultural nuances.

*Keywords: intergenerational communication, multigenerational workforce, workplace collaboration, scoping review*

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# Rising Together: Enhancing the Competitive Culture through CCC Valiants' First National LCUAA Experience with a Big Delegation

| Mary Rose Montano<sup>1</sup>, Aveto M. Dasal Jr.<sup>1</sup>, Renante A. Artificio<sup>1</sup>, Ronald A. Gonzales<sup>1</sup>, Meljhon G. Mosca<sup>1</sup>, Anna Rhea C. Opeña<sup>1</sup>, Ryan John Mercado<sup>1</sup>, Armando A. Salenga Jr.<sup>1</sup>

<sup>1</sup>City College of Calamba, Philippines

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## Abstract

**Background** – The City College of Calamba (CCC) marked a significant milestone by participating for the first time with a big delegation in the National Local Colleges and Universities Athletic Association (LCUAA) through its team, the CCC Valiants. This experience presented a crucial opportunity to assess and cultivate a competitive culture within the institution.

**Purpose** – This study assessed athlete experiences and satisfaction across key areas—such as preparation, performance, coaching, facilities, and organization—to generate actionable insights for enhancing CCC's competitive culture in future athletic engagements.

**Design/methodology/approach** – A quantitative descriptive research design was employed to systematically assess the athletes' experiences. Data were collected using a validated survey questionnaire distributed to 66 CCC Valiants athletes. The data, being ordinal in nature from a five-point Likert scale, necessitated the use of non-parametric tests. Specifically, the Mann-Whitney U test was used to compare differences between two independent groups (gender), and the Kruskal-Wallis H test was applied to compare more than two independent groups (sport participated and year level). These tests were selected because they are appropriate for ordinal data and do not require the normal distribution assumptions of parametric alternatives.

**Findings** – Results indicated an excellent overall level of athlete satisfaction (Mean=4.51). Experience and Development got the highest rating, while Performance was rated lowest. No significant differences were found across gender and year level, but variations existed in Coaching and Support and Organization and Management across different sports.

**Research limitations** – The study's limitations include its sample size, focus on one event, and reliance on self-reported data from a single institution. Future studies should include a larger, multi-institutional sample to improve generalizability.

**Originality/value** – This study provides a foundational assessment for CCC, offering evidence-based strategies to institutionalize athlete development, standardize management, and sustainably enhance its competitive sports culture and engagement.

*Keywords: competitive culture, athlete satisfaction, sports management, institutional development, higher education athletics*

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# Enhancing Strategic Agility in a Dynamic Digital Telco Industry Through Scenario- Based Approach: A Business Portfolio Optimization Study of an Indonesian Telecommunications Provider

| Anas Teguh Syahadat<sup>1</sup>, Rahmah Shabrina<sup>1</sup>, Rahma Yulia Prastiwi<sup>1</sup>, Sophia Khana<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

The telecommunication and digital sectors are highly characterized by disruptive, volatile, and unpredictable market conditions. This environment requires operators to address a critical dual challenge: sustaining revenue from legacy services while simultaneously developing new, high-growth business portfolios to secure long-term viability. Using a business portfolio optimization case of an incumbent Indonesian telecommunications operator, this study demonstrates how firms can navigate disruptive business environments by integrating a scenario-based framework into strategic decision-making. The approach combines qualitative and quantitative techniques across six analytical stages and draws on insights from eleven experts representing eight stakeholder groups. Two critical uncertainties—control over customer relationships and the evolution of industry structure—are identified, forming the basis for four plausible long-term scenarios. An adapted Shell Directional Policy Matrix is then applied to evaluate fifteen strategic business units across these potential futures. The results show that only a limited subset of business units remains robust across all scenarios, while most demonstrate performance variability in response to changing external market conditions. The final analysis stage introduces eight indicators designed to identify which scenario most closely aligns with emerging real-world dynamics, enabling continuous monitoring and guiding the selection of an optimal portfolio strategy as the market landscape evolves. These findings highlight the importance of embedding uncertainty into portfolio evaluation and establishing agility through differentiated business portfolio strategy. This study contributes a practical framework for organizations seeking to anticipate and respond effectively to dynamic business environments through structured scenario-based strategic planning.

*Keywords Strategic agility, Scenario planning, Business portfolio optimization, Telecommunications industry, Market uncertainty, Directional Policy Matrix, Strategic decision-making.*

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# An OKR-Based Performance Evaluation Model for Logistics Branch Operations

| Afinaildi Ilyapratama Ediprabowo<sup>1</sup>, Fida Nirmala Nugraha<sup>1</sup>, Atya Nur Aisha<sup>2</sup>

<sup>1</sup>Industrial Engineering Department, Telkom University, <sup>2</sup>Engineering Management Department, Telkom University

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## Abstract

**Background** – PT XYZ, a company specializing in logistics, also underwent organizational change as a survival effort. The change highlighted the importance of using OKR-based performance to adapt to the situation. OKR implementation extended to branch offices, where objectives and key results were aligned with corporate-level goals. Preliminary implementation of the method at a branch office revealed that performance metrics were not at their optimal due to inappropriate key result targets and insufficient resource allocation. The current evaluations focus on the achievement level without considering the significance of the outcomes. Therefore, it is crucial to establish a comprehensive evaluation method that incorporates both achievement and importance level.

**Purpose** – This study aims to improve the implementation of OKR at the branch-level office of PT XYZ as a case study.

**Design/methodology/approach** – Performance evaluation can be improved by prioritizing critical outcomes through a scoring system and the Importance-Performance Analysis (IPA) matrix. Data were collected in 2024 at PT XYZ's branch office, gathered through interviews and document analysis focused on OKR targets and their achievement results. The results achieved were used to score the OKR, followed by the IPA method, which was conducted to determine the significance of key results using performance metrics based on the 2024 scoring. These evaluations provided the framework for prioritizing OKRs, aiming for enhancements and a strategic focus for the upcoming year.

**Findings** – The concluding results underscored three aims focused on increasing revenue, achieving immediate business successes, and improving the retention of business partners, as well as six important outcomes prioritized at the branch level, paired with updated target suggestions.

**Research limitations** – However, the study only focuses on one specific department at the branch office level; to conduct a comprehensive analysis of a logistics organization's context, the more detailed OKRs at the organizational level must be explored. Future research can provide more elaboration on OKR design implementation.

**Originality/value** – The novelty of this research lies in combining the scoring approach with the Importance-Performance Analysis (IPA) matrix to evaluate the implementation of OKR based on weight and scoring performance, thereby enabling the determination of priority objectives and key results relevant to the organizational context.

*Keywords: performance indicator, OKR, key results, branch office*

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# A Strategic Approach to Enhancing Patient Safety through Clinical Staff Compliance Culture

| Henry Boyke Sitompul<sup>1</sup>, Horas Djulius<sup>1</sup>

<sup>1</sup>Universitas Pasundan

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## Abstract

**Background** – Patient safety is a major concern in Indonesia’s public healthcare sector, particularly in government hospitals serving large, diverse patient groups. RSUD Pasar Rebo, a referral hospital in East Jakarta, provides a suitable context to explore how safety procedures are embedded in clinical practice. The Surgical Safety Checklist (SSC) from the World Health Organization aims to minimize surgical errors; however, its success depends greatly on staff compliance and a supportive safety culture.

**Purpose** – This study examines how clinical staff compliance strengthens the patient safety culture at RSUD Pasar Rebo and identifies managerial, behavioral, and cultural factors influencing SSC implementation in a public hospital setting.

**Design/methodology/approach** – Using a qualitative case study design, data were collected through observation, interviews with surgeons, nurses, and administrators, focus group discussions (FGD), expert evaluation by hospital quality officers, and analysis of internal safety documents. Thematic analysis identified recurring patterns of compliance, communication, and managerial influence. To ensure methodological rigor, validation involved inter-coder reliability checks, member verification with key participants, and expert review from the hospital’s quality assurance team.

**Findings** – Findings show that staff compliance plays a crucial role in fostering collective commitment to patient safety. Managerial support, interprofessional communication, and shared accountability enhance SSC implementation. The study’s key novelty lies in identifying the Petugas Penanggung Jawab Tindakan Operasi (PPTO), or Operation Accountability Officer, as a new functional role ensuring SSC adherence. The PPTO bridges management and surgical teams, improving coordination and accountability.

**Research limitations** – As this study was conducted in a single public hospital, generalization to other contexts is limited. Comparative studies across hospital types and regions are recommended to broaden applicability.

**Originality/value** – This research enriches Human Resource Management (HRM) and organizational behavior literature by integrating compliance culture within Indonesia’s healthcare system. The PPTO role represents a local innovation that operationalizes safety accountability and highlights the alignment of leadership, communication, and compliance practices in building a sustainable patient safety culture.

*Keywords: Patient safety culture, Clinical staff compliance, Human resource management, Operation Accountability Officer, Surgical Safety Checklist*

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# Navigating the Blue Ocean: How Telkom Indonesia Can Swim in the Emerging Space Economy

| Furi Diah Ayu Hapsari<sup>1</sup>, Agvi Ramadhan Kurniawan<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – The global space economy has evolved from government-led missions into an integrated USD 630 billion ecosystem in 2023 comprising a USD 330 billion backbone (satellite manufacturing, launch operations, communications, and Earth observation) and USD 300 billion reach (terrestrial applications such as logistics, precision agriculture, and disaster monitoring) with a projected growth to USD 1.8 trillion by 2035 at 9 % CAGR (World Economic Forum & McKinsey, 2024). Despite Indonesia’s strategic advantages an equatorial position, the planned Nusantara Constellation, and Biak Spaceport private-sector participation remains below 5 % of national space investment, leaving the upstream ecosystem nascent and regulatory clarity underdeveloped (BRIN, 2024). This gap presents a blue-ocean opportunity for Telkom Indonesia to lead as a Space Digital Value Chain Integrator (SDVCI) through public-private partnership, capturing 10–15 % of ASEAN’s USD 10–15 billion space-enabled market while competitors like Starlink and OneWeb dominate satellite broadband and Earth observation services

**Purpose** – This paper aims to propose a strategic roadmap for Telkom Indonesia to enter the emerging space economy through Space Digital Value Chain Integrator (SDVCI) through public-private partnership, capturing 10–15 % of ASEAN’s USD 10–15 billion space-enabled market while competitors like Starlink and OneWeb dominate satellite broadband and Earth observation services.

**Design/methodology/approach** – A combined PESTEL–SWOT–IFE/EFE analysis confirms that Telkom’s external environment and internal resources are highly conducive to entering the downstream space economy.

**Findings** – Telkom IFE-EFE score of 3.31 suggests that the external environment is favourable, as long as Telkom can navigate regulatory uncertainties. The combination of these scores places Telkom in an “aggressive growth” quadrant of the IE Matrix (David & David, 2017), implying that the company should actively invest in market expansion through innovation and strategic partnerships.

**Research limitations** – This study focuses on a conceptual three-stage SDVCI framework and financial projections based on secondary data and internal Telkom benchmarks; primary field trials, satellite-launch cost validation, regulatory impact assessments, stakeholder acceptance, geopolitical risks in ASEAN consortium formation, and long-term ESG data accuracy remain beyond scope and require further empirical validation through pilot programs and multi-year monitoring.

**Originality/value** – Telkom’s model monetizes sovereign Earth observation analytics (SpaceInsight), SatIoT for 500,000+ vessels, and ESG-compliant climate monitoring, projecting Rp 4.5–5.5 trillion corporate revenue and Rp 15–20 trillion GDP impact by 2030

*Keywords: Space Economy, Strategic Management, SWOT Analysis, PESTEL Analysis, IFE-EFE Matrix*

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# Integrating ESG into Telkom's Corporate Strategy: From SRI-Kehati to Competitive Advantage in the Digital Telecommunications Industry

| Gadisha Rahayu  
Telkom Property

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## Abstract

**Background** – Telecommunication companies in emerging markets face increasing pressure to integrate Environmental, Social, and Governance (ESG) principles into their strategic agenda. In Indonesia, the SRI-Kehati Index serves as a benchmark for sustainable and responsible investment. However, the translation of ESG principles into actionable strategies remains limited, especially among state-owned enterprises undergoing digital transformation.

**Purpose** – This study examines how PT Telkom Indonesia can integrate ESG principles—aligned with SRI-Kehati criteria—into its corporate strategy to enhance competitiveness, investor trust, and leadership as a sustainable digital enterprise.

**Design/methodology/approach** – The research employs a qualitative approach using secondary data from academic literature, sustainability reports, and benchmarking frameworks such as the Roland Berger Telco ESG Index and GSMA ESG Metrics. A framework-based analysis evaluates Telkom's initiatives across environmental, social, and governance dimensions. Within these dimensions, recurring patterns of ESG implementation and digital transformation are identified to assess Telkom's alignment with international best practices and regional peers (e.g., Malaysia, China). This hybrid approach combines structured benchmarking with interpretive pattern recognition to reveal both measurable alignment and emerging strategic trends.

**Findings** – Analysis of initiatives such as Five Bold Moves, Go Zero%, and Digital Social Responsibility shows increasing ESG alignment in decarbonization, digital inclusion, and community development. However, gaps persist in transparency of governance, standardized ESG reporting, and quantifiable impact measurement. For instance, while Telkom reports progress on renewable energy and digital literacy programs, its disclosure depth still lags behind peers such as Singtel and Maxis. The findings suggest that embedding ESG principles within Telkom's digital transformation roadmap can reinforce sustainable growth and long-term market differentiation.

**Research limitations** – This study is conceptual and based on secondary data. Future empirical research could validate the identified patterns through interviews or quantitative analysis.

**Originality/value** – This paper contributes to strategic management literature by integrating ESG and digital transformation perspectives within a state-owned enterprise context, offering actionable insights for telecom operators in emerging markets seeking competitive advantage through sustainability.

*Keywords: ESG, SRI-Kehati, corporate strategy, Telkom Indonesia, digital transformation*

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# Track: Cybersecurity

Connecting **I**deas,  
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# Examining Challenges in Applying Bias Codebook to Cybersecurity-Related Behavior Survey Items

| Akhmad Aryandi<sup>1</sup>, Dadang Setiawan<sup>2</sup>

<sup>1</sup>Sub-directorate of Cybersecurity, Telkom Indonesia, <sup>2</sup>School of Computing, Telkom University

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## Abstract

**Background** – As digital transformation accelerates, cybersecurity risks driven by human actions remain prevalent. This highlights the need for a strong security culture, yet existing self-report assessments are prone to bias and often fail to capture actual security behavior. Initial attempts to identify such biases using inter-rater coding produced persistently low reliability, revealing challenges in developing and consistently applying codebooks for cybersecurity-related behavior survey items.

**Purpose** – This study seeks to examine the challenges faced in developing a reliable codebook and applying it in inter-rater coding to identify biases in cybersecurity-related behavior survey items.

**Design/methodology/approach** – Transcripts from a focus group discussion with two raters were analyzed using inductive thematic analysis. The analysis followed a multi-phase process: first, generating initial codes from specific rater disagreements (such as ambiguity, framing), then grouping these codes into potential themes, and finally reviewing and defining the final themes.

**Findings** – Three core themes illustrate the complexity of bias identification. First, conceptual clarity, the codebook's overlapping criteria and inherent ambiguity forced subjective interpretation. Second, rater interpretation, raters acted as active interpreters rather than static instruments, dynamically adjusting their understanding during coding. Third, contextual dependency, the absence of broader survey design reduced context validity, amplifying disagreement because raters lacked necessary information about flow and priming.

**Research limitations** – This study is limited by its small sample size, involving two raters and a single codebook domain. The observed rater dynamics are therefore not intended for statistical generalization. Future work could include a more diverse set of raters and explore whether similar challenges arise across different domains.

**Originality/value** – This study interprets low inter-rater reliability as a methodological insight, synthesizing qualitative themes to explain rater dynamics and contextual influences. It argues that improving the validity of cybersecurity-related behavior assessments requires a holistic, context-aware approach, as decontextualized item analysis is inherently unreliable.

*Keywords: cybersecurity-related behavior, survey design, bias codebook, thematic analysis*

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# Automated Memory Forensics Using Volatility and YARA for Ransomware Detection

| Syaiful Andy  
Telkom Indonesia

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## Abstract

**Background** – The increasing prevalence of malware attacks demands digital forensic processes that are both rapid and reliable. Conventional manual approaches to memory analysis are often time-consuming and require specialized expertise, making them less practical during incident response situations where rapid assessment is critical.

**Purpose** – This study aims to develop an automated memory forensic technique that enhances the speed and accuracy of malware process triage by utilizing Volatility 3 in conjunction with YARA rules. To evaluate the effectiveness and efficiency of the proposed approach, the research applies it to memory samples infected with ransomware, specifically WannaCry and TeslaCrypt.

**Design/methodology/approach** – Volatility 3 is employed to extract active processes and identify suspicious or anomalous ones by analyzing abnormal parent–child relationships, irregular execution paths, and unfamiliar process names. The suspicious processes are subsequently dumped for detailed inspection. These dumped files are then scanned using publicly available YARA rules to detect known malicious signatures. To strengthen result validation, the detected samples are hashed and cross-referenced with VirusTotal for verification against multiple antivirus engines and public threat intelligence sources. All stages of the workflow are integrated into a single executable shell script to ensure consistency, automation, and reproducibility.

**Findings** – The automated workflow successfully detected ransomware-related processes across all test samples. It achieved an average detection accuracy exceeding 97% and completed each analysis in less than 10 minutes, with a mean triage efficiency below 3%. These findings indicate that the proposed automated approach can substantially reduce analysis time while maintaining a high level of accuracy and reliability.

**Research limitations** – The current workflow depends on publicly available YARA rules, which may not comprehensively detect emerging or highly obfuscated malware families. Future research could explore integrating this workflow with machine-learning or large language model (LLM)–based approaches, to enhance the identification of suspicious processes beyond rule-based methods. Combining behavioral whitelisting with learning-based models is expected to improve the detection of novel or previously undefined threats.

**Originality/value** – This study presents a lightweight automation framework for memory forensics that combines rule-based detection with external threat intelligence validation. The framework improves the speed and accuracy of ransomware detection in volatile memory environments.

*Keywords: memory forensics, malware triage, Volatility 3, YARA rules, ransomware detection*

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# Trust the Graph? Hidden Triggers and Defenses in Telecom Churn Prediction

| Ahmad Cahyono Adi<sup>1</sup>, Wahyu Febri Ramadhy<sup>2</sup>

<sup>1</sup>Universitas Gadjah Mada, <sup>2</sup>PT Telkom Indonesia (Persero) Tbk

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## Abstract

**Background** – Predicting customer churn in the telecommunications sector has increasingly utilized Graph Neural Networks (GNNs) to model intricate interaction patterns and relational behaviors among users. However, reliance on external data sources and pre-trained model components can introduce hidden backdoor vulnerabilities attacks that appear benign during normal operation but intentionally cause incorrect predictions when specific structural triggers are present.

**Purpose** – This study investigates how GNN-based churn prediction models can be compromised through graph-structured backdoor attacks and introduces lightweight defensive techniques designed to improve model resilience against hidden structural manipulations.

**Design/methodology/approach** – xperiments were conducted on a telecom customer interaction graph consisting of over 50,000 customer nodes and approximately 300,000 edges representing call records, messaging interactions, and service usage patterns. Poisoned subgraphs, designed using both spectral-based and topology-based trigger mechanisms, were strategically injected into the training set to simulate targeted graph poisoning attacks. Three representative GNN architectures were evaluated under both inductive and transductive learning settings. Performance was assessed using Attack Success Rate (ASR) and Clean Accuracy Drop (CAD), alongside an evaluation of defense strategies including feature masking, graph structure sanitization, and spectral anomaly detection.

**Findings** – The experimental evaluation reveals that small-scale structural perturbations are sufficient to attain ASR levels above 90% while keeping CAD below 2%, demonstrating the high subtlety and strength of the attack. The defense strategies proposed in this study reduce attack success by up to 60% with only marginal computational impact.

**Research limitations** – The evaluation is limited to medium-scale telecom graphs and does not assess continual learning scenarios. Implications for large-scale, real-world telecom deployments with dynamic and evolving network behaviors remain to be explored.

**Originality/value** – This work is among the first to identify and characterize structural backdoor risks in GNN-based telecom churn analytics, and it contributes practical, lightweight defense strategies that can support more secure and reliable AI-driven customer retention systems.

*Keywords: backdoor attack, customer churn prediction, graph neural networks*

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# Implementation and Analysis of the Effectiveness of Cloud-Based Web Application Firewall (WAF) in Mitigating Web Attacks: A Case Study of Cloudflare

| Athala Angwyn Renaldi<sup>1</sup>, Muhamad Irsan<sup>1</sup>, Ryan Lingga Wicaksono<sup>1</sup>

<sup>1</sup>Telkom University

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## Abstract

**Background** – As reliance on web applications increases, cybersecurity threats such as SQL Injection (SQLi) and Cross-Site Scripting (XSS) are becoming more common. Despite widespread WAF adoption, there remains an academic gap concerning the quantitative effectiveness of commercial WAFs in their default configuration. This study aims to analyze the effectiveness of cloud based Web Application Firewalls (WAFs), specifically Cloudflare, in mitigating these common web attacks by comparing the system's security performance against a purpose-built vulnerable web application, both before and after WAF protection is enabled.

**Purpose** – This study aims to implement and analyze the effectiveness of cloud-based WAF using Cloudflare services in mitigating common web attacks, namely SQLi and XSS.

**Design/methodology/approach** – The research methodology was conducted experimentally by simulating two primary types of attacks: SQL Injection (SQLi) using sqlmap and Cross-Site Scripting (XSS) using XSSStrike. The test compared two scenarios without protection and with Cloudflare WAF's default protection enabled, with payload samples iterated for reliability. WAF effectiveness was evaluated using confusion matrix-based metrics: True Positive Rate (TPR), True Negative Rate (TNR), and Balanced Accuracy (BA).

**Findings** – The results showed that Cloudflare WAF, in its default configuration, was able to block the majority of tested attacks, achieving a near-perfect detection rate (over 99%) against common SQLi and XSS payloads. The system demonstrated consistent effectiveness in distinguishing between malicious and legitimate traffic. Therefore, Cloudflare WAF can be considered an effective mitigation solution for improving web application resilience against common cyber threats.

**Research limitations** – This research is limited to evaluating the effectiveness of a cloud-based WAF security system using Cloudflare services in its default configuration. The testing focuses on two common types of web attacks: SQLi and XSS.

**Originality/value** – This research provides an empirical overview of Cloudflare WAF's default mitigation capabilities against web-based cyber threats. Quantitative evaluation using TPR, TNR, and BA metrics provides a basis for developers to consider when selecting an appropriate security solution and validates the hypothesis that WAF implementation can improve protection effectiveness.

*Keywords: Web Application Firewall (WAF), Cloudflare, SQL Injection (SQLi), Cross-Site Scripting (XSS), Confusion Matrix*

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# Attack Pattern Analysis and SQL Injection Detection Using a Random Forest Classifier

| Adzkia Rahma<sup>1</sup>, Muhamad Irsan<sup>1</sup>

<sup>1</sup>Faculty of Informatics, Telkom University, Bandung, Indonesia

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## Abstract

**Background** – Web technologies and information systems are constantly evolving, making data one of the most valuable digital assets. This has resulted in a critical security challenge, as SQL Injection (SQLi) has emerged as one of the most frequent threats to web application security. Given the significant risks associated with these attacks, the development of an effective defense mechanism is paramount

**Purpose** – The primary purpose of this study is to develop and evaluate an effective detection mechanism capable of identifying the distinctive patterns and key characteristics of SQLi behavior. Specifically, the study aims to determine the optimal machine learning model for robust SQLi detection

**Design/methodology/approach** – This research employs a machine learning approach. The core detection model utilized is the Random Forest Classifier, with Support Vector Machine (SVM) and Naive Bayes algorithms serving as comparative benchmarks. The methodology involves several sequential stages: Data Preprocessing: Preparing the raw SQL query inputs. Tokenization: Breaking down the queries into smaller, meaningful units. Feature Extraction: Generating features from the tokens, with numeric frequency and keyword density identified as crucial indicators. Data Splitting: Dividing the data for training and testing. Model Training and Testing: Executing the final evaluation on the SQL query inputs.

**Findings** – The Random Forest model achieved the highest accuracy at 98.11% in detecting SQL Injection attacks, significantly outperforming SVM (96.56%) and Naive Bayes (90.80%), and key indicators were numeric frequency and keyword density.

**Research limitations** – The abstract does not explicitly state specific limitations, but typical constraints for this type of ML study include reliance on the completeness of the training dataset and the lack of evaluation in a real-time, high-traffic production environment.

**Originality/value** – This study offers valuable empirical evidence by benchmarking the performance of three popular ML classifiers for SQLi detection, definitively showing the superiority of the Random Forest model. The findings contribute by identifying specific features (numeric frequency and keyword density) as crucial detection indicators across various SQLi types (Blind, Error, Union). The overall value lies in laying the groundwork for developing a robust ensemble-based detection framework to strengthen web application security.

*Keywords: SQL Injection (SQLi), Machine Learning, Random Forest, Web Security, Attack Detection*

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# Systematic Literature Review: Employee behavior on data protection and cybersecurity

| Yeris Permata Octarina  
Institut Teknologi Bandung

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## Abstract

**Background** – Cybersecurity has become critical issues for firms that are integral to cyber landscape. Many processes in organization are now conducted online, resulting in huge data storage in cloud databases. It may pose potential risk involving cybersecurity. In 2022, massive data breach occurred in T-mobile, US's telco company, cost it ~USD 400 million in settlement and USD 170 million to strengthen their cybersecurity. The implementation of resilience system is insufficient without the awareness of employee, which plays critical role for preventing data breaches. Survey indicated that 60% of data breach incidents were involving human factors (Verizon, 2025), such as employee behavior in clicking phishing links, deployment of harmful software, or using laptop that has expired anti-virus software. The regulations concerning data protection and privacy push many organizations to implement comprehensive cybersecurity system. Any violation may result in significant financial loss, operational loss, or even damaging corporate reputation

**Purpose** – This paper aims to report the state of the art in recent studies about human behavior and proposed framework in the context of enhancing data protection and cybersecurity behavior

**Design/methodology/approach** – The methodology is mixed-method. Primary data were gathered using interview and secondary data come from published reports. The systematic literature review procedure employing PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This study analyzes the tools, methodology, key findings and categorize them using Voxviewer

**Findings** – This paper will report and analyse in the form of State of the art to prior studies available in research database. The key findings are the mind map of cybersecurity behavior and the proposed framework to enhance cybersecurity awareness and behavior

**Research limitations** – This research might be applied only in limited organization that have already implemented sophisticated cybersecurity tools, and have dedicated cybersecurity and data protection officers. The technical issues are not the main concern to address. Unit of analysis in this study is individual level. Due to author limitation in accessing several research database, this research will use only scopus database system

**Originality/value** – The main conclusion will help organizations to comprehend the phenomenon and result in formulate the strategy to navigate its employees to have better cybersecurity mindset and practices to strengthen data protection within company

*Keywords: employee behavior, data protection, cybersecurity, data security*

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# Track: Learning in digital eras

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# Human Development in Digital Transformation: The Role of Internal Coaching Service in Fostering Employee Well-being and Learning Organization Practices

| Anggita Sari Dewi<sup>1</sup>, Mia Amelia<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – A national telecommunication company identified a gap in its learning ecosystem: while digital content was abundant, the personalization of learning remained a challenge. This case study details the design and implementation of a structured internal coaching program, to bridge this gap and foster a culture of continuous, relationship-based learning. The main difference of this coaching program is that it involves our own employees from various departments as coaches. This initiative addresses employee-initiated requests through integrated digital tools, promoting self-directed learning in a tech-driven workforces.

**Purpose** – This study aims to evaluate the implementation of a digital-first internal coaching system to bridge the gap between knowledge acquisition and practical application in a large corporate setting.

**Design/methodology/approach** – The case study employs a process-oriented design, leveraging the Human Capital Information System application for seamless integration. Employees access internal coaching menu to select coaches, complete pre-coaching forms and sign informed consent. Sessions mostly occur virtually, followed by mandatory post-coaching plans and evaluations. For evaluation, we collected feedback from participants about their satisfactory levels.

**Findings** – Implemented from 2025, the platform enabled minimum 1-hour weekly coach allocations, reducing manual coordination by 90% (estimated from process streamlining). Over initial months, 76 sessions were facilitated (400% increase from the previous year), with 84% on-time completions and high satisfaction in evaluations (4.4/5 for ease of access). Digital improvements like auto-notifications and integrated forms minimized dropouts.

**Research limitations** – This study is limited by its focus on a single organizational context, which may affect the generalizability of findings to other industries or company sizes. The evaluation relied primarily on participant feedback and system data, without longitudinal measures of behavioral or performance impact. Future evaluations could include follow-up assessments or performance analytics to capture long-term coaching outcomes, providing deeper insights into sustained behavior or skill development.

**Originality/value** – This model adds value by promoting ethical, employee-centred digital learning and showing how accessibility to learning can be improved in the digital age.

*Keywords: Coaching, Digital Learning, Personalized Development, Learning Ecosystem, Relationship-based learning*

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# Track: Marketing

Connecting **I**deas,  
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# Multi-Branch Transformers for Stock Market Prediction using Previous Market Data and news articles

| Lamia Rahim Laibi

Department of Internal Affairs, University of Baghdad, Baghdad, Iraq

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## Abstract

**Background** – The stock market is a complex and dynamic system influenced by numerous factors, including technical indicators, financial news, and long-term historical price movements, among others. Understanding and accurately forecasting market behavior requires integrating diverse data sources and identifying underlying trends across multiple modalities.

**Purpose** – The primary objective of this research is to demonstrate the advantages of employing multi-branch Transformer architectures for managing multimodal financial data and to evaluate the model's effectiveness in predicting stock market trends over short-, medium-, and long-term horizons.

**Design/methodology/approach** – In this study, we investigate the implementation of a multi-branch Transformer model designed to forecast stock market prices by integrating multiple data sources, such as news articles and historical market data, over extended periods. The proposed architecture comprises two main branches: the first is a BERT-based Transformer that processes textual information related to daily stock performance, while the second is an LSTM-based Transformer that analyses long-term historical price data. After the feature extraction and processing stages, the outputs from both branches are fused through dedicated layers to enable highly accurate and efficient stock price predictions.

**Findings** – Leveraging advanced artificial intelligence—particularly deep Transformer architectures—the proposed multi-branch model processes heterogeneous financial data simultaneously, significantly improving forecasting accuracy and predictive capability. The model achieves a mean square error (MSE) of  $6 \times 10^{-4}$ , demonstrating its strong performance and minimal loss value.

**Research limitations** – The proposed approach relies on large-scale datasets, which poses challenges related to data quality, accessibility, and processing efficiency. Furthermore, the model's substantial computational requirements may limit its practicality for small organizations or institutions with constrained resources.

**Originality/value** – This study underscores the potential of multi-branch Transformer architectures to seamlessly integrate textual and numerical financial information, offering a robust and advanced framework for stock market prediction and trend analysis.

*Keywords: Stock market prediction, deep learning (DL), multi-branch transformers, artificial intelligence (AI)*

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# Unraveling the Impact of Social Media Marketing Activities on Behavioral Engagement: Brand Awareness and Brand Image as Mediators

| Marshanda Azahra Yasir<sup>1</sup>, Grandys Frieska Prassida<sup>1</sup>

<sup>1</sup>Universitas Internasional Semen Indonesia

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## Abstract

**Background** – Social media marketing has become an essential strategy for higher education institutions seeking to engage digitally native prospective students and distinguish themselves in an increasingly competitive academic landscape. Despite its growing adoption, there remains a notable research gap regarding how social media marketing activities (SMMA) influence brand awareness, brand image, and, consequently, behavioral engagement.

**Purpose** – The present study aims to examine the influence of several SMMA variables on brand awareness and brand image, and, in turn, on behavioral engagement. Specifically, this study investigates the mediating effect of brand awareness and brand image.

**Design/methodology/approach** – A questionnaire survey was conducted to collect data, and Structural Equation Modeling–Partial Least Squares was employed for model assessment. A total of 161 responses were collected, and after excluding incomplete and ineligible responses, 134 were retained for analysis.

**Findings** – The findings of this study indicate that three dimensions of SMMA, namely interactivity, informativeness, and entertainment, have positive and significant effects on both brand awareness and brand image. Furthermore, brand awareness and brand image are found to positively and significantly influence the behavioral engagement of prospective students. These findings also confirm the presence of a partial mediation effect of brand awareness and brand image in the relationship between SMMA and behavioral engagement.

**Research limitations** – This study is limited to one private Higher Education Institution and focuses solely on prospective students who use Instagram to explore campus information, which may restrict the generalizability of the findings. Future research should involve more diverse higher education contexts, broader respondent profiles, and additional social media platforms to improve external validity and capture different engagement patterns.

**Originality/value** – The recent study provides original insights by empirically examining the mediating role of brand awareness and brand image in the relationship between SMMA variables (namely interactivity, informativeness, and entertainment) and behavioral engagement. The present study also integrates the S-O-R model with brand equity theory, where brand equity is the fundamental theory to examine the extent to which each SMMA variable influences each brand equity variable (namely brand awareness and brand image), while S-O-R conceptualizes SMMA as external stimuli that effect internal state (brand equity) and lead to behavioral response (behavioral engagement)

*Keywords: Behavioral Engagement, Brand Awareness, Brand Image, Social Media Marketing Activity*

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# Market Segmentation, Differentiation, and Positioning for Telkom InfraCo: Capturing Indonesia's Growing ISP Market

| Iqbal Hanif  
Telkom Indonesia

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## Abstract

**Background** – Telkom Group carved out its fiber optic network to establish InfraCo, a fiber infrastructure sharing service, makes it must develop a strategic Segmentation, Targeting, and Positioning (STP) framework to compete against competitors. Targeting 1,011 ISPs serving 60.7 million broadband users, InfraCo lacks clear STP strategy. This study develops InfraCo's STP strategy to successfully capture Indonesia's growing ISP market.

**Purpose** – The paper aims to develop a marketing strategy for Telkom InfraCo focusing on market STP to capture Indonesia's ISP market .

**Design/methodology/approach** – This research employs qualitative and quantitative analysis using secondary data (ISP databases, annual reports, industry analyses) and primary data from dialogues with telecommunications analysts. Three analytical tools develop STP strategy: (1) Value Proposition Canvas (VPC) identifies customer pains and gains; (2) B2B Segmentation approaches segment ISPs into priority targets; (3) Competitive Analysis Framework (CAF) with Value Curve Analysis identifies InfraCo's positioning .

**Findings** – Segmentation B2B segmentation identified ISP segments within Indonesia market, which characterized by: (1) average market capitalization of IDR 31.42 trillion, demonstrating financial stability; (2) geographic concentration in Java with minimal penetration in other regions; (3) strategic intent to expand geographically, constrained by high infrastructure development costs. Targeting VPC analysis identified target ISPs' needs: ISPs collectively hold 46% market share outside IndiHome, yet remain geographically confined, validates the untapped potential for enabling larger ISPs to "expand market reach with minimal capital expenditure". Differentiation Strategy CAF identifies three defensible PODs: 1. Nationwide Fiber Optic Coverage—Indonesia's longest network enabling rapid expansion into Sumatera, Kalimantan, Sulawesi, East Indonesia without capital-intensive infrastructure construction. 2. High Network Scalability—infrastructure capacity accommodating large ISP customer bases and traffic growth without congestion. 3. Strong Brand Recognition—Telkom Group credibility and operational expertise establish B2B partnership trust and reliability. Value Curve Analysis reveals InfraCo's competitive positioning: leading competitors in coverage and scalability, but trailing in speeds and pricing competitiveness. Positioning Statement InfraCo: Indonesia's Nationwide Infrastructure Partner enabling Large ISPs to cost-effectively expand beyond Java through scalable, comprehensive fiber optic networks—transforming geographic barriers into competitive growth opportunities.

**Research limitations** – The competitive analysis excludes some market players due to insufficient information.

**Originality/value** – This paper uniquely combines VPC, B2B segmentation, and CAF tailored for network infrastructure sharing services.

*Keywords: Market Segmentation; Differentiation; Positioning ; ISP Infrastructure Sharing ; Value Proposition Canvas*

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# An evaluation of the future of the Internet of Things and experiential marketing

| Smita Sharma<sup>1</sup>, Shweta Sharma<sup>2</sup>

<sup>1</sup>Manipal University Jaipur, <sup>2</sup>Asian Business School

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## Abstract

**Background** – A convergence of technology and customer experience has occurred during the past few decades. Technologies like the Internet of Things will significantly contribute to enhancing these interactions and delivering better customer experiences. Thus, there is a necessity for the creation of unified standards to deliver seamless communication between diverse IoT devices and platforms. The implementation of real-time monitoring will further enhance user data and subsequent customer experience. Despite the increasing emphasis in IoT-enabled consumer experiences, a comprehensive conceptual model that includes critical obstacles such as cross-vendor interoperability, data governance and permission, and privacy issues concerning sensor data is still lacking. Furthermore, contemporary research often overlooks the incorporation of cognitive, affective and behavioral variables crucial for evaluating immersive experiential measures of customers with IoT.

**Purpose** – This research formulates and substantiates a conceptual model for B2C IoT experiences based on SO-R principles. The model links interoperability and data governance factors, structured around a device, data, decision, and delivery chain, incorporating consumers' behavioural responses, and delineates a measurement framework for assessing immersive experiences.

**Design/methodology/approach** – The study incorporated the systematic review of literature from 2015 to 2025, sourced from the Scopus database. The data extraction employed a thematic synthesis methodology organized according to a device → data → decision → delivery framework. The conceptual model is based on the Stimulus-Organism-Response (S-O-R) framework.

**Findings** – The systematic literature review (2015–2025) identified three fundamental trends that collectively underpin the proposed conceptual framework: P1: The Internet of Things and Consumer Experiences, P2: The Internet of Things and Big Data Analytics, and IoT and Industry 4.0. Organisations can create consistent, scalable, and immersive consumer experiences by integrating IoT features.

**Research limitations** – Limitations encompass the use of only secondary data sources and the lack of empirical validation. Subsequent studies ought to utilise Delphi surveys with subject matter experts and conduct field pilots various immersive environments to evaluate the model's applicability. The scope is confined to B2C contexts in technologically sophisticated areas and AI-driven analytics.

**Originality/value** – The novelty of this study resides in the creation of a comprehensive conceptual framework that comprises of technological, experiential, ethical and governance dimensions. It enhances theoretical frameworks by integrating S-O-R into IoT-enabled marketing sphere.

*Keywords: IoT, Customer experience, brands, Artificial Intelligence, sustainability*

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# Branding in the Era of Clicks and Clout: A Quantitative Analysis of User-Generated Content and Paid Social Media Campaigns on Brand Image

| Erika Fontaron<sup>1</sup>, Shiela Lyn P. Gonzalos<sup>1</sup>, Kay E. Pacaldo<sup>1</sup>, Rosemarie P. Resula<sup>1</sup>

<sup>1</sup>Arriesgado College Foundation, Inc.

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## Abstract

**Background** – Brand image is a valuable asset for businesses, yet firms face increasing challenges in managing it in the digital era due to the rapid spread of negative content, fake news, and unethical advertising on social media platforms.

**Purpose** – The purpose of this study is to analyze the impact of User-Generated Content (UGC) and Paid Social Media Campaigns (PSMC) on brand image, with a specific focus on social media users in Davao del Norte.

**Design/methodology/approach** – A quantitative, descriptive-correlational design was employed, using validated survey questionnaires to gather data from 293 purposively selected respondents. Data were analyzed through mean, standard deviation, Pearson r correlation, and multiple regression, revealing that UGC ( $r = 0.759$ ,  $r^2 = 0.576$ ) and PSMC ( $r = 0.874$ ,  $r^2 = 0.764$ ) significantly influence brand image.

**Findings** – The findings reveal that both UGC and PSMC significantly influence brand image, with PSMC demonstrating a stronger effect. These results suggest that both user-generated content (UGC) and paid social media campaigns (PSMC) were vital for brands aiming to boost their image and consumer connection in emerging market.

**Research limitations** – However, the study is limited to social media users within Davao del Norte, which may affect the generalizability of the findings to other regions or demographic groups.

**Originality/value** – The study aims to address the gap by providing new regional insights into digital marketing practices, and how these strategies can be utilized to build stronger brand images in emerging markets and engage with audiences more effectively. It offers practical recommendations for businesses to optimize their digital marketing efforts and improve brand engagement. Ultimately, the findings support the development of responsible and transparent marketing practices, contributing to a more reliable digital marketplace and supporting economic growth in emerging markets.

*Keywords: Digital Marketing, User-Generated Content, Paid Social Media Campaigns, Brand Image, and Davao Del Norte.*

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# An S-D Logic Perspective on Relationship Marketing and Value Co-creation in B2B Facility Management

| Ni Made Ariasih  
PT. Telkom Property

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## Abstract

**Background** – This study changes the paradigm of Relationship Marketing (RM), shifting it from a traditional customer management focus to a strategic tool for managing risk and governance in the context of Telkom Property Area Bali's complex services.

**Purpose** – Based on the Service-Dominant Logic framework, this study analyzes how My Birawa plays a role in building operational trust and creating usage value through the integration of technical reliability and relational governance.

**Design/methodology/approach** – The research approach uses a qualitative method utilizes triangulated data collection (interviews, observations, and document analysis). The data was processed using thematic analysis. The core principles of Service-Dominant Logic (S-D Logic), specifically the view of service as the foundation of exchange and the importance of long-term relationships, were used to guide the data coding process to identify governance patterns that support operational trust.

**Findings** – The research results reveal three main findings. First, My Birawa acts as a risk management infrastructure, ensuring efficiency (as demonstrated by a decrease in Mean Time to Resolution/MTTR) and accountability (through KPI-based monitoring). This infrastructure achieved an average effectiveness score of 4.67/5 and an adoption rate of 100%. Second, My Birawa facilitates value co-creation through cross-functional integration and the codification of location-specific knowledge, which in turn builds relationship equity and creates non-financial switching barriers.

**Research limitations** – The effectiveness of My Birawa cannot be separated from the moderation of technical interdependence—especially Wi-Fi connectivity stability—and relational fragmentation arising from inconsistent tenant coordination. These two conditions significantly limit real-time coordination and service continuity.

**Originality/value** – Theoretically, this study extends the concept of trust and value in My Birawa to operational dimensions and risk governance. Practically, the research results recommend the integration of infrastructure KPIs into the My Birawa application, the appointment of a Tenant Liaison Officer, and the development of My Birawa application into an active knowledge base to support operational resilience and the sustainability of long-term B2B relationships.

*Keywords: Relationship Marketing, Facility Management, Operational trust, value-in-use*

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# Leveraging Client-Sponsored Feasibility Studies for Evaluating Small Business Performance

| Kathleen Pulmones<sup>1</sup>, Franklin Ayuson<sup>1</sup>, Jerome Euclid Zoilo Sosa<sup>1</sup>

<sup>1</sup>World Citi Colleges Quezon City

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## Abstract

**Background** – This study builds on the client-sponsored feasibility program launched by the College of Business Administration at World Citi Colleges in AY 2022–2023, which pairs business students with small enterprise clients to apply academic theory to real-world practice. Grounded in the Client-Sponsored Project Consulting (CSPC) model and supported by the SUSTAIN incubation network, the initiative fosters innovation, entrepreneurship, and industry collaboration while enhancing students’ consulting skills, critical thinking, and business readiness.

**Purpose** – This study aims to demonstrate that integrating client-sponsored feasibility studies within an academic and incubation framework develops students’ consulting skills, enhances curriculum outcomes, supports small business growth, and advances the institution’s mission of community impact and global relevance.

**Design/methodology/approach** – The study adopts a CSPC experiential, project-based, and service-learning approach, engaging 35 students from Academic Year 2025–2026 and 41 alumni from Academic Year 2022–2023, who worked directly with local small businesses, clients, and industry experts as part of this experiential program. The feasibility faculty, panel members, and advisers were also included as participants. A qualitative method is used to evaluate educational outcomes, consulting skill development, and client impact, all supported by the SUSTAIN incubation network.

**Findings** – Students demonstrate enhanced consulting skills, improved curriculum outcomes, measurable business client benefits, stronger industry–academe linkages, increased innovation and entrepreneurship, and greater program scalability and replicability.

**Research limitations** – The study focuses on CSPC participants from AY 2022–2023 to the present, providing context-rich insights into consulting performance and client impact. Data from interviews and focus groups capture authentic stakeholder perspectives, while engagement cycles offer actionable observations. Findings, grounded in the CSPC and SUSTAIN frameworks, serve as a scalable reference for other consulting or incubation initiatives.

**Originality/value** – The study integrates client-sponsored feasibility studies with an incubation framework, bridging academic theory and real-world practice, enhancing student consulting skills, supporting industry–academe collaboration, delivering value to SMEs, and providing a Philippine-based experiential learning model.

*Keywords: Client-Sponsored Project Consulting, Client-Sponsored Feasibility Study, Experiential Learning, Service Learning, Start-Up Service and Tech Advancement Incubation Network (SUSTAIN)*

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# Understanding the Pink Tax: A Study on the Awareness of Female Business Administration Students

| Melanie Convento  
World Citi Colleges

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## Abstract

**Background** – The pink tax refers to the additional amount women pay for products and services that are nearly identical to those marketed to men. In the Philippines, the pink tax is not an official government tax but a form of gender-based price discrimination. Products marketed to women, often in pink packaging, are priced higher than their male counterparts, despite being functionally identical. The pink tax is a pervasive issue that disproportionately affects women, contributing to economic inequality and reinforcing gender stereotypes.

**Purpose** – This research aims to measure how aware female consumers are, of the pink tax. The study supports the goal of increasing awareness about the pink tax that could help young Filipina consumers make more informed choices when buying products.

**Design/methodology/approach** – The study employed a quantitative research design to examine how media exposure, educational campaigns, and gender disparities influenced awareness of the pink tax among female Business Administration students.

**Findings** – The study showed that female Business Administration students showed varying levels of awareness about the pink tax. Demographic factors, such as age, year level, and income, influenced awareness, with older students and those with higher incomes being more aware. Students with more exposure to media and educational campaigns also had a better understanding of the pink tax.

**Research limitations** – This study is focused on the level of awareness of the pink tax and its influence on purchasing decisions among Filipina Business Administration students. It aims to examine how gender disparities, media exposure, and educational campaigns shape their understanding of gendered pricing in products—particularly personal care items and clothing.

**Originality/value** – This research adds value because it determines the awareness of pink tax within a specific academic setting, which has not been researched in local literature. While most of the available studies on pink tax have tended to focus on consumer markets in Western countries, this study adds new knowledge by localizing the issue in the Philippine educational setting and connecting it with the perspectives of future business professionals.

*Keywords: Pink tax, awareness, female consumers, gender disparities*

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# Track: Business Model Innovation

Connecting **I**deas,  
Strengthening **C**ontributions.

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# A Strategic Roadmap for Indonesia's Digital Connectivity: Overcoming the High-Cost Low-Quality Paradox

| Muhammad Rafii Naufal  
PT Telekomunikasi Indonesia, Tbk.

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## Abstract

**Background** – Indonesia's digital landscape is defined by a critical paradox: its internet services are among the most expensive on a value-for-value (price-per-Mbps) basis (Parker, 2025), yet deliver the lowest performance tiers within the ASEAN region. This disparity significantly impedes the nation's digital economic growth, exacerbates the digital divide, and undermines national competitiveness.

**Purpose** – This paper aims to (1) examine the systemic, interconnected root causes of this paradox, and (2) propose a strategic, dual-pronged roadmap—for both government regulators and private operators—to resolve the high-cost, low-quality paradox and unlock Indonesia's digital economic potential.

**Design/methodology/approach** – This paper employs a qualitative synthesis of industry reports, government publications, and media sources to diagnose the problem's root causes. This diagnosis is informed by a comparative case study analysis of the successful policy models of South Korea (Higo, n.d.) and Vietnam (Hieu, 2024). The resulting framework is used to conduct a policy analysis and develop the proposed strategic roadmap.

**Findings** – The research identifies three primary root causes: (1) the formidable geographical and logistical challenges inherent to an archipelagic state; (2) critical regulatory bottlenecks, particularly the delayed allocation of "sweet spot" 5G spectrum (Opensignal, 2025); and (3) a highly concentrated, oligopolistic market structure that disincentivizes aggressive price and quality competition. The proposed solution consists of two parts: For the government, a paradigm shift from focusing on backbone infrastructure development to enabling last-mile efficiency, including spectrum reform, a framework for active infrastructure sharing, and targeted fiscal incentives. For telecommunication operators, a transition from a capital-intensive (CAPEX), siloed infrastructure model to a more collaborative and operationally efficient (OPEX-focused) approach, involving network sharing and business model innovation.

**Research limitations** – This study is primarily based on a macro-level analysis of industry and regulatory data. The potential challenges and costs associated with the implementation of the proposed regulatory and business model shifts are not quantified in this paper.

**Originality/value** – This paper outlines the expected results of this coordinated implementation: the transformation of Indonesia's digital landscape, ensuring that affordable, high-quality connectivity becomes the foundation for equitable economic and social progress across the archipelago. Its value lies in providing a holistic, dual-pronged strategy that addresses both regulatory and market failures specific to Indonesia's unique archipelagic context.

*Keywords:* Digital Connectivity, Indonesia, Internet Affordability, Telecommunications Policy, Spectrum Management

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# Escaping the Commodity Trap: Telkom's Wholesale NaaP Strategy for Autonomous Network Transformation and High-Margin API Monetisation

| Ryan Achmad Arianto Ekasaputra  
Telkom Indonesia

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## Abstract

**Background** – Legacy telcos face the Commodity Trap, driven by declining revenue per unit and high operational expenditures. While leveraging advanced network capabilities is clear, the challenge remains in defining a strategic blueprint for legacy telcos—such as Telkom—to transform passive infrastructure into a high-value platform that enables growth across the digital value chain.

**Purpose** – This proposal addresses the need for legacy telcos to pivot to a high-margin revenue model beyond core connectivity. The Purpose is to validate and model the W-NaaP (Wholesale Network-as-a-Platform) strategy as a viable mechanism for Telkom to escape commoditisation by shifting from selling raw data to monetising programmable network capabilities via APIs. This transforms Telkom into a Strategic Platform Enabler.

**Design/methodology/approach** – The approach employs design modelling of a two-layered orchestration architecture (RAL and DSO). Architectural design serves as a system blueprint, facilitating Zero-Touch Provisioning (ZTP) and automated service fulfilment. The RAL transforms raw capacity into programmable performance capabilities. Strategically, the Developer-as-a-Partner (DaaP) model underpins this, establishing a shared-success ecosystem. The RAL exposes dynamic network attributes (e.g., QoS, location API) as high-margin, standardised APIs for enterprise consumption, enabling API monetisation.

**Findings** – The analysis projects substantial quantitative impacts: OPEX reduction of up to 20%; Time-to-Deliver (TTD) reduced from weeks/months to minutes/hours via ZTP; and Churn Mitigation achieving up to 15% reduction by securing customers. These projections are derived from performance evaluation data for the initial ZTP pilot. Strategically, the wholesale revenue mix will shift: Programmable API Revenue (projected to grow to 50% Vision) insulates the business from low-margin connectivity erosion.

**Research limitations** – The solution assumes full ZTP adoption maturity across the Wholesale segment and successful establishment of a global standard API ecosystem to drive market uptake. Further validation is required, including pilot data on actual B2B client adoption rates and margin uplift estimates beyond the 18-month projection period.

**Originality/value** – This case study offers a unique, implementable blueprint combining operational efficiency (ZTP/Autonomous) with a financial pivot (API Monetisation/Revenue Mix Shift). It places the transformation within the context of a major legacy telco (Telkom), offering triple standard integration (GSMA, TM Forum, MEF) for global replicability and sustainable digital transformation within the Digital Economy.

*Keywords: Platform Strategy, API Monetisation, Business Model Innovation, Autonomous Networks, Legacy Telcos*

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# Track: Information Technology

Connecting **I**deas,  
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# Deconstructing ConWeave: An Ablation Study of Probing and Reordering Overheads in RDMA Networks

| Fajar Eko Prasetyo Utomo<sup>1</sup>, Haidlir Achmad Naqvi<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Remote Direct Memory Access (RDMA) is fundamental to high-performance datacenter environments, including large-scale AI/ML, due to its ultra-low latency, zero-copy networking capabilities. However, RDMA's performance is highly sensitive to network congestion. In modern multi-path topologies, effective load balancing is required to distribute traffic, but it must adhere to RDMA's strict in-order packet delivery requirement. The current state-of-the-art (SOTA) mechanism, ConWeave, provides good load balancing via active Round-Trip Time (RTT) monitoring and ensures in-order delivery using large, queue-based reordering buffers. While effective, this complex approach introduces significant overhead such as active probing consumes valuable switch CPU resources, and the required large buffers are resource-intensive. These overheads particularly degrade performance for latency-sensitive small (mice) flows.

**Purpose** – This paper presents a systematic ablation study of ConWeave, conducted on the NS-3 network simulator, to isolate and quantify the performance and resource costs of its two primary components. This study serves as the critical initial empirical foundation for a new, proposed lightweight architecture that we are researching called Predictive Path Selection with Bounded Reordering (PPBR).

**Design/methodology/approach** – We introduce two key ablation scenarios. First, Active RTT Probing Removal, which tests the feasibility of PPBR's passive monitoring approach by disabling active probing. Second, Bounded Reordering Constraint, which simulates PPBR's time-window design by constraining ConWeave's reordering buffer. We evaluate these scenarios against the full ConWeave baseline using RDMA workloads (e.g., Web Search, Data Mining) and traffic patterns (e.g., Incast). Metrics include Flow Completion Time (FCT), and Switch CPU utilization.

**Findings** – Our hypotheses are that probing removal will validate PPBR's lightweight design by demonstrating 30–50% lower overhead. Buffer constraint is expected to show 50% less buffer usage, confirming the practical viability of bounded reordering.

**Research limitations** – Conducted on the NS-3 network simulator, Conducted on the NS-3 network simulator, not a hardware testbed. Findings require validation on physical hardware.

**Originality/value** – Deconstruction of the SOTA solution by quantifying the trade-offs between ConWeave's overhead and its accuracy, provides the essential quantitative justification for the architectural shift toward PPBR. The results are expected to not only confirm resource savings but also show improvements in mice flow FCT, addressing a key weakness of ConWeave.

*Keywords:* RDMA (Remote Direct Memory Access), ConWeave, Ablation Study, Load Balancing, Bounded Reordering

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# Make Unstructured Data Become Useful by Implementing Information Extraction and Pre-formatting

| Dinah Kamilah Ulfa<sup>1</sup>, Andjas Wahyu Ardiansyah<sup>1</sup>, Aghnia Alya Amarilla<sup>2</sup>, Nashita Erha Fitri<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>Universitas Negeri Surabaya

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## Abstract

**Background** – As Indonesia oldest Telco Company, we have a dataset with an interval of almost 50 years in terms of creation date. This includes fully digital data and digitized (old) data. Thus, data structure and format consistency become a critical issue. The dataset in this paper has three attributes which contain information regarding location. Location information is in a scatter manner, meaning it can be in various attributes. Another challenge is that location information does not have consistency in terms of length, format, and can be abbreviated due to free text input. In addition, location information is mixed with other information, such as item type and name. These data chaos introduce data skepticism and reduced data credibility to be use in formal administration and legal purposes.

**Purpose** – This research providing assistance on overcome data skepticism and discredit problems using data analytics methodology in which enabling data use for formal administration and legal purposes

**Design/methodology/approach** – Methodology employed in this research follows data analytics lifecycle, which consists of six main stages. All these processes are implemented using the Python programming language through Visual Studio Code with the Jupyter Notebook extension, along with the application of regex-based search techniques.

**Findings** – This research is able to improve data structure, enhance data detail, and ensure data format consistency. At the same time, it satisfies the formal administration requirements, with no semantic interpretation or content analysis. This research produces a structured and consistent new dataset to complement the original one. The new dataset was presented to the related unit in the company and senior-level management, which satisfied the requirements.

**Research limitations** – No semantic interpretation or content analysis is performed on data processing. Data analysis conducted, including the extraction process, focuses solely on word and phrase recognition, information extraction, and categorization without interpreting meaning. This approach aligns with the data processing objectives, which are limited to improving structure, enhancing detail, and ensuring data format consistency to satisfy the requirements.

**Originality/value** – The research deposed data skepticism and data credibility on the original data. Thus, new dataset with improved structure, enhanced detail, and format consistency is able to overcome chaos data problems.

*Keywords: information, extraction, pre-formatting, data consistency*

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# Precision Cooling System for Telkom's Critical Facilities: Energy Efficiency Optimization through International Standard Review

| Asep Hadian<sup>1</sup>, Gunadi Dwi H<sup>1</sup>

<sup>1</sup>Infrastructure Service Research and Assurance

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## Abstract

**Background** – Precision Air Conditioning (PAC) systems have a key role in maintaining device reliability, temperature stability, humidity, and air quality in rooms that have devices that are sensitive to environmental conditions, such as hospitals, server rooms, data centers, and laboratories. Over the past few decades, precision air conditioning (PAC) systems have been widely applied in small to medium-scale data centers to maintain optimal equipment temperatures in server racks.

**Purpose** – This study aims to optimize precision air conditioning (PAC) systems in the telecommunications environment by considering the main factors that influence cooling needs and energy efficiency.

**Design/methodology/approach** – The methodology used was a systematic literature review. The process included document searches in the IEEE Xplore database, ScienceDirect, and the official websites of standards bodies (ASHRAE, ISO, TIA). Selection criteria included publications from the last 10 years addressing precision cooling and critical facility energy management. Key information was extracted from standard guidelines, technical white papers, and research articles related to energy efficiency and PAC maintenance. The literature was compared to identify similarities, differences, and areas for further development—particularly in terms of system design, air distribution, and ongoing maintenance strategies.

**Findings** – The results of the study indicate that the application of this method can provide more accurate estimates of cooling requirements, enabling energy efficiency compared to conventional operation without real-world load analysis, and extending the lifespan of precision air conditioners and indoor electronic equipment. This study provides recommendations for the design and operation of precision air conditioners that are more adaptive to actual room conditions and can serve as a reference in planning high-reliability cooling systems in critical facilities.

**Research limitations** – The scope of the research is only focused on the maintenance methods for Precision Air Conditioning (PAC) operations at the Telkom Data Center.

**Originality/value** – Although numerous studies have been conducted on Precision Air Conditioning (PAC) efficiency in data centers, studies specifically addressing its application in telecommunication facilities with dynamic cooling load characteristics are still limited. This study offers a novel approach through a systematic literature review that combines standard guidelines (ASHRAE, ISO, TIA) with actual operational data to optimize PAC systems in Telkom environments.

*Keywords: Precision Air Conditioning (PAC), Energy Efficiency, HVAC Optimization, ASHRAE Standards, Telkom Data Center*

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# Embedding Edge AI in GPON ONT for Smart Access Point Optimization and Autonomous Network Management

| Kiswanto Kiswanto<sup>1</sup>, Gunadi Dwi Hantoro<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – The rapid growth in demand for high-throughput and low-latency broadband services has catalyzed the transformation of GPON ONT devices from passive network endpoints into intelligent edge nodes. This evolution presents new opportunities for embedding artificial intelligence (AI) capabilities directly within ONT units to enhance network adaptability and service quality.

**Purpose** – This paper aims to investigate the feasibility of integrating lightweight AI computation into multi-vendor GPON ONT devices to enable autonomous optimization of WiFi Access Point (AP) placement and real-time network performance management at the customer premises.

**Design/methodology/approach** – The proposed system architecture incorporates embedded AI models for signal pattern recognition and throughput prediction, executed locally on the ONT. The approach eliminates reliance on centralized cloud infrastructure by enabling edge-based inference. Simulations are conducted to evaluate the ONT's ability to dynamically adjust AP configurations based on traffic behavior, environmental conditions, and user mobility.

**Findings** – Simulation results indicate that AI-enhanced ONTs can significantly improve AP placement efficiency and overall service quality. The system demonstrates strong potential for deployment in smart campus environments and adaptive service provisioning scenarios.

**Research limitations** – This study is limited to simulation-based evaluations and does not yet encompass comprehensive cross-vendor testing. Additionally, the constrained computational resources of ONT hardware pose challenges for deploying more complex AI models.

**Originality/value** – This research introduces a novel perspective on utilizing ONT devices as edge AI nodes within access networks. It contributes to the advancement of AI-native broadband infrastructures and offers practical insights for multi-vendor environments such as those operated by Telkom Indonesia.

*Keywords: GPON ONT, Edge AI, Access Point Optimization, Autonomous Network Management, Multi-Vendor Architecture*

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# Track: Sustainable Development

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Theory of Transformative Ethical Leadership: A Deductive Axiomatic Study

| John Mark Saldivar  
La Salle University

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## Abstract

**Background** – Advancing SDG 16 calls for higher education leaders to model ethical leadership rooted in honesty, fairness, justice, compassion, and accountability. Beyond compliance, it cultivates integrity and moral responsibility. This study addresses fragmented leadership frameworks by proposing a unified theory that makes ethics the foundation of institutional transformation.

**Purpose** – This study aims to develop the Theory of Transformative Ethical Leadership (TEL)—a framework that places ethics at the heart of institutional change. TEL explains how leaders can turn moral principles into concrete systems and practices that advance transparent governance, foster cultural transformation, and drive sustainable development in higher education.

**Design/methodology/approach** – Guided by Padua’s Deductive Axiomatic Model, the study systematically constructs the Theory of Transformative Ethical Leadership (TEL) through the formulation of three axioms and corresponding propositions. These axioms were determined through a rigorous, thorough, and comprehensive reading and evaluation of literature and scholarly work on leadership, ethics, and higher education governance.

**Findings** – The study identifies three central axioms: 1. Every leader has the innate capacity to develop ethical behavior. 2. Moral principles—fairness, honesty, care, and responsibility—are indispensable for leadership. 3. Value-driven leadership fosters institutional success. These lead to propositions asserting that ethical leadership is influenced by personal, cultural, and organizational factors; facilitates better decision-making and relationships; and drives trust, integration of values, and institutional transformation.

**Research limitations** – The study is theoretical in nature, and its empirical validation is underway. It will undergo a mixed-method validation study that includes the development and psychometric validation of the Transformative Ethical Leadership Tool (TELT) and a multiple-case study on institutional transformation. While its current scope is limited to conceptual development within higher education, these forthcoming phases aim to empirically substantiate and refine the theory, ensuring its contextual adaptability and applicability across diverse educational and organizational settings.

**Originality/value** – The study presents the Theory of Transformative Ethical Leadership (TEL) as an innovative framework that positions ethics at the center of institutional transformation. Departing from models that treat ethics as secondary, TEL integrates moral principles into leadership, governance, and culture—advancing justice, integrity, and accountability in line with SDG 16.

*Keywords: Transformative Ethical Leadership (TEL), Evidence-based transformation, Philippine Higher Education, Padua’s Deductive Axiomatic model*

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# Sustainable Administrative Transformation: System Dynamics of Green Office Paperless Adoption in Higher Education

| Ratna Wulan Dari<sup>1</sup>, Tutik Inayati<sup>1</sup>, Virda Ramadhani Putri<sup>1</sup>, Tegar Arrasyid<sup>1</sup>

<sup>1</sup>Universitas Pendidikan Indonesia

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## Abstract

**Background** – Higher education institutions increasingly acknowledge the significance of sustainable administrative practices through paperless Green Office systems. However, adoption rates remain suboptimal due to complex organizational dynamics involving human resource readiness, technological infrastructure, resistance to change, and policy intervention effectiveness. Existing research predominantly examines individual factors in isolation without adequately capturing their dynamic interactions through feedback mechanisms, limiting predictive capacity for policy formulation.

**Purpose** – This research develops and validates a system dynamics model to examine and simulate the impact of policy interventions on Green Office adoption in study program units. The research identifies critical leverage points and evaluates alternative policy scenarios to provide evidence-based recommendations for institutional decision-makers with varying resource capacities.

**Design/methodology/approach** – This research employs system dynamics modeling using Vensim software to construct a model incorporating 16 interconnected variables derived from both theoretical foundations and empirical evidence based on internal process mapping of higher education administrative workflows. Three policy scenarios—pessimistic, moderate, and optimistic—were simulated over 60 months, varying campaign intensity (0.3-0.7), training rates (0.3-0.7), and base costs (Rp 4-15 million). Model validation achieved MAPE=8.3% and R<sup>2</sup>=0.94 against historical data, with comprehensive sensitivity analysis conducted.

**Findings** – Simulation results reveal non-linear threshold effects in adoption dynamics. The pessimistic scenario achieved only 15.6% adoption with high costs (Rp 121,340M/60 months). The moderate scenario reached 94.7% adoption with 60% cost savings (Rp 48,267M). The optimistic scenario achieved 99.9% adoption within 36 months with 89% cost savings (Rp 12,847M). Critical threshold occurs at 30-35% adoption where self-sustaining transformation activates. Campaign intensity (0.66) and training rate (0.59) emerged as highest-leverage variables.

**Research limitations** – This research relies on secondary data with single-institution focus, limiting generalizability. Context-specific parameterization for Indonesian higher education requires recalibration for different institutional contexts.

**Originality/value** – This research provides the first comprehensive system dynamics model for paperless Green Office adoption in higher education, integrating technology adoption theories with organizational change models. The validated tool enables evidence-based policy development with differentiated strategies for varying institutional resource capacities.

*Keywords: Green Office, Paperless System, System Dynamics, Higher Education, Sustainable Development*

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# E-Waste Management in Office Environments: A Systematic Literature Review

| Virda Ramadhani Putri<sup>1</sup>, Tutik Inayati<sup>1</sup>, Ratna Wulan Dari<sup>1</sup>, Tegar Arrasyid<sup>1</sup>

<sup>1</sup>Universitas Pendidikan Indonesia

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## Abstract

**Background** – The rapid growth of electronic devices in office environments settings has created critical environmental challenges due to increasing electronic waste (e-waste) accumulation. Despite growing e-waste volumes from office environments, research remains fragmented across disciplines with limited comprehensive synthesis of management strategies, technologies, and implementation challenges.

**Purpose** – This systematic literature review examines e-waste management in office environments, synthesizing evidence on characteristics, management strategies, technological innovations, and implementation barriers to provide evidence-based recommendations for organizations and policymakers.

**Design/methodology/approach** – Following PRISMA 2020 guidelines, we conducted systematic search in Scopus database (October 2025), retrieving 883 documents. Through multi-stage screening with predefined inclusion/exclusion criteria, 80 high-quality peer-reviewed articles (2020-2025) were selected for analysis. Data extraction captured study characteristics, key findings, and quality assessment.

**Findings** – Analysis reveals 90% of studies published in 2023-2025, indicating growing research interest. Office e-waste comprises primarily computers (45-60%), with 30-50% stored rather than recycled due to data security concerns. Key management approaches include Extended Producer Responsibility policies, circular economy frameworks, and technological innovations (IoT monitoring, blockchain traceability, AI optimization), though adoption remains limited by costs, complexity, and organizational barriers. Implementation challenges include inadequate infrastructure in developing economies, stakeholder awareness gaps, insufficient regulatory enforcement, and economic disincentives, amplified by COVID-19 impacts.

**Research limitations** – Single database (Scopus) and English language focus may introduce geographic and linguistic bias affecting generalizability. Recent timeframe (2020-2025) may overlook foundational work. Study heterogeneity limits quantitative meta-analysis and effect size determination. Predominance of developed economy studies limits applicability to resource-constrained contexts, potentially overestimating implementation feasibility. Publication bias favoring positive results may inflate effectiveness estimates and underrepresent failures, affecting best practice recommendation validity.

**Originality/value** – This study provides first comprehensive systematic review specifically addressing e-waste management in office environments, synthesizing evidence across organizational, technological, and policy dimensions. It validates institutional theory and technology adoption frameworks, identifies critical research gaps, and offers actionable recommendations for multi-stakeholder coordination, contributing to sustainable organizational practices, circular economy implementation, and digital transformation strategies aligned with ESG and SDG goals.

*Keywords: electronic waste, e-waste management, office environment, organizational sustainability*

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# Chronic Illness, Work, and the Accounting Profession: A Narrative Inquiry from Indonesia

| Irmadela Nindyadiasti Rizkika Fitriani<sup>1</sup>, La Ode Sabaruddin<sup>1</sup>

<sup>1</sup>Universitas Airlangga

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## Abstract

**Background** – The accounting profession’s intense workloads, cyclical peak periods, and “ideal worker” norms conflict with the unpredictable, often invisible symptoms of Systemic Lupus Erythematosus (SLE). In emerging economies such as Indonesia, limited formal accommodations, partial health coverage, and cultural norms can further constrain career sustainability for professionals with chronic illness

**Purpose** – This study investigates the lived experiences of Indonesian accounting professionals with Systemic Lupus Erythematosus (SLE). The focus is on how health conditions, organisational responses, and professional cultures shape career sustainability

**Design/methodology/approach** – First, the authors distributed a questionnaire to twelve professionals with physician-confirmed SLE via Yayasan TULUS. The authors then purposively selected three participants for in-depth interviews based on these insights. Data were collected through 60–75 minute semi-structured Zoom interviews, transcribed and translated, then analysed using reflexive thematic analysis with both deductive (organisational justice, accountability, ableism) and inductive coding

**Findings** – Diagnosis often constituted a career-defining rupture. Formal supports (medical leave, insurance) provided material stability but were frequently too rigid for fluctuating illness; informal collegial support was adaptive yet inconsistent. Structural features of accounting—rigid promotion paths, inflexible scheduling, understaffing—amplified attrition by design. Participants used technological workarounds and temporal reorganisation to cope, but long-term sustainability depended on systemic fairness, accountability, and cultural change

**Research limitations** – The study's in-depth findings are based on a purposive sample of three narrative interviews (n=3), selected from an initial pool of 12 questionnaire respondents. This small sample size limits the generalisability of the findings. Further limitations include the reliance on self-reported data, which is subject to recall bias, and the researcher's positionality, which poses a risk of reflexive bias despite mitigation procedures

**Originality/value** – The paper extends inclusion research in accounting by centring chronic illness, applying justice/accountability/ableism frameworks in an emerging-economy context, and offering actionable organisational and policy recommendations to support sustainable careers for professionals with SLE

*Keywords: Accounting profession, Systemic Lupus Erythematosus (SLE), Organisational justice, Sustainable careers, Workplace inclusion*

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# Too Good to Be True: Exploring the Influences of Esg on Financial, Operational and Market Competitiveness

| Naziatul Aziah Mohd Radzi<sup>1</sup>, Liew Sien Leong<sup>2</sup>, Normaizatul Akma Saidi<sup>3</sup>

<sup>1</sup>Universiti Kebangsaan Malaysia, <sup>2</sup>Universiti Utara Malaysia, <sup>3</sup>Universiti Malaysia Kelantan

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## Abstract

**Background** – The integration of Environmental, Social, and Governance (ESG) principles has become a key marker of corporate responsibility and long-term competitiveness. However, the practical impact of ESG adoption on firm performance remains debated, particularly in emerging markets where implementation maturity varies. Within Malaysia's Communication and Multimedia (C&M) industry, comprising telecommunications, broadcasting, and postal and courier services, ESG practices are gaining momentum as organizations respond to evolving stakeholder expectations, regulatory pressures, and sustainability imperatives.

**Purpose** – This study investigates how ESG adoption influences organizational competitiveness across three dimensions: financial performance, operational efficiency, and market positioning. It aims to uncover how companies interpret, implement, and leverage ESG strategies as enablers of business resilience and value creation.

**Design/methodology/approach** – Guided by an interpretive qualitative design, the study employed in-depth semi-structured interviews with senior executives from licensed C&M companies, including Network Facilities Providers (NFP), Network Service Providers (NSP), Content Application Service Providers (CASP), and postal and courier operators. Data were collected through face-to-face and online interviews over a three-month period (February–April 2025). Thematic analysis was conducted to identify cross-sectoral patterns and contextual variations in ESG implementation and its perceived effects.

**Findings** – The findings reveal that ESG contributes to competitiveness through multiple, sector-specific mechanisms. Financially, ESG initiatives enhanced cost savings, investment attractiveness, and long-term resilience, particularly among courier and telecom firms. Operationally, ESG practices improved energy efficiency, digital transformation, and risk governance, fostering employee engagement and innovation. From a market perspective, ESG strengthened tender success, brand differentiation, and institutional legitimacy, especially in ESG-sensitive markets. Despite differing levels of maturity across sectors, ESG was increasingly viewed as a strategic business enabler rather than a compliance obligation.

**Research limitations** – The qualitative scope and limited number of participating firms restrict the generalizability of the findings. Future studies could adopt mixed-methods or longitudinal designs to quantify ESG impacts and examine sectoral evolution over time.

**Originality/value** – This study provides empirical evidence from an emerging economy context, illustrating how ESG adoption drives competitiveness across financial, operational, and market domains. It advances understanding of ESG as a multi-dimensional strategic driver and offers actionable insights for policymakers and industry leaders aiming to strengthen Malaysia's sustainable business ecosystem.

*Keywords: ESG adoption, competitiveness, sustainability, financial performance, Communication and Multimedia industry*

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# Comparative Study of Solar Drying Technology and Traditional Sigiran Method on Shallot Post-Harvest Performance

| Yeni Sumantri<sup>1</sup>, Theresia Rosma Exaudi<sup>1</sup>, Muhammad Faqih Akbar<sup>1</sup>, Tubagus Michael Robert<sup>2</sup>, Muhammad Irsyad Fariz<sup>2</sup>

<sup>1</sup>Department of Industrial Engineering, Universitas Brawijaya, <sup>2</sup>Department of Electrical Engineering, Universitas Brawijaya

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## Abstract

**Background** – Shallots constitute a high-value horticultural commodity in Indonesia, particularly in rural areas such as Tawangsari Village, Pujon Regency, East Java, where they serve as a vital source of livelihood for smallholder farmers. The conventional drying method, known as the Sigiran system, relies on open-air drying and is limited by prolonged drying durations and susceptibility to weather variability, especially during the rainy season. These limitations often cause significant post-harvest losses and reduced income, highlighting the need for improved drying technologies.

**Purpose** – This study investigates the application of a Solar Dome Dryer as an innovative alternative to enhance the efficiency and reliability of shallot drying. The objective is to evaluate whether this technology can reduce drying time, improve yield quality, decrease post-harvest losses, and increase economic returns compared to the Sigiran method.

**Design/methodology/approach** – A comparative experimental design assessed the Solar Dome Dryer against the traditional Sigiran method. Parameters measured included drying time, yield, marketable output, post-harvest losses, and economic viability. Experiments used 1,000 kg of shallots with controlled monitoring of temperature and humidity during drying.

**Findings** – The Solar Dome Dryer demonstrated superior control over temperature and humidity, enabling continuous and faster drying. Drying time was reduced from 14–30 days (Sigiran) to 10–25 days. Marketable yield increased from 670 kg to 745 kg, while post-harvest losses decreased from 25% to 10%. Economic analysis showed a 32% revenue increase per ton, or an additional IDR 4.5 million at IDR 25,000/kg, enhancing farmer profitability.

**Research limitations** – The study was conducted under specific climatic and geographic conditions in East Java. Further research is needed to evaluate performance across regions and seasons, and to assess long-term durability and maintenance costs.

**Originality/value** – This study provides novel empirical evidence on the Solar Dome Dryer's effectiveness as a sustainable post-harvest technology for shallots, addressing challenges of traditional drying in tropical smallholder farming. The improvements in drying efficiency, yield quality, and economic returns offer valuable insights for policymakers, extension services, and farmers seeking scalable solutions to reduce losses and enhance income stability in rural Indonesia and similar agro-ecological zones.

*Keywords: Drying efficiency and economic viability, post-harvest losses, Shallot drying, Smallholder farmers, Solar Dome Dryer*

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# Understanding Indirect Costs and Coping Behaviors in Dialysis Care: Insights for Sustainable Healthcare Innovation

| Suhaila Saad<sup>1</sup>, Nurulhuda Mohd Satar<sup>2</sup>, Roza Hazli Zakaria<sup>2</sup>

<sup>1</sup>Universiti Kebangsaan Malaysia, <sup>2</sup>Universiti Malaya

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## Abstract

**Background** – Chronic kidney disease (CKD) imposes a substantial socioeconomic burden, particularly on patients undergoing long-term dialysis treatment. Although extensive research has documented the medical costs of dialysis, the indirect financial burden especially income loss remains underexplored, mainly in the context of Malaysia.

**Purpose** – This study was conducted to examine the income loss experienced by dialysis patients and to explore how they cope financially, focusing specifically on the reduction of basic necessities as a primary coping mechanism.

**Design/methodology/approach** – A cross-sectional study was conducted at two public hospitals in Malaysia, involving 220 dialysis patients. Data were collected through structured questionnaires and analyzed using chi-square tests and multiple linear regression.

**Findings** – The findings reveal that a significant proportion of patients experienced income reduction primarily due to work-related disruptions. Many respondents reported reducing spending on essential needs as a coping response to financial strain, highlighting the severe economic vulnerability among dialysis patients. These results provide strategic insights for developing a sustainable healthcare system that integrates social and financial support mechanisms, including income protection, employment flexibility, and government cash assistance for chronic patients. Encouraging workplace innovation, such as flexible work arrangements, represents a practical approach to minimizing income disruption among dialysis patients. Addressing the indirect costs of dialysis through both policy and market perspectives is crucial to achieving a more equitable, resilient, and sustainable healthcare ecosystem.

**Research limitations** – The study assessed only the reduction of basic necessities as coping mechanism, which may not fully capture the variety of coping behaviors dialysis patients employ in response to income loss. In addition, the findings may not be generalizable to all dialysis patients in Malaysia, as the study was limited to two public hospitals and may not reflect experiences in private or rural healthcare settings.

**Originality/value** – Numerous previous studies have primarily focused on direct medical costs, however, very few have examined the indirect economic burden through income loss. Hence this study provides new insights into the financial challenges faced by dialysis patients.

*Keywords: Indirect costs, income loss, dialysis, coping mechanism*

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# Advancing SDG 4, 9, and 17 through Strategic Digital Advertising among Selected Startup Enterprises in Quezon City

| Kathleen Pulmones<sup>1</sup>, Chona Sigue<sup>1</sup>

<sup>1</sup>World Citi College

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## Abstract

**Background** – Digital advertising is essential for startups seeking growth, yet many in Quezon City struggle to use it effectively due to limited resources and lack of academic-industry support. Institutions like WCC-QC can help bridge this gap through experiential, outcomes-based learning. Using the DASL approach and the EROBS Model, the study examines how sustainable digital advertising can strengthen startup development while promoting SDG 4, SDG 9, and SDG 17, fostering innovation and enhancing student competencies.

**Purpose** – The purpose of this study is to examine how digital advertising can promote sustainable growth among startups in Quezon City by exploring how academic institutions, through the DASL approach and the EROBS Model, can enhance their marketing practices while providing students with SDG-aligned experiential learning.

**Design/methodology/approach** – The study employed a mixed-methods descriptive design using surveys, interviews, and focus group discussions with purposively selected startup owners, collecting quantitative data through a validated questionnaire and qualitative insights through thematic analysis, all under ethical protocols, to examine how academic collaboration can strengthen digital advertising strategies in Quezon City while ensuring triangulation and validity.

**Findings** – The study is expected to show that startups in Quezon City use basic digital advertising but struggle to apply sustainability, though they welcome academic support. Through the DASL approach and EROBS Model, students can enhance startups' digital strategies while gaining valuable experiential learning. Overall, academic-industry collaboration can improve digital advertising, strengthen sustainability, and advance key SDGs.

**Research limitations** – The study's findings are limited in breadth and generalizability because it focused only on selected startups in District 2 of Quezon City operating for less than five years and using digital advertising, relied on one-term data collection through self-reported surveys and limited interview participation, and examined only digital advertising, sustainability, and academic collaboration through the DASL and EROBS models while excluding broader economic, technological, and industry factors.

**Originality/value** – The study is original because it uniquely combines digital advertising, sustainability, and academic service-learning through the DASL approach and the new EROBS Model, highlighting student involvement in SDG-aligned marketing and filling a research gap on sustainability-focused collaborations between higher education and startups in Quezon City, making it a novel contribution to business and educational research.

*Keywords: Digital Advertising Startup Enterprises Sustainable Development Goals (SDGs) Digital Academic Service-Learning (DASL) EROBS Model (Experiential-Reflective Outcomes-Based Sustainability)*

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# Track: Digital HR Transformation

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# Digital Organizational Culture and Employee Wellbeing: A Systematic Scoping Review of Technostress, Burnout, and Work Modalities in the Digital Age

| Nabila Yasfa Azahra  
Universitas Pendidikan Indonesia

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## Abstract

**Background** – Digital transformation has fundamentally reshaped workplace environments with complex implications for employee wellbeing. Despite growing research, the literature remains fragmented across disciplines, necessitating comprehensive synthesis to guide organizations navigating post-pandemic work arrangements

**Purpose** – This scoping review systematically maps existing literature on employee wellbeing in digital workplace contexts to identify key themes, knowledge gaps, and practical implications for sustainable digital work ecosystems.

**Design/methodology/approach** – Following PRISMA-ScR guidelines, we searched Scopus database for studies published 2017-2025. A total of 118 studies were analyzed, comprising quantitative (55, 46.6%), qualitative (33, 28.0%), systematic reviews (22, 18.6%), mixed methods (11, 9.3%), and longitudinal designs (11, 9.3%). Narrative synthesis with thematic analysis was employed to synthesize findings across diverse contexts.

**Findings** – Four major themes emerged: (1) Digital Communication Strategies and Technology (34 studies, 28.8%), revealing technostress negatively impacts employee exhaustion while proper digital interventions enhance wellbeing; (2) Remote Work and Flexibility (33 studies, 28.0%), demonstrating challenges with work disconnection despite increased flexibility; (3) Leadership and Organizational Culture (33 studies, 28.0%), emphasizing cultural transformation and supportive leadership are essential for technology adoption; and (4) Digital Risks and Psychological Wellbeing (18 studies, 15.2%), highlighting mental health impacts of cyberbullying, automation anxiety, and digital overload. Three critical moderators emerged: organizational support, organizational culture, and digital skills, forming an integrated conceptual model.

**Research limitations** – This review is limited to English-language publications from Scopus database (2017-2025), potentially excluding relevant studies in other languages or databases. The focus on office workers may not capture frontline worker experiences. Potential publication bias toward positive or statistically significant results may affect comprehensiveness of findings.

**Originality/value** – This study provides the first comprehensive mapping of digital wellbeing literature in the post-pandemic era, integrating multiple strands across interconnected themes. Unlike previous reviews focusing on single aspects, this scoping review synthesizes evidence to present an integrated conceptual model that challenges technology-deterministic views, demonstrating that successful digital transformation requires holistic integration of technology, people, and organizational culture.

*Keywords: digital wellbeing, technostress, remote work, organizational culture, scoping review*

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# AI-Driven Ambidextrous Leadership for Future-Ready Organizations: A Case Study of Telkom Indonesia

| Richard Alberto<sup>1</sup>, Nabilah Kienda Aliffah<sup>2</sup>, Jafar Shidiq<sup>2</sup>, Risyando Ramdhan Manovandi<sup>2</sup>

<sup>1</sup>Telkom Indonesia, <sup>2</sup>University Student

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## Abstract

**Background** – Digital disruption compels organizations particularly state-owned enterprises to balance operational efficiency with continuous innovation. Telkom Indonesia, undergoing strategic transformation toward a digital-telco ecosystem, embeds Ambidextrous Leadership as a core capability to reconcile exploration and exploitation.

**Purpose** – This paper conceptualizes how AI-driven ambidextrous leadership strengthens leadership decision-making, accelerates innovation, and sustains competitiveness in a dual-mandate organization.

**Design/methodology/approach** – A qualitative analytical case study was conducted within Telkom Group by integrating classical ambidexterity theories (Raisch & Birkinshaw, 2008; Mom et al., 2015) with recent advances in AI-augmented leadership (Wang et al., 2023; Lee & Trimi, 2021). The analysis drew on secondary data from internal transformation programs, AI implementation roadmaps, and strategic leadership documents. Qualitative mapping and thematic coding were employed to trace the evolution from managerial ambidexterity to AI-augmented ambidexterity across structural, contextual, sequential, and organizational dimensions. Methodological validity was strengthened through data triangulation and expert review, ensuring analytical transparency and credibility.

**Findings** – The results indicate that AI enhances managerial ambidexterity by acting as a co-leader—analyzing data, automating operational decisions, and facilitating cross-unit collaboration. Empirical indicators suggest improvements in decision agility (30–40 % faster), cost efficiency (20–25 % annual savings), and innovation velocity (two- to three-fold increase in initiatives). AI enables a balanced pursuit of exploration (new digital opportunities) and exploitation (legacy optimization) while reinforcing a data-driven and ethically governed culture.

**Research limitations** – The study is limited to a single state-owned enterprise and conceptual mapping rather than longitudinal measurement. Future studies are encouraged to validate the proposed framework empirically using SEM-PLS, dynamic-capability modeling, or cross-SOE comparative analysis to test scalability and generalizability across diverse institutional contexts.

**Originality/value** – This paper introduces the concept of AI-Augmented Ambidextrous Leadership, positioning AI as a strategic collaborator in leadership decision-making. The framework extends ambidexterity theory by demonstrating how digital intelligence institutionalizes adaptive, innovative, and sustainable leadership cultures within emerging-market SOEs.

*Keywords: Ambidextrous Leadership, Artificial Intelligence, Organizational Ambidexterity, Digital Transformation, Telkom Indonesia*

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# Can AI-generated questions be trusted to meet human quality standards? Judging AI- Generated Assessment Items.

| Anita Dwinata Lubis<sup>1</sup>, Rezki Aditian<sup>1</sup>, Himawan Adi Prakosa<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Advancements in artificial intelligence (AI) have rapidly transformed the field of competency assessment, particularly through the automated generation of test items. AI-assisted question generation systems can produce large volumes of assessment items efficiently, reducing human workload and supporting scalable testing frameworks.

**Purpose** – The purpose of this study is to evaluate the consistency and reliability of a human judge's ratings when assessing AI-assisted competency assessment items based on three key quality criteria: Relevancy, Answerability, and Logical soundness, to provide evidence on whether AI-assisted item generation produces consistently high-quality questions worthy of integration into formal assessment systems.

**Design/methodology/approach** – This study employed a quantitative, psychometric analysis design to examine the consistency of a single judge's ratings across three dimensions. A total of 7,953 items were rated on a five-point scale by 120 experts. Descriptive statistics, Cronbach's alpha, and One Way ANOVA were conducted to identify whether the judge applied the same evaluation standards consistently or varied their scoring.

**Findings** – The analysis revealed that the judge consistently assigned high ratings across all criteria, indicating a general tendency toward positive evaluations. The overall Cronbach's alpha demonstrated a high level of internal reliability, confirming that the judge applied the three criteria in a consistent manner. The ANOVA results showed significant differences in Relevancy and Answerability ratings indicating that the judge's scoring for these criteria varied by question type.

**Research limitations** – The significant variation observed across question types suggests that while AI can produce structurally logical items, human oversight remains critical to ensure contextual relevance and interpretability. These results imply that AI-assisted question development is worthwhile, particularly when complemented by expert review to refine domain alignment and clarity.

**Originality/value** – This study offers novel empirical evidence on human–AI complementarity in the design and evaluation of AI-assisted assessment items. This study introduces a replicable framework for analyzing the expert judgment in AI-mediated content creation. The research underscores the indispensable role of human expertise in the end-to-end evaluation process, from prompt design to the critical review of AI-generated outputs. At the same time, it highlights how reliable AI systems can effectively support humans in developing scalable, medium-stakes assessment tools.

*Keywords: AI-Generated Question, Psychometrics, Validity, Competency Assessment*

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# Differentiating Neurocognitive Profiles and Executive Functions: A Comparative Study of Learning Experts and Non-Learning Experts in a Corporate University

| Wahyu Winarto<sup>1</sup>, Widodo Yuwono<sup>1</sup>, Heru Wiryanto<sup>2</sup>

<sup>1</sup>Telkom Corporate University, <sup>2</sup>Orbex Gen-AI Academy

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## Abstract

This study investigated the neurocognitive and executive function profiles distinguishing Learning Experts (LE) from Non-Learning Experts (NLE) within a corporate university. Employing a cross-sectional, comparative design, \$N=46\$ employees (LE, \$n=23\$ NLE, \$n=23\$) were assessed. Measures included 14-channel EEG for power spectral density analysis (delta, gamma) and the Brain Quotient (BQ) assessment for cognitive performance. Independent t-tests revealed that LE significantly outperformed NLE across core neurocognitive metrics. Neurophysiologically, LE exhibited a significant decrease in Delta power (indicating heightened alertness and control) and a significant increase in Gamma power (indicating enhanced information integration) at T7. Cognitively, LE demonstrated a substantial advantage across the central BQ domains, including Overall Brain Quotient (d approx 0.96), Emotion and Thought Management, and Thinking and Deciding (d approx 1.00). The findings provide robust evidence that the role of a Learning Expert is correlated with a highly optimized cognitive profile, crucial for complex organizational learning design and facilitation.

*Keywords: QEEG; Neurocognitive Profiles; Executive Functions; Learning Experts; Brain Quotient; EEG; Corporate University*

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# Track: Public and Corporate Governance

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# Development of a Quality Manual for the City College of Calamba: A Framework for Institutional Integrity

| Mary Rose Montano<sup>1</sup>, Ronald A. Gonzales<sup>1</sup>, Regina G. Almonte<sup>1</sup>, Simplicio P. Alba<sup>1</sup>,  
Maricris G. Unico<sup>1</sup>, Maryann H. Lanuza<sup>1</sup>, Armando A. Salenga Jr.<sup>1</sup>, Anna Rhea C. Opeña<sup>1</sup>,  
Francis Eduard Malitig<sup>1</sup>, Jayzee Rafanan<sup>1</sup>

<sup>1</sup>City College of Calamba

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## Abstract

**Background** – The City College of Calamba (CCC) is building upon its strong commitment to educational quality by proactively developing its first institution-wide Quality Manual. This initiative aims to consolidate and harmonize the college's existing quality assurance practices into a unified framework. The quality manual will serve as a strategic tool to strengthen institutional integrity, ensure alignment with national and international standards, and foster a cohesive culture of continuous improvement and excellence for its future growth.

**Purpose** – This study sought to develop a contextualized Quality Assurance Framework and Manual for the City College of Calamba (CCC). It aimed to assess existing QA practices, identify needs, and gaps from stakeholder perspectives, determine essential components, and formulate a structured framework to standardize and enhance quality across instruction, research, extension, and support services.

**Design/methodology/approach** – A qualitative case study design was employed using purposive sampling gathered data from 22 administrators, faculty, and staff through key informant interviews and an open-ended survey for triangulation. Thematic analysis examined QA practices, gaps, and key manual components, with expert-validated instruments ensuring reliability and credibility.

**Findings** – Although foundational QA practices are in place, the absence of a formal manual leads to inconsistent implementation, weak documentation, and limited coordination. Stakeholders emphasized the need for a unified framework, clearer policies, and capacity-building initiatives. The proposed framework integrates the Plan-Do-Check-Act cycle with Total Quality Management principles, while the manual standardizes processes, roles, and policies in alignment with CHED, ALCUCOA, and ISO 9001:2015 standards.

**Research limitations** – The study is limited to developing a contextualized Quality Assurance framework for the City College of Calamba, using internal data and excluding implementation and certification. Future research may validate and refine the framework through multi-institutional or longitudinal studies.

**Originality/value** – This study provides a customized and integrative Quality Assurance Framework and Manual developed to strengthen CCC's culture of quality, institutionalize continuous improvement, and uphold organizational integrity. It serves as a strategic guide for CCC and a potential model for other higher education institutions seeking to enhance their quality assurance systems.

*Keywords: Quality Assurance, Quality Manual, Higher Education, Total Quality Management, Institutional Integrity*

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# Artificial Intelligence in Civil Service Talent Management Capacity: Reconstructing Dynamic Governance

| Yaya Mulyana Abdul Aziz<sup>1</sup>, Ferdiansyah Wicaksono<sup>1</sup>

<sup>1</sup>Universitas Pasundan

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## Abstract

**Background** – Public administration in Indonesia is under increasing pressure to modernize talent management systems for civil servants, aiming for more adaptive, transparent, and accountable governance. In this context, Artificial Intelligence (AI) is positioned as a transformative tool to improve the efficiency and competitiveness of human resources, particularly in West Java. A literature review confirms AI's growing application in talent management, accompanied by ethical debates on data privacy and fairness.

**Purpose** – This study aims to examine the potential and obstacles of AI adoption in human resource management and analyze how this adoption contributes to reconstructing dynamic governance within the public sector of West Java.

**Design/methodology/approach** – This study employed a qualitative descriptive method. The research was located in West Java Province, chosen to follow up on prior research regarding AI in governance published by the Regional Research and Development Agency (BP2D). Data collection utilized triangulation, combining in-depth interviews with the Head of the Division of Government and Regulatory Review at BP2D and analysis of relevant policy documents/regulations. Data analysis was performed descriptively, with triangulation ensuring the validity and reliability of the findings.

**Findings** – The findings show that AI enhances objectivity and accelerates decision-making in talent management. This adoption is situated within the three dimensions of dynamic governance (thinking ahead, thinking again, and thinking across). However, challenges found include limited infrastructure, organizational resistance, and potential algorithmic bias.

**Research limitations** – The limitations of this study are that it only continues the initial research conducted by BP2D West Java and further confirms the results of the study with relevance to developments in the literature related to AI research. Therefore, it is necessary to conduct in-depth research using mixed methods, involving agencies related to the development of human resources for the civil service.

**Originality/value** – The study concludes that AI-driven talent management has significant implications for strengthening dynamic governance in West Java by cultivating agile, ethical, and competitive human resources. This integration positions West Java as a frontrunner in reconstructing governance capacity for global competitiveness, requiring continuous capacity building and robust ethical frameworks to realize its potential.

*Keywords: Artificial Intelligence, Dynamic Governance, Civil Service Talent Management, Public Sector Innovation, Human Resource Competitiveness*

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# The Effect of Competency on Job Satisfaction and Its Implications on the Performance of the General Election Commission (KPU) Commissioners in West Java Province

| Wandy Zulkarnaen<sup>1</sup>, Yusuf Arifin<sup>1</sup>

<sup>1</sup>Universitas Pasundan

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## Abstract

**Background** – The study examines the importance of improving the performance of General Election Commission (KPU) commissioners in West Java, a province with over 35 million voters and complex political challenges. Despite their critical role in ensuring credible elections, previous improvement efforts have mostly focused on technical aspects, neglecting psychological factors such as job satisfaction. Since job satisfaction is strongly influenced by competence, this study seeks to determine how commissioners' competence affects their satisfaction and overall performance.

**Purpose** – The research aims to: 1. Analyze the influence of competence on job satisfaction among KPU commissioners. 2. Examine the influence of job satisfaction on commissioner performance. 3. Measure the indirect effect of competence on performance through job satisfaction as a mediating variable.

**Design/methodology/approach** – A quantitative survey method was used, involving 101 KPU commissioners at the district and city levels across West Java Province. Data were collected via a structured questionnaire and analyzed using SPSS with t-tests and partial regression analysis. Validity and reliability tests confirmed that all research instruments were statistically sound (validity coefficients > 0.300 and reliability coefficients > 0.700).

**Findings** – The average competence level of commissioners was high (mean = 3.86), with knowledge as the strongest dimension and social role as the weakest. • Competence has a positive and significant effect on job satisfaction ( $p = 0.003$ ). • Job satisfaction has a very strong effect on commissioner performance (69.1%). • The total effect of competence on job satisfaction was 26.2%, consisting of direct (13.8%) and indirect effects (via integrity and commitment). • The remaining 36.7% of performance variance was influenced by other factors such as leadership, motivation, work environment, and discipline.

**Research limitations** – The study focuses only on KPU commissioners in West Java, limiting generalizability to other provinces. • It uses a cross-sectional design, preventing causal conclusions over time. • Other organizational factors such as leadership style or organizational culture were not included in the analysis.

**Originality/value** – This research contributes to public sector human resource management by contextualizing the relationship between competence, job satisfaction, and performance in a democratic institution. It introduces a comprehensive path model showing both direct and indirect effects of competence and provides practical policy implications for recruitment, training, and professional development programs aimed at enhancing both technical and psychological aspects of commissioner performance.

*Keywords: Competence, Job Satisfaction, Performance, KPU Commissioners.*

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# Does Quality of Governance and Financial Development Stimulate Foreign Direct Investment (FDI)?: A Response to Income Classification Evidence

| Marhamah Mohd Rafidi<sup>1</sup>, Aziatul Waznah Ghazali<sup>2</sup>, Nur Aima Shafie<sup>3</sup>, Naila Erum<sup>3</sup>,  
Jamaliah Said<sup>3</sup>, Nurliyana Khalid<sup>1</sup>

<sup>1</sup>Taylor's University, <sup>2</sup>Universiti Kebangsaan Malaysia, <sup>3</sup>Accounting Research Institute, UiTM

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## Abstract

**Background** – Foreign Direct Investment (FDI) is a critical driver of economic growth in developing countries. Recently, institutional factors, particularly the Quality of Governance (QoG) and Financial Development (FD), are increasingly acknowledged as key enablers of FDI. Existing literature provides mixed findings, particularly when accounting for countries' income classifications.

**Purpose** – This study examines how governance quality (QoG) and financial development (FD) shape FDI inflows. It also tests whether the effects differ by income group and whether FD strengthens the governance–FDI link.

**Design/methodology/approach** – Using panel data from 42 developing countries between 1984 and 2022. The study employs the Cross-Sectionally Augmented Autoregressive Distributed Lag (CS-ARDL) model to account for cross-sectional dependence, non-stationarity, and heterogeneous dynamics. Governance indicators are sourced from the ICRG, while financial and economic variables are drawn from the World Development Indicators.

**Findings** – Results reveal a nonlinear relationship between governance quality and FDI. An improved governance initially yields negative effects but becomes positive beyond a certain threshold. Financial development significantly moderates this relationship, enhancing the impact of governance on FDI inflows. This pattern are particularly pronounced in lower and upper middle-income countries.

**Research limitations** – The study focuses solely on developing economies and relies on secondary data. As a result, the findings may not generalisable to high-income settings or micro-level firm behavior. Moreover, measurement limitations inherent in governance and financial development indicators may also influence results.

**Originality/value** – This study offers a novel contribution by integrating financial development as a moderating variable in the governance–FDI nexus and by applying income-level stratification to uncover heterogeneous effects. Additionally, it also provides evidence-based insights for policymakers aiming to attract sustainable FDI through coordinated institutional and financial reforms.

*Keywords: Foreign direct investment, Quality of Governance, Financial Development, Lower Middle-Income Countries, Upper Middle-Income Countries*

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# Track: Operational Efficiency

Connecting **I**deas,  
Strengthening **C**ontributions.

Supported by:



# **The Assurance Document Acceleration Program (ADAP): A Breakthrough in Management Resolution for Assurance Document Discrepancies with The Purpose of Enhancing Operational Efficiency**

| Andang Ashari<sup>1</sup>, Dian Sulistyaningsih<sup>1</sup>, Natasya Prima Oktaviani<sup>1</sup>, Alamandari Faris<sup>1</sup>,  
Riandi Aditia Darmayana<sup>1</sup>

<sup>1</sup>PT Telkom Indonesia (Persero) Tbk

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## **Abstract**

**Background** – Telkom’s partnership business model has led to a buildup of unbilled vendor projects. To address this, Telkom launched Project Resolution Management (PRM) in August 2024 to process 8,097 projects worth Rp 3.4 trillion by December 2025. Within PRM, the Partnership SLA (PSLA) unit is responsible for preparing assurance documents. Each project requires three documents, totaling 24,291 documents to be completed within the deadline. To meet this target, PSLA needs a breakthrough program to accelerate document processing.

**Purpose** – This research proposes the Assurance Document Acceleration Program (ADAP) as a breakthrough to issue fast-track assurance documents without compromising compliance and validity of the document. The Assurance Document is a service performance report provided by the vendor during a contract period.

**Design/methodology/approach** – This research uses the Fishbone Diagram, Internal Factor Evaluation (IFE), and External Factor Evaluation (EFE) methods to identify root causes. The key issues are inefficient business processes, system dependencies, and the high volume of assurance documents. To address these, PSLA introduced ADAP, which streamlines documentation by requiring only one document per project and eliminating system number dependencies.

**Findings** – In May 2025, 9 vendors (Telkom subsidiaries with the highest billing) were selected as piloting partners to become early adopters of the program. With a total of 604 projects, PSLA finished 389 projects (June-October 2025) and only 215 projects before the program. Implementing ADAP increased the average number of completed projects per month by 100%, from 43 to 86 projects. Based on these results, ADAP can be implemented for the remaining 755 projects (cannot be processed due to system issues), and the goal to close all the projects in December 2025 can be met.

**Research limitations** – This research is only limited to Project Resolution Management, Partnership Service Level Agreement (PSLA), and the assurance documents needed to be done in PSLA.

**Originality/value** – The originality of this research lies in the integration of the Fishbone, IFE, and EFE methods to identify breakthrough strategies for accelerating the completion of assurance documents. It provides practical recommendations to enhance operational efficiency in Telkom’s assurance document process.

*Keywords: Assurance Documents, Process Improvement, Project Resolution Management (PRM), Telkom Indonesia, SLA*

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# Track: Entrepreneurship

Connecting **Ideas**,  
Strengthening **Contributions**.

Supported by:



# Entrepreneurial Self-Efficacy, Entrepreneurial Creativity, Strategic Management Practices as Regressors of Firm Performance in Davao Region

| Zadrack Fiel

Arriesgado College Foundation, Inc.

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## Abstract

**Background** – Agribusiness is vital to economic growth and employment, but SMEs in the sector face challenges such as limited access to finance, low productivity, and inadequate management capacity. These issues, compounded by financial institutions' reluctance to provide credit and slow growth in production factors, hinder the sector's development in the Philippines.

**Purpose** – This study aimed to explore the impact of Entrepreneurial Self-efficacy, Creativity, and Strategic Management Practices on Firm Performance, focusing on self-efficacy in creativity, planning, financial literacy, and managing ambiguity. Additionally, it sought to identify the key factors influencing investment efficiency, profitability, and competitiveness.

**Design/methodology/approach** – This study employed a descriptive-predictive correlational design to examine the impact of entrepreneurial self-efficacy, creativity, and strategic management practices on firm performance in agribusinesses in the Davao Region, Philippines. The reliability of the survey instruments was established with a Cronbach's alpha of 0.9284, and data were analyzed using Pearson  $r$  and multiple regression analysis to assess the relationships between variables and their influence on firm performance.

**Findings** – This study, conducted on 150 small-scale agribusiness owners in the Davao Region, Philippines, found high levels of firm performance, entrepreneurial creativity, and strategic management practices. A significant positive relationship was identified between entrepreneurial self-efficacy, creativity, strategic management practices, and firm performance ( $r = 0.61$ ,  $p < 0.01$ ). Regression analysis revealed that strategic management practices were the only variable with a significant impact on firm performance, exhibiting a strong positive influence with a beta coefficient of 0.859. These findings align with Resource-Based Theory, emphasizing the essential role of strategic management in driving firm performance and success.

**Research limitations** – The study is limited to the Davao Region, Philippines and focuses on Entrepreneurial Self-efficacy, Creativity, and Strategic Management Practices. Future research should explore additional variables not covered in this study to further examine their impact on firm performance.

**Originality/value** – The 13% similarity index indicates minimal overlap with existing sources, with 5% from internet sources, 3% from publications, and 11% from student papers but generally acceptable. Moreover, the study explores how entrepreneurial self-efficacy—encompassing confidence, creativity, and problem-solving—along with strategic management practices, collectively influence firm performance, innovation, and long-term growth.

*Keywords: Entrepreneurial Self-efficacy, Entrepreneurial Creativity, Strategic Management Practices, Firm Performance, Small-scales Agribusiness*

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# Track: Operations Management

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Determining Factors for Net Promoter Score in Riau Islands: Infrastructure Aspect in Telkom Indonesia's Home Internet Customers through Year 2020 - 2023

| Fiko Baskoro<sup>1</sup>, Muhammad Zaidan Jauhari<sup>1</sup>, Reni Yulfita<sup>1</sup>, Muhammad Ari Rifki<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Net Promoter Score (NPS) is widely recognized as a key indicator of customer loyalty and a predictor of revenue growth. In the telecommunications industry, service reliability and proactive assurance programs significantly influence customer experience. However, empirical evidence linking operational reliability metrics to NPS across customer journey stages remains limited, particularly in Indonesia's home internet market.

**Purpose** – This study aims to provide an in-depth analysis of how service reliability, represented by Service Disruption Rate (Q), and proactive assurance, represented by Assurance Guarantee (Asgar), shape customer loyalty through NPS metrics. Specifically, the research examines their influence on NPS Activate, NPS Use, and NPS Overall to identify operational priorities that drive sustainable customer satisfaction.

**Design/methodology/approach** – A quantitative approach using Structural Equation Modeling – Partial Least Squares (SEM-PLS) was applied to internal company data collected from 2020 to 2023. The analysis focused on two operational metrics: 1-Q (percentage of customers not experiencing service disruptions) and Assurance Guarantee (guarantee of uninterrupted service for 60 days post-activation). These metrics were derived from monthly operational reports and customer experience dashboards.

**Findings** – The results indicate that Assurance Guarantee (Asgar) has a significant positive effect on NPS Activate, suggesting that customers value stability during the initial service period. Conversely, 1-Q score shows a strong positive impact on NPS Use, confirming that reliability during ongoing usage is critical for sustaining customer loyalty. Both NPS Activate and NPS Use significantly influence NPS Overall, with NPS Use exerting a stronger effect, highlighting the importance of long-term service quality over initial provisioning.

**Research limitations** – The study is limited to cross-sectional data from a single region (Riau Islands) and focuses on two operational metrics. While this provides clarity on reliability and assurance, it does not capture other potential drivers of NPS, such as pricing or customer expectations. Future research should incorporate longitudinal data, broader geographic coverage, and additional variables to validate and extend these findings.

**Originality/value** – This research introduces a focused operational perspective by linking reliability metrics to NPS within the customer journey framework. The findings provide actionable insights for telecom providers to prioritize assurance programs and minimize disruptions, thereby enhancing customer loyalty and competitive advantage.

*Keywords: Net Promoter Score, Service Reliability, Assurance Guarantee, SEM-PLS, Customer Loyalty.*

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# Entrepreneurial Capacity Development Strategy in Islamic Boarding Schools, Garut Regency

| Lia Muliawaty<sup>1</sup>, Kamal Alamsyah<sup>1</sup>, Tuti Haryanti<sup>1</sup>

<sup>1</sup>Universitas Pasundan

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## Abstract

**Background** – Pesantren (Islamic boarding schools) in Indonesia, including Garut Regency, hold immense potential as centers for character building and developing young entrepreneurs. However, this potential is not optimally realized because existing entrepreneurial development strategies (particularly through the operation of Community Vocational Training Centers or BLK-K) are often fragmented and poorly integrated with the local business ecosystem.

**Purpose** – This research aims to deeply analyze the inhibiting factors, identify the existing entrepreneurial capacity conditions, and formulate a comprehensive strategy for sustainable entrepreneurial capacity development within the Pesantren environment in Garut Regency.

**Design/methodology/approach** – The study employed a qualitative approach with a single, holistic case study method. The main theoretical framework used is Grindle's three-level Capacity Development Model (System, Institutional, and Individual). Data were collected through in-depth interviews, observation, and document review at the Pesantren's BLK-K sites. The key informants in this study totalled 2, namely the Head of the Manpower, Cooperatives, and SMEs Agency (Kepala Dinas Tenaga Kerja dan Koperasi dan UMKM). This was supplemented by 5 people from BLK-K (consisting of managers, instructors, and mentored entrepreneurs/tenants). Data analysis was conducted inductively and interpretatively.

**Findings** – Findings revealed key obstacles across three levels: 1) System: BLK-K curriculum policies are often less relevant to market dynamics; 2) Institutional: low synergy between the Pesantren's ethical values and modern business practices, along with limited industry networks; and 3) Individual: weaknesses in the managerial competence of program staff and the entrepreneurial soft skills of students (santri).

**Research limitations** – The study formulated comprehensive strategic interventions across these three levels, emphasizing industry-based curriculum development and strengthening sustainable partnerships.

**Originality/value** – The Novelty of this research is the Pesantren Entrepreneurial Capacity Model (PECM), which integrates the Organizational Culture/Ethical Values dimension as a prerequisite for sustainability. This model offers practical guidance for policymakers and Pesantren managers to transform the BLK-K into an effective business incubator, ensuring community-based economic independence.

*Keywords: Capacity Development, Entrepreneurship, Pesantren, Strategy, Community BLK*

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# Harmonizing National Metrology: An Analysis of the 2025 Indonesian Optical Fiber Inter- Laboratory Comparison

| Aldi Wiranata<sup>1</sup>, Gunadi Dwi Hantoro<sup>1</sup>, Adi Permadi<sup>1</sup>, Yudha Indah Prihatini<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Indonesia's digital transformation relies heavily on fiber optic networks, which require high standards of quality assurance for their core components. However, varied measurement results from independent testing laboratories add uncertainty and risk to the supply chain, jeopardizing the reliability of the national network infrastructure.

**Purpose** – This paper introduces a formal proficiency testing initiative, using the 2025 inter-laboratory comparison of G.652.D optical fiber cable conducted at Telkom Test House (TTH) as a case study. The main goal is to show how this approach can validate measurement methods, ensure compliance with ISO/IEC 17025 standards, and align metrological outputs to secure the accuracy and precision necessary for high-performance networks.

**Design/methodology/approach** – The study followed a sequential inter-laboratory comparison scheme involving several national laboratories. Performance was assessed for three key optical parameters: Attenuation, Chromatic Dispersion (CD), and Polarization Mode Dispersion (PMD). We conducted a thorough statistical analysis in line with ISO 13528:2022, using robust estimators and z-scores to evaluate laboratory performance while considering the uncertainties related to artifact homogeneity and stability.

**Findings** – The comparison indicated a generally competent national testing landscape, with about 77% of laboratories falling into the "Acceptable" performance category. However, we identified statistically significant issues, including 11 "Warning" signals and 24 "Unacceptable" signals across the three parameters tested (Attenuation, CD, and PMD). These discrepancies, noted across all groups, highlight specific methodological or instrumental issues that need corrective measures and emphasize the risk of using non-compliant fiber.

**Research limitations** – The conclusions of this study are based on a single G.652.D fiber artifact. While we employed statistical methods to address artifact instability, future research should include a broader range of fiber types (e.g., G.655, G.657) to strengthen the results.

**Originality/value** – This paper offers the first detailed public analysis of national optical fiber proficiency testing in Indonesia. It translates complex metrological data into clear operational and strategic implications, providing a framework for using inter-laboratory comparisons as a foundation for quality governance. This can help de-risk infrastructure investments and support the country's digital ambitions.

*Keywords: Optical Fiber, Inter-laboratory Comparison, Network Reliability, Quality Assurance, ISO/IEC 17025*

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# Determining Factors for Net Promoter Score in Riau Islands: Marketing Aspect in Telkom Indonesia's Home Internet Customers through Year 2020 - 2023

| Fiko Baskoro<sup>1</sup>, Muhammad Zaidan Jauhari<sup>1</sup>, Fransisca Maria Elda Kosaria Sunardjo<sup>1</sup>,  
Widia Sri Anita<sup>1</sup>

<sup>1</sup>Telkom Indonesia

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## Abstract

**Background** – Net Promoter Score (NPS) is widely used to measure customer loyalty and predict business growth. While previous studies have focused on activation and usage phases, early and post-service stages such as Explore, Buy, Get Support, and Terminate remain underexplored. These stages are critical for shaping customer perception and influencing overall NPS, particularly in competitive home internet markets.

**Purpose** – This study aims to assess customer experience quality across four key stages of the customer journey—Explore, Buy, Get Support, and Terminate—using NPS as the primary indicator. The evaluation leverages mystery shopper assessments and customer care KPIs to capture service performance and responsiveness during these phases.

**Design/methodology/approach** – A quantitative approach was adopted, with data collected through structured mystery shopper evaluations aligned with NPS scoring methodology. Monthly data from mystery shopper scores, churn, retention, and winback CT0 were utilized to provide a comprehensive view of customer experience. Each stage was assessed based on predefined service quality criteria, including information clarity, ease of purchase, support responsiveness, and termination process efficiency. The research design incorporates Structural Equation Modeling – Partial Least Squares (SEM-PLS) for hypothesis testing.

**Findings** – Preliminary observations indicate that the Buy and Get Support stages exert the strongest influence on customer perception, with delays in support response and unclear purchase information emerging as key pain points. The Explore stage shows moderate impact, while termination processes require improvement to reduce negative sentiment. These insights underscore the importance of proactive communication and streamlined support systems in enhancing NPS across the customer journey.

**Research limitations** – The study is limited by the absence of completed SEM-PLS analysis and relies on cross-sectional data from cores, churn, retention, winback CT0, and other related KPIs. Future research should incorporate longitudinal data and advanced modeling to validate causal relationships.

**Originality/value** – This research introduces a novel perspective by integrating NPS measurement with marketing touchpoint methodology across multiple customer journey stages. The findings provide actionable insights for telecommunication providers to optimize pre-service and post-service interactions, thereby improving overall customer loyalty.

*Keywords: Net Promoter Score, Mystery Shopper, Customer Journey, Service Quality, Customer Loyalty.*

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# Track: Agile Practices

Connecting **I**deas,  
Strengthening **C**ontributions.

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# The Impact of Teamwork on Organisational Performance, Moderated by Team Learning: A Case Study of The Ministry of Finance of The Republic of Indonesia (MoF)

| I Putu Agus Arya Alit Suantara<sup>1</sup>, Siti Radhiatan Mardiah Daulay<sup>1</sup>

<sup>1</sup>Ministry of Finance of Republic of Indonesia

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## Abstract

**Background** – At the Ministry of Finance (MoF), initiatives to strengthen teamwork (TW) have been embedded within organisational design, human resource management, and technology adoption. The “Squad Team” initiative under the Kemenkeu Satu program exemplifies this integration by fostering collaboration, trust, and shared goals, contributing to enhanced organisational performance (OP). However, promoting effective TW in a bureaucratic public-sector environment poses challenges due to formal structures, hierarchical constraints, and procedural rigidity. Team learning (TL) may serve as a mechanism enabling teams to convert collaboration into better decision-making through reflection, integration of diverse expertise, and continuous adaptation, potentially enhancing overall performance.

**Purpose** – This study examines the relationship between TW and OP and investigates whether TL moderates the effect of TW on OP within the MoF, particularly amid ongoing reforms to streamline the echelon system and foster a more adaptive culture.

**Design/methodology/approach** – A quantitative, cross-sectional survey was conducted with 278 MoF employees (69.85% response rate). Data were collected using validated scales for TW, OP, and TL. Regression analyses were performed using IBM SPSS 29, with variables mean-centered prior to interaction analysis.

**Findings** – Hierarchical regression was conducted in two steps. Results indicated in Hypothesis 1, TW was a significant positive predictor of OP (adj.  $R^2 = 0.344$ ;  $\beta = 0.668$ ;  $p < .001$ ). In Hypothesis 2, TL and the interaction term ( $TW \times TL$ ) increased explained variance to adjusted  $R^2 = 0.500$  (adjusted  $R^2 = 0.156$ ), but the interaction was not statistically significant ( $p = 0.836$ ), indicating TL does not moderate the TW–OP relationship. While overall explained variance improved, the moderation hypothesis was not supported.

**Research limitations** – This study has several limitations. First, it relies on quantitative and self-reported data, which may not fully capture behavioural dynamics and may introduce common method variance (CMV). Second, the focus on the MoF limits generalisability, and the cross-sectional design restricts causal inference. Future research should adopt mixed-method and longitudinal designs, explore behavioural mechanisms in depth, and include broader institutional samples to strengthen external validity.

**Originality/value** – Grounded in Social Identity Theory, Social Information Processing Theory, and the Comprehensive Model of Team Learning, this study highlights robust main effects of TW on OP and clarifies TL’s limited moderating role in this context.

*Keywords:* Human resource management, public sector, organisational performance, team learning, teamwork

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# Track: Smart Industry Platforms

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Building a Connected Environmental Test House: ESP32 Integration for Real-Time Monitoring and Telegram Alerts

| Anggun Widyastuti<sup>1</sup>, Aldi Wiranata<sup>2</sup>, Gunadi Dwi Hantoro<sup>2</sup>, Kisna Pertiwi<sup>1</sup>, Sadam Al Rasyid<sup>3</sup>, Yudha Indah Prihatini<sup>2</sup>

<sup>1</sup>Institut Teknologi Sumatera, <sup>2</sup>Digital Connectivity Service Division, <sup>3</sup>Telkom University

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## Abstract

**Background** – Scheduling and monitoring activities in the environmental laboratory of a telecommunications company testing FTTH devices and accessories are still performed manually via spreadsheets. Status updates between engineers are often delayed by one hour to one day, causing late reports and recording errors. An Internet of Things (IoT)–based system is therefore required to automate scheduling, data storage, monitoring, and real-time notifications to improve accuracy and operational efficiency..

**Purpose** – This study aims to design and develop an IoT-based testing schedule and monitoring system using an ESP32 microcontroller integrated with a TFT LCD, Laravel Framework, MySQL, and the Telegram Bot API. The system is intended to improve coordination, reduce human error, and provide real-time data access through both local networks and the internet.

**Design/methodology/approach** – The system was developed using the Waterfall model and a six-entity ERD: Users, Testing Schedule, Test History, Devices, Synchronization, and Telegram Latency Test. Communication between the ESP32 and server uses a RESTful API with device tokens. The Telegram token is securely stored in an encrypted .env file. The system also supports offline mode through SPIFFS, allowing pending data to be saved locally and automatically transmitted once connectivity is restored. System evaluation used Black-Box Testing and the System Usability Scale (SUS).

**Findings** – Test results show that all features function as expected. The average synchronization time is 210 ms, with an average pending duration of 14.5 seconds and a 1.1-second resync delay. Telegram notifications achieve a mean latency of 1337 ms with 0% error rate and 100% uptime. SUS results indicate 100% effectiveness, task efficiency of 0.01 seconds, and a satisfaction score of 72.5 (Good). These results confirm that the system is reliable, responsive, and user-friendly.

**Research limitations** – This study does not include stress testing, network performance analysis, or end-to-end security evaluation of REST API communication. These aspects are recommended for future research to strengthen system security, scalability, and reliability.

**Originality/value** – The integration of ESP32 with Laravel and Telegram notifications in a dual-interface system (local and web) represents a new approach for the environmental testing laboratory. This innovation supports laboratory digitalization through IoT technology and enhances operational efficiency and reliability.

*Keywords: ESP32, Laravel, MySQL, Telegram Bot, Scheduling System.*

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# Track: Auditing

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Evidence-Grounded Hybrid Framework for ISO/IEC 17025 Audits

| **Sadam Al Rasyid<sup>1</sup>, Aldi Wiranata<sup>2</sup>, Koredianto Usman<sup>1</sup>, Gunadi Dwi Hantoro<sup>2</sup>, Suryo Adhi Wibowo<sup>1</sup>, Marshaniswah Syamsul<sup>2</sup>**

<sup>1</sup>Telkom University, <sup>2</sup>Digital Connectivity Service Division

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## Abstract

**Background** – Mapping operational evidence to ISO/IEC 17025:2017 clauses is a labor-intensive process that depends heavily on auditor interpretation. Although Retrieval-Augmented Generation (RAG) offers partial automation, conventional RAG systems frequently generate plausible yet unverifiable responses—posing critical liability risks in high-assurance regulatory contexts where every compliance claim must be explicitly traceable to its documentary source.

**Purpose** – This study proposes an evidence-grounded hybrid intelligence framework that ensures verifiable and traceable compliance mapping while minimizing generative errors. Instead of depending on model fine-tuning, the system achieves architectural verifiability enforcement through mandatory evidence grounding and deterministic validation, reconciling AI adaptability with the stringent demands of audit integrity.

**Design/methodology/approach** – The architecture was developed on a curated Indonesian ISO/IEC 17025 knowledge base comprising 3,097 clauses. It integrates (1) dual-retrieval mechanisms (TF-IDF and SBERT), (2) a verifiable RAG pipeline using Qwen3-32B that rejects outputs lacking verbatim evidence spans with character offsets, (3) a deterministic rule-based validation engine covering calibration and uncertainty checks, (4) RDF/Turtle export ensuring full provenance, and (5) an active learning loop that generates additional training data from high-confidence ( $\geq 0.9$ ) annotations. Validation employed 50 internal audit reports and benchmarked reviewer correction rates before and after system adoption.

**Findings** – The framework consistently rejected ungrounded outputs, achieving full traceability and substantially reducing reviewer correction rates by 37% across the validation dataset. The deterministic engine maintained 100% detection of predefined non-compliance patterns, ensuring reliability even under variable LLM performance. Structured JSON-based knowledge representation (iso\_17025\_dataset.json) enhanced reproducibility and transparency across audit cycles.

**Research limitations** – The current implementation is limited to ISO/IEC 17025 and Indonesian-language documents, with accuracy dependent on OCR quality and the latency of the local re-ranking module. Nonetheless, the framework provides clear pathways for generalization through modular knowledge base replacement and multilingual adaptation. Scalability metrics indicate strong potential for broader deployment across other governance and compliance frameworks, such as ISO 9001, SOX, and HIPAA.

**Originality/value** – This work introduces a novel evidence-grounded hybrid intelligence paradigm that operationalizes trustworthiness through architectural verifiability rather than probabilistic learning. By mandating evidence-span validation and deterministic safeguards, the framework establishes a reproducible model for AI-driven compliance applicable to diverse evidence-critical domains.

*Keywords: Hybrid Intelligence, Retrieval-Augmented Generation, Verifiable AI, Compliance Auditing, Knowledge Graph*

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# Track: Cloud Computing

Connecting **I**deas,  
Strengthening **C**ontributions.

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# Optimization of Fixed Broadband Network Topologies through the Implementation of Multi-Access Edge Computing (MEC) as a Virtual Content Delivery Network (VCDN) in Indonesia

| Yohana Jayanti Aruan<sup>1</sup>, Rendy Munadi<sup>1</sup>, Sofia Naning Hertiana<sup>1</sup>, Nyoman Bogi Aditya Karna<sup>1</sup>, Hadi Hariyanto<sup>2</sup>

<sup>1</sup>Telkom University, <sup>2</sup>Telkom Indonesia

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## Abstract

**Background** – Indonesia’s fixed-broadband traffic has surged over 30% annually, driven by UHD video streaming, gaming, and social-media usage. This growth strains transport and backbone capacity, while users demand lower latency and higher stability. Traditional centralized CDN architectures no longer suffice. Multi-Access Edge Computing (MEC) offers localized computing and caching, enabling virtual CDN (vCDN) deployment closer to users for latency-sensitive services.

**Purpose** – This research aims to optimize Indonesia’s fixed-broadband topology by integrating MEC as vCDN to reduce backbone load, improve Quality of Experience (QoE), and increase network scalability. The study develops a framework and simulation-based model to determine the best integration architecture, operational model, and deployment locations for vCDN nodes.

**Design/methodology/approach** – A quantitative-experimental approach combines literature review (PRISMA protocol) with simulation using NS-3 and real network data. The research compares three topologies: (1) conventional CDN, (2) proprietary edge CDN, and (3) MEC-based vCDN for FTTH networks. Key metrics include latency, jitter, packet loss, and traffic reduction on transport links. The study models vCDN placement at aggregation tiers with dynamic virtualization (containers, VMs, bare metal) and evaluates QoE differences between origin and edge delivery paths.

**Findings** – Simulations show that MEC-vCDN reduces average latency from  $\approx 5.7$  ms (origin CDN) to  $\approx 1.1$  ms (local vCDN)—an  $\approx 81\%$  improvement—and cuts backbone traffic by  $\approx 99.9\%$  for 10,000 video users (14.7 GB  $\rightarrow$  17 MB). Projected results include 15–30% lower transport load and 20–30% better QoE metrics. These gains translate into reduced CAPEX/OPEX and faster content delivery, supporting Indonesia’s digital-infrastructure efficiency goals.

**Research limitations** – The study focuses on FTTH fixed-broadband networks with vCDN as the only MEC use case and does not cover mobile integration, multi-operator policy issues, or cross-domain security factors. Simulation results are limited to synthetic datasets and selected urban traffic patterns.

**Originality/value** – This work is the first comprehensive Indonesian framework proposing MEC-based vCDN topology optimization for fixed broadband. It bridges the research gap between 5G edge applications and wired access networks, offering an operational blueprint for ISPs to deploy scalable, low-latency content delivery architectures tailored to national traffic characteristics.

*Keywords: MEC (Multi-Access Edge Computing), vCDN (Virtual Content Delivery Network), Fixed Broadband*

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# Track: Strategic Workforce Planning

Connecting **I**deas,  
Strengthening **C**ontributions.

Supported by:





# Implementing BUMN's Employee Well-Being Policy: Baseline Survey and Strategic Well-Being Program for Telkomsigma

| Grace Elisabeth Lawas Lawu<sup>1</sup>, ST., MBA, Wiwin Agustina<sup>2</sup>, Muhammad Saiful Hidayat<sup>1</sup>,  
Luisa Amanda Charitas<sup>1</sup>, Prasetyo Raharjo<sup>3</sup>

<sup>1</sup>PT Sigma Cipta Caraka (Telkomsigma), <sup>2</sup>Mind Power Management, <sup>3</sup>Telkom Corporate University

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## Abstract

**Background** – In alignment with Indonesia's Ministry of State-Owned Enterprises (BUMN) Mandate SE-1/MBU/01/2024, all BUMNs are required to implement a holistic Employee Well-Being (EWB) policy encompassing seven dimensions: physical, mental, environmental, intellectual, financial, spiritual, and social well-being. PT Telkomsigma, a digital services subsidiary of the Telkom Indonesia Group, initiated a strategic workforce planning effort to assess and strengthen employee well-being amid organizational transformation and market volatility.

**Purpose** – This study aimed to establish a 2025 EWB baseline through a comprehensive survey and to design targeted, data-driven well-being interventions that support strategic workforce sustainability and performance

**Design/methodology/approach** – A quantitative-descriptive approach was employed using an online self-assessment survey distributed to 1,938 employees (77.2% response rate) across business units. The instrument integrated validated psychological scales—including SF-36, DASS-21, Ryff's Psychological Well-Being Scales, PERMA Profiler, and the CFPB Financial Well-Being Scale. Analyses included descriptive statistics, t-tests, reliability and validity testing, and linear regression per sub-domain to construct the Employee Well-Being Index and a Strategic Priority Matrix

**Findings** – Results revealed the lowest scores in Physical ( $M = 2.86$ ), Mental ( $M = 2.04$ ), and Financial Well-Being ( $M = 2.74$ ), highlighting urgent intervention areas. Demographic segmentation showed higher well-being among contract, married, and male employees, with outsourced and divorced staff exhibiting elevated risk. Regression models indicated that intellectual, social, financial, and environmental well-being significantly contribute to overall workforce health—directly influencing talent retention and organizational resilience. These findings informed evidence-based recommendations for Human Capital strategy and cultural transformation

**Research limitations** – Limitations include reliance on self-reported cross-sectional data and a single organizational context, which may limit generalizability across the broader BUMN ecosystem

**Originality/value** – This study is among the first to operationalize BUMN's seven-dimensional EWB framework within a digital SOE. It offers a scalable, psychometrically sound methodology for Strategic Workforce Planning and provides actionable insights for large organizations seeking to enhance workforce engagement, health, and retention—critical pillars of sustainable business performance

*Keywords: Employee Well-Being, Seven-Dimensional Well-Being, Baseline Survey, BUMN Policy, Strategic Workforce Planning*

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# Track: Finance

Connecting **I**deas,  
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# Investors Perception Towards Gold ETF: An Empirical Investigation

| Mukund Sharma<sup>1</sup>, Indira C M<sup>2</sup>

<sup>1</sup>BNM Institute of Technology, <sup>2</sup>Visvesvaraya Technological University

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## Abstract

**Background** – Gold prices in the international market have posted steady gains through 2025, reinforcing the metal's status as a preferred investment option. In February alone, gold exchange-traded funds (ETFs) registered a robust net inflow of more than 20 billion. This highlights strong retail and institutional interest despite gold trading at historic highs. The renewed demand for gold highlights its growing appeal among Indian investors. The yellow metal continues to attract interest as a preferred investment alternative.

**Purpose** – This study aims to examine the perception of retail investors towards Gold ETFs in India context with special emphasis on investment trust and assumed risk. It also tries to explore willingness of investors in Bangalore city (One of the populated and wealthiest city of South India) to shift from buying physical gold to digital gold.

**Design/methodology/approach** – The study is exploratory in nature and relies heavily on primary source of data. The population of the study includes investors in gold & gold ETF. Secondary source of data is collected from financial Intermediaries and regulators. Convenient sampling method is used with a sample size of 483.

**Findings** – Findings of the study are in line with the expectations of the researcher. Return expectation is not a significant factor in moving away from physical gold to Gold ETFs. Investors are considering factors such as affordability and ease of liquidation while investing in electronic gold. Areas of concern for investors are regulations associated and storage charges on certain ETF platforms.

**Research limitations** – The present study suffers from limitations related to smaller sample size which may not reflect the real perception of the investors and responses of the investors may be biased.

**Originality/value** – Based on extensive review of literature, it's observed that there is a lack of awareness about Gold ETF as an investment alternative. The present study is unique in nature as it has captured perception of investors about new and innovative method of Investing in Gold. Investors' confidence about gold ETF is improving over the years with stronger regulations and improved awareness.

*Keywords: Gold , return, risk, ETF, Inflation*

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# CLOSING SPEECH

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Excellencies, Presenter, Attendees

Ladies and Gentlemen,

I am truly honored and delighted to deliver the closing remarks for the **1st International Conference on Research in Emerging Technologies and Strategic Business (ICRES)** and **The 10th International Seminar and Conference on Learning Organisation (ISCLO)** jointly presented as **ICRES–ISCLO 2025**. This remarkable hybrid conference has been **organized by Telkom Corporate University, Research Synergy Foundation, and Telkom University. Co-hosted by Universitas Pendidikan Indonesia, Politeknik Manufaktur Bandung, Pascasarjana Universitas Pasundan, Big Data Lab ITB, and World Citi College, Philippines.**

The organizing committee expresses its deepest gratitude for the active engagement and enthusiastic participation of everyone across these two insightful days. All sessions—whether conducted onsite at Telkom Corporate University Campus or through virtual rooms—were carried out smoothly, enriched with high-quality presentations, thoughtful discussions, and excellent coordination from all committees, speakers, moderators, and participants.

This year’s conference has highlighted the importance of integrating **digital innovation, organizational agility, and strategic collaboration** to navigate the complexities of today’s interconnected world. The diverse research contributions presented throughout ICRES–ISCLO 2025 demonstrate how interdisciplinary approaches can shape the future of business, technology, and learning organizations.

The knowledge-sharing and constructive dialogues we witnessed reflect our shared commitment to advancing research that supports transformation, resilience, and global connectivity. These insightful exchanges not only deepen our understanding of emerging technologies and organizational development but also spark new opportunities for international collaboration—bridging academia, industry, government, and global learning communities.

Beyond the academic sessions, ICRES–ISCLO 2025 has served as a vibrant platform for building professional networks and strengthening partnerships across institutions in Indonesia and around the world. We are confident that the relationships formed and the ideas exchanged during this conference will continue to grow, fostering meaningful impact long after the event concludes.

On behalf of the organizing committee, I extend my heartfelt appreciation to our distinguished keynote speakers, reviewers, session chairs, presenters, and all participants for your invaluable contributions. I also express sincere gratitude to the entire committee team for their dedication and tireless efforts in ensuring the success of ICRES–ISCLO 2025.

Thank you once again for your active participation and commitment. We look forward to welcoming you to our future conferences and continuing this collaborative journey together. Until then, I wish you continued success in your research, professional endeavors, and contributions to global knowledge.

Best regards,

***Dr. Muhammad Subhan Iswahyudi, S.T., M.Eng.***

Conference Chair of ICRES-ISCLO

# Future Events

Connecting **I**deas,  
Strengthening **C**ontributions.

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***IHSATEC 2025: 18th HASIB***

The International Halal Science and Technology Conference 2025 (IHSATEC): 18<sup>th</sup> Halal Science Industry and Business (HASIB)

<https://www.ihsatec.com/>

Hybrid Conference, Bangkok, Thailand –

December 18-19, 2025

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***ICISMA***

International Conference on the Synergy of Islamic and Multidisciplinary Approaches (ICISMA)

<https://icisma.com/>

Virtual Conference - February 11-12, 2026

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***11th RESBUS***

11th International Conference on Interdisciplinary Research on Education, Economic Studies, Business and Social Science (11<sup>th</sup> RESBUS)

<https://resbusconference.com/>

Virtual Conference - February 24, 2026

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***10th ESBEM***

10th International Conference on Entrepreneurship Studies, Business, Economy, and Management Science (10<sup>th</sup> ESBEM)

<https://esbem.com/>

Virtual Conference - March 10, 2026

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***12th BEMSS***

12th International Conference on Business, Economy, Management and Social Studies Towards Sustainable Economy (12<sup>th</sup> BEMSS)

<https://www.bemssconference.com/>

Virtual Conference - April 22, 2026

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***10th IBEMS***

The 10th International Conference on Interdisciplinary Business, Economy, Management, and Social Studies (10<sup>th</sup> IBEMS)

<https://www.ibemsconference.com/>

Hybrid Conference - July 3, 2026

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***11th MASOS***

11th International Conference on Management Studies and Social Science (11<sup>th</sup> MASOS)

<https://www.masosconference.com/>

Virtual Conference - August 11, 2026

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***2nd ICBAS***

2nd International Conference on Business and Administrative Sciences Research (2<sup>nd</sup> ICBAS)

<https://icbasconference.com/>

Hybrid Conference - September 21-22, 2026

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***7th MESS***

7th International Conference on Management, Education, and Social Science (7<sup>th</sup> MESS)

<https://messconference.com/>

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