

# Program Book

## Information Systems International Conference (ISICO) 2019

July 23 – 24, 2019  
Bumi Surabaya Resort, Indonesia



Role of Information  
Systems in Industry 4.0



## PREFACE

Dear Participants,

Welcome to the Information Systems International Conference (ISICO) 2019!

Thank you for participating in this conference. ISICO is a biannual international conference organized by the Department of Information Systems, Institut Teknologi Sepuluh Nopember (ITS). We are proud to announce that this year is the fifth succession of this conference where we gain more supports from partners and communities, i.e. Universitas International Semen Indonesia, Asosiasi Cloud Computing Indonesia, Academic-Computer Security Incident Response Team.

Following our endless commitment to provide the best services to participants, this year ISICO invites outstanding speakers: Prof. Michael Rosemann—a prominent scholar in Business Process Management, Prof. Hyerim Bae—an expert in Big Data Analytics, Prof. Robert M. Davison—an expert in ICT for developing countries and Dr. Torsten Reiners—a specialist in Logistics and Supply Chain Management.

Thank you for your contribution and we hope you enjoy the conference.

Yours truly,

Conference Chair of ISICO 2019

**Nur Aini Rakhmawati, PhD.**

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## OUR KEYNOTE SPEAKERS

### **Prof. Michael Rosemann, PhD, FACS, FQA, MAICD**

*Professor and Head of the Information Systems School, Science and Engineering Faculty, Queensland University of Technology (QUT), Brisbane, Australia*



### **Keynote's Title: The Entire New Challenges, and Opportunities for BPM**

#### **Abstract:**

Business Process Management is conducted in the context of a larger economic environment, fast moving demographic and societal changes, technological innovation and entire paradigm shifts. This keynote will look back and forward by characterizing the requirements, achievements, but in particular upcoming challenges and opportunities for BPM in four stages, i.e. engineering excellence, corporate excellence, customer excellence and societal excellence. As most BPM activities in practice and academia are still in stage 2, there will be a number of exciting and rewarding pathways for researcher who like to make rigorous, high impact contributions in an increasingly opportunity-rich environment.

#### **Short Biography:**

Dr Michael Rosemann is Professor for Information Systems and the Executive Director, Corporate Engagement, at Queensland University of Technology. For seven years, he has been the Head of QUT's Information Systems School, a time during which he established the Woolworths Chair in Retail Innovation, the Brisbane Airport Chair in Airport Innovation and the PwC Chair in Digital Economy.

Passionate about innovative, inter-disciplinary and applied BPM, his work has among others initiated research in the areas of quality of process modelling, configurable process modelling, context-aware BPM, BPM maturity, systemic process innovation, rapid process redesign (NESTT) and ambidextrous BPM.

Michael is the author/editor of seven books, more than 280 refereed papers, Editorial Board member of ten international journals and co-inventor of US patents. His publications have been translated into Russian, Mandarin, German and Portuguese. His research projects received funding from industry partners such as Accenture, Infosys, PwC, Rio Tinto, SAP and Woolworths. Michael provides advice to senior executives from diverse industries such as telecommunication, finance, insurance, professional services, utility, retail, public sector, logistics and the film industry.

Michael is also the Honorary Consul for Germany in South-East Queensland and created in this role the David meets Goliath series, the Australian-German Start-up Hub Summit and the Brisbane German Week

## **Prof. Hyerim Bae**

*Professor in the Industrial Engineering Department at Pusan National University (PNU), South Korea*



**Keynote's Title: AI and Big data for Process Analytics in Manufacturing and Logistics Industry**

### **Abstract:**

Recent interest in Industry 4.0 has highlighted the importance of activities to discover patterns and find hidden knowledge in the manufacturing and logistics industries. In particular, this trend has been accelerated with the introduction of smart technologies such as IoT, Cloud computing, and AI, because the introduction of this technology facilitates the collection of a large amount of data that is generated during the execution of processes. The goals of these activities are to innovate processes and increase productivity by identifying and improving process-level problems through the analysis of Big Data. In this presentation, a new approach, process analytics, to improve productivity by discovering process-related knowledge, solving problems and predicting KPI from operational Big Data will be discussed. In the presentation, the analytical activities are based on event log data and process model discovered, which discriminate the approach from conventional analytic methodologies. Some case studies in the field of manufacturing and logistics industry will be introduced for a better understanding of our approach. The future direction of process analytics method will also be discussed.

### **Short Biography:**

Hyerim Bae is a professor in the Industrial Engineering Department at Pusan National University (PNU), Korea. He received PhD, MS, and BS degrees from the Industrial Engineering Department, Seoul National University (SNU), Korea. He had been a manager of information strategic planning team at Samsung Card Corporation before he joined PNU. He has been an executive chair of AP – BPM Steering Committee since September 2012, committee chair of Busan Global Data Hub Center since July 2014 and a member of advisory board for Busan Metropolitan City, since September 2016. He was recently a visiting scholar at the Georgia Institute of Technology from March 2016 to February 2017. Currently, Prof. Bae is leading BAB – Best of Big Data Analytics project which is an open source operational big data analysis tool.

### **Prof. Robert M. Davison**

*Professor of Information Systems, City University of Hong Kong*



### **Keynote's Title: Responsible IS Research for a Better World**

#### **Abstract:**

In this keynote, I will examine some critical issues relating to the impact that our research has. Historically, we have tended to examine impact through the lens of impact factors and citation counts. However, research assessment exercises in various countries are now pushing us to examine the impact that our research has on specific non-academic actors. I link these new initiatives to the notion that we should seriously consider the moral obligation to make the world a better place, not only for corporate shareholders but also for ordinary citizens. Further, we should not forget the natural world and its ecosystems upon which we depend for life. Achieving these objectives requires that we go beyond impact and also consider the value that our research brings. I will provide examples of research that measures up to such standards of responsibility and will also consider the dark side of IS research that may be more problematic. I will explore some principles for responsible research that may enlighten or annoy researchers and attempt to link these principles to the

conference theme, Industry 4. I hope that these will help to ensure that Industry 4 is a force for good in the world.

### **Short Biography:**

Robert Davison is a Professor of Information Systems at the City University of Hong Kong. His research focuses on the use and misuse of information systems, especially with respect to problem solving, guanxi formation and knowledge management, in Chinese organizations. He has published over 90 articles in a variety of journals such as MIS Quarterly, the Information Systems Journal, IT & People, Journal of IT, Journal of the AIS, Journal of the American Society for Information Science & Technology, IEEE Transactions on Engineering Management, Decision Support Systems, Communications of the AIS, and Communications of the ACM. Robert chairs the IFIP WG 9.4 (Social Implications of Computing in Developing Countries) and is the Editor-in-Chief of the Information Systems Journal and the Electronic Journal of Information Systems in Developing Countries. Robert travels extensively, seeking to understand how people in different contexts and cultures make sense of their lives with IS. As a researcher and as an editor, he seeks to promote both an inclusive and a local perspective to research. Home Page: <http://www.is.cityu.edu.hk/staff/isrobert>.

### **Dr. Torsten Reiners**

*Senior Lecturer in Logistics and Supply Chain Management at the Curtin University, Australia*



**Keynote's Title: Industry 4.0: Trends, Opportunities, Impacts, Risks**

### **Abstract:**

Talking to industry stakeholders, I received either pure excitement about a paradigm shift that is the solution to all their problems or a shrug of the shoulders about the next buzzword they will pass to see what is really relevant after the hype. The keynote is about taking a broader look at Industry 4.0 and the potential impact it can have on all player in the supply chain, including the consumer. Talking about the opportunities given by a sustainable integration; i.e. looking at the Triple Bottom Line, but also the risks to keep in mind when we believe to find all the answers in Big Data.

The keynote will depict some case to take a glimpse in how Industry 4.0 can benefit us and where we still have challenges that need to be addressed. Topics covered in the presentation are mixed reality, digital twins, digital ecosystems, deception, AI, corporate social responsibility, automation, society.

### **Short Biography:**

Dr Torsten Reiners is a project leader on the OLT Grant (2012) “Development of an authentic training environment to support skill acquisition in Logistics & Supply Chain Management” and participated in VirtualPREX (ALTC grant, lead is Sue Gregory). He participated in multiple projects to use 3D spaces for learning support; i.e. to improve the authenticity of learning in classes about production and simulation as well as developing a theoretical framework for authentic and immersive education with gamified elements. Recent research interests include disruptive technology in the supply chain, the relation of deception and sustainability on the impact on consumer, event studies on the impact of sustainability practice implementations, and big data analytics. The over 100 publications include published journal articles in reputable journals; i.e. European Journal of Operation Research, International Journal of Production Economics, Journal of Business Research, International Journal of Logistics Research and Applications, and Transportation Research Part E: Logistics and Transportation Review.



# CONFERENCE SCHEDULE

Venue: Bumi Surabaya City Resort

## DAY 1 (TUESDAY – JULY 23, 2019)

TIME (GMT+7)	SESSIONS	ROOM
08:00 – 09:00	<b>Registration</b>	Isyana Ballroom
09:00 – 09:30	<b>Opening Ceremony</b> <ul style="list-style-type: none"> <li>• <i>Welcome speech by the Chairman of ISICO: Nur Aini Rakhmawati</i></li> <li>• <i>Opening speech by the Rector of ITS: Prof. M. Ashari</i></li> <li>• <i>A Tribute: Traditional Remo Dance</i></li> </ul>	Isyana Ballroom
09:30 – 10:45	<b>Keynote Session I:</b> Prof. Hyerim Bae – Professor in the Industrial Engineering Department at Pusan National University (PNU), Korea <b>“AI and Big data for Process Analytics in Manufacturing and Logistics Industry”</b>	Isyana Ballroom
10:45 – 12:00	<b>Keynote Session II:</b> Prof. Robert M. Davison – Professor of Information Systems, City University of Hong Kong <b>“Responsible IS Research for a Better World”</b>	Isyana Ballroom
12:00 – 13:00	<b>Break and Lunch</b>	Lunch: Hotel Bumi Restaurant, Ground Level
13:00 – 15:00	<b>Presentation Sessions</b>	Breakout Rooms (see the presentation schedule)
15:00 – 15:30	<b>Break</b>	
15:30 – 17:00	<b>Presentation Sessions</b>	Breakout Room 1 – 6 (see the presentation schedule)
	<b>Special Track Session</b>	
18:30 – 21:00	<b>Dinner</b> <ul style="list-style-type: none"> <li>• <i>Best Paper Award Bestowal</i></li> <li>• <i>Dance and Performance</i></li> <li>• <i>Quizzes and Door Prizes</i></li> </ul>	Isyana Ballroom

**DAY 2 (WEDNESDAY – JULY 24, 2019)**

TIME (GMT+7)	SESSIONS	ROOM
08.30 – 09:45	<b>Keynote Session III:</b> Prof. Michael Rosemann, PhD, FACS, FQA, MAICD – Professor and Head of the Information Systems School, Science and Engineering Faculty, Queensland University of Technology (QUT), Brisbane, Australia <b>“The Entire New Challenges, and Opportunities for BPM”</b>	Isyana Ballroom
09:45 – 11:00	<b>Keynote Session IV:</b> Dr. Torsten Reiners – Senior Lecturer in Logistics and Supply Chain Management at the Curtin University, Australia <b>“Industry 4.0: Trends, Opportunities, Impacts, Risks”</b>	Isyana Ballroom
11:00 – 12:00	<b>Presentation Sessions</b>	Breakout Rooms (see the presentation schedule)
	<b>Special Sessions</b>	
12:00 – 13:00	<b>Break and Lunch</b>	Lunch: Function Room (in front of Isyana Ballroom)
13:00 – 15:00	<b>Presentation Sessions</b>	Breakout Room 1 – 6 (see the presentation schedule)
15:00 – 15:30	<b>Break</b>	
15:30 – 17:00	<b>Presentation</b>	Breakout Rooms (see the presentation schedule)
	<b>Special Sessions</b>	
17:00 – 17:30	<b>Closing Ceremony</b>	Isyana Ballroom

**SPECIAL SESSION FOR BLOCKCHAIN WORKSHOP\*  
WEDNESDAY – JULY 24, 2019**

TIME (GMT+7)	SESSIONS	ROOM
08:45 – 09.00	<b>Registration</b>	Trowulan I Room
09:00 – 12:00	<b>Workshop:</b> Concept and Theory	Trowulan I room

TIME (GMT+7)	SESSIONS	ROOM
12:00 – 13:00	<b>Break and Lunch</b>	Lunch: Function Room (in front of Isyana Ballroom)
13:00 – 16:00	<b>Workshop:</b> Installation and Practice	Trowulan I Room

*\*) This session is only intended for participants who have registered to join the workshop.*

**Notes:**

The venue also provides medical room and prayer room. Please ask the registration desk regarding the location.



## PRESENTATION SCHEDULE (BY PAPER ID)

TUESDAY - JULY 23, 2019							
ROOM	AIRLANGGA	GAJAHMADA	WIJAYA	TROWULAN 1	TROWULAN 2	TROWULAN 3	TRIBUANA
TRACK			MIS	BIG DATA	ENTERPRISE SYSTEMS	DATA ANALYTICS	IT INFRASTRUCTURE & SECURITY
13:00 - 13:15			148	5			11
13:15 - 13:30			9	42			13
13:30 - 13:45			143	52			162
13:45 - 14:00			18	69			53
14:00 - 14:15			20	72			60
14:15 - 14:30			23	83			78
14:30 - 14:45			24	87			161
14:45 - 15:00			192	104			32
15:00 - 15:15			150	188			193
15:15 - 15:30							
TRACK		CHALLENGE TRACK: CLOUD COMPUTING	MIS	BIG DATA	ENTERPRISE SYSTEMS	DATA ANALYTICS	SPECIAL TRACK: CYBER SECURITY
15:30 - 15:45		36	28	117	12	6	90
15:45 - 16:00		54	33	118	22	31	68
16:00 - 16:15		66	35	119	165	15	70
16:15 - 16:30			41	123	173	91	111
16:30 - 16:45			44	152	89	200	
16:45 - 17:00					67	201	

WEDNESDAY - JULY 24, 2019							
ROOM	AIRLANGGA	GAJAHMADA	WIJAYA	TROWULAN 1	TROWULAN 2	TROWULAN 3	TRIBUANA
TRACK	MIS	ENTERPRISE SYSTEMS	SPECIAL TRACK: BPM		DATA ANALYTICS	DATA ANALYTICS	SPECIAL TRACK: IOT
11:00 - 11:15	61	56	101		57	158	16
11:15 - 11:30	80	95	126		58	163	37
11:30 - 11:45	114	140	170		82	164	39
11:45 - 12:00	130	147	172		84	184	40
TRACK	MIS	ENTERPRISE SYSTEMS	SPECIAL TRACK: BPM		DATA ANALYTICS	DATA ANALYTICS	SPECIAL TRACK: IOT
13:00 - 13:15	134	45	180		26	7	59
13:15 - 13:30	141	171	191		96	55	63
13:30 - 13:45	142	50	195		100	204	85
13:45 - 14:00	10	176	197		105	110	86
14:00 - 14:15	153	179			106	186	94
14:15 - 14:30	156	183			108	4	121
14:30 - 14:45	159	190			120	127	
14:45 - 15:00	160	194			132	207	
TRACK	MIS	BIG DATA	MIS		DATA ANALYTICS	MIS	SPECIAL TRACK: CYBER SECURITY + IT INFRASTRUCTURE & SECURITY
15:30 - 15:45	166	157	181		136	174	107
15:45 - 16:00	167	196	182		138	175	135
16:00 - 16:15	168	202	185		144	115	112
16:15 - 16:30	169	155	25		145	199	113
16:30 - 16:45	206		177		149	208	124
16:45 - 17:00			178		151	88	81
17:00 - 17:15							189

TIME (GMT+7)	ID	Paper Title	Author(s)
13:45 - 14:00	176	Analysis of Greenhouse Gas Emissions Mitigation: A System Thinking Approach (Case Study: East Java)	Andriyan Rizki Jatmiko, Erma Suryani, Dhyna Octabriyantiningtyas
14:00 - 14:15	179	Influence of Inventory Changes to Bullwhip Effect on Private Industrial Network	Mudjahidin, Lukman Junaedi, Andre Parvian Aristio, Yudha Andrian Saputra
14:15 - 14:30	183	Testing Methods in System Dynamics: A Model of Reliability, Average Reliability, and Demand Of Service	Mudjahidin, Rully Agus Hendrawan, Andre Parvian Aristio, Joko Lianto Buliali, Muhammad Nur Yuniarto
14:30 - 14:45	190	The Impact of Social Media Usage on the Sales Process in Small and Medium Enterprises (SMEs): A Systematic Literature Review	Nanda Kurnia Wardati, Mahendrawathi ER
14:45 - 15:00	194	Behavioural Similarity Measurement of Business Process Model to Compare Process Discovery Algorithms Performance in Dealing with Noisy Event Log	Ifrina Nuritha, Mahendrawathi ER

ROOM : GAJAHMADA  
DAY/SESSION : 2/3  
TRACK : BIG DATA

TIME (GMT+7)	ID	Paper Title	Author(s)
15:30 - 15:45	157	New Filtering Scheme Based on Term Weighting to Improve Object Based Opinion Mining on Tourism Product Reviews	Ahimsa Denhas Afrizal, Nur Aini Rakhmawati, Aris Tjahyanto
15:45 - 16:00	196	Knowledge Representation for Infectious Disease Risk Prediction System: A Literature Review	Retno Aulia Vinarti
16:00 - 16:15	202	Integration of Crowdsourcing into Ontology Relation Extraction	Eunike Andriani Kardinata, Nur Aini Rakhmawati
16:15 - 16:30	155	Open Data Visual Analytics to Support Decisions on Physical Investments	Meditya Wasesa, M. Mashuri, Putri Handayani, Utomo S. Putro

### Abstract:

As a model used to simulate policies by creating scenarios, system dynamics must have similarities with real systems. Therefore, the system dynamics model should test so declare as the right model and representing the behaviour of a system. Thus, in this article, we propose three test methods to ensure the system dynamics model have appropriate structure, correct value according to the specified equation, and can use to establish the parameter of the model. We study articles to propose the testing methods (the structural testing, algorithms testing, and behavioural testing) and present the case study about reliability, average reliability, and its affected demands. In this article, we prove that the testing methods can be used to show the system dynamics model appropriates and represents the real system, all computation generated by the simulation output is proper to the specified equation and can use to choose the best parameter.

### Keywords:

System dynamics; Testing method; structural testing; algorithms testing; behavioral testing.

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### PAPER ID: 190

## **The Impact of Social Media Usage on the Sales Process in Small and Medium Enterprises (SMEs): A Systematic Literature Review**

Nanda Kurnia Wardati, Mahendrawathi ER

Email: [nandakurniawardati@gmail.com](mailto:nandakurniawardati@gmail.com)

### Abstract:

The dramatic growth of the internet has led to the emergence of two important phenomena: social media and online search engines. In business context, social media is a new communication channel between the companies including SMEs and customers, which allows them to interact directly. This study aims to conduct an analysis of the impact of social media usage on the sales process in SMEs. The method used in this study is Systematic Literature Review (SLR). The method is carried out by reviewing several journals that discuss about related research topics. The results of this study identified similar impacts of social media use in SMEs across different countries. The use of social media depends on the type of industry and the type of social media used in accordance with SMEs business objectives. The impact obtained is mostly related to customers, stakeholders, business partners and competitors. However, the impact produced in this study is still general. Therefore, further research needs to be done to gain more insights on the drivers of social media use in SMEs and their impact on the performance of SMEs.

### Keywords:

Social Media; Small and Medium Enterprises; Sales; Marketing.

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### PAPER ID: 194

## **Behavioural Similarity Measurement of Business Process Model to Compare Process Discovery Algorithms Performance in Dealing with Noisy Event Log**

Ifrina Nuritha, Mahendrawathi ER

Email: [mahendrawathi.er@gmail.com](mailto:mahendrawathi.er@gmail.com)

### Abstract:

Process discovery algorithms have different strength and weakness to find the most suitable model. The five process discovery algorithms will be compared in this research such as Alpha, Heuristic Miner, Duplicate Genetic, Genetic, and Inductive Miner, to get the recommendation

# COMMITTEE

## Steering Committee

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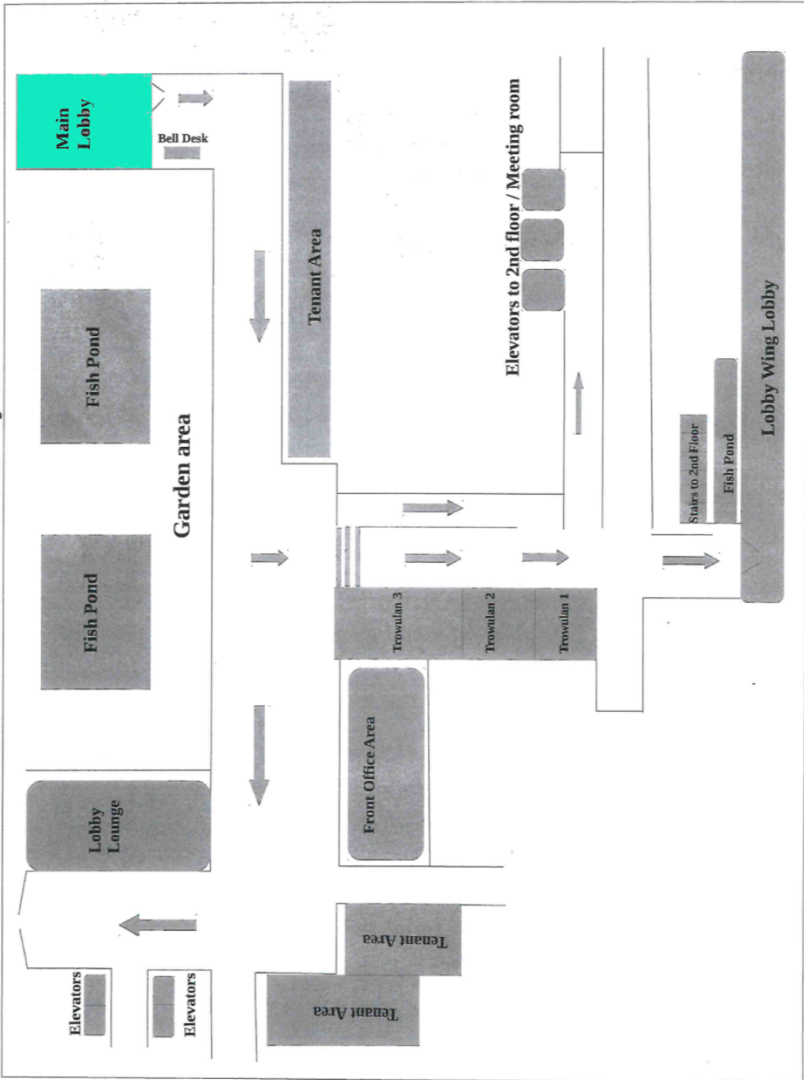
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Dr. Yusina Mansoor (*International Islamic University Malaysia, Malaysia*)  
Dr. Zuraini Ali Shah (*Universiti Teknologi, Malaysia*)

# VENUE MAP

## Floor Plan Lobby Area





# ABOUT US

Established in 2001, the Information Systems Department currently managed two Study Programs: Bachelor (S1) and Master (S2) in Information Systems. The undergraduate study program is accredited A from Indonesia Higher Education National Accreditation Board (BAN PT), while the master study program is accredited B. In addition to national accreditation, the Information Systems Department has obtained ASEAN University Network (AUN) certification.

Both the Bachelor and Master Program in Information Systems are carried out with a credit system (semester credit unit). The Bachelor of Information Systems Program consists of 144 credits and is designed to provide students with relevant competencies required for a career as:

- Information and Data Engineer
- Systems Analyst
- Project Manager
- Business Analyst
- IT Business Initiator

A master program student took at least 36 credits including 28 credits of taught courses and 8 credits master's thesis. The master program is scheduled to be completed in 4 semesters.

Recently relocated to the centre of Institut Teknologi Sepuluh Nopember main campus, the department has five research laboratories namely: Data Acquisition and Information Dissemination, Data Engineering and Business Intelligence, System and Information Technology Infrastructure, Management of Information Systems and Enterprise Systems.

In 2019 Academic Year, the Information Systems Department also offers an International Undergraduate Program (also known as IUP). IUP is a bachelor program that implements English as the language of instruction. The program offers regular undergraduate curriculum and provides opportunities for students to take part in international activities in the form of:

1. Study excursion

2. Internship in an international or multinational company
3. Student exchange
4. Summer/short course
5. Joint degree

We currently have active collaboration with several partner universities including Pusan National University (PNU), Hankuk University of Foreign Studies (HUFS), National Taiwan University of Science and Technology (NTUST), National Chen Kung University (NCKU), King Mongkut University of Technology Thonburi (KMUTT) and Fontys University.

We are eager to expand our networks and are open for academic collaboration in the forms of joint or dual degree, student and staff exchanges and internship as well as research partnership.

For more information about the department please contact:  
[sisteminformasi@its.ac.id](mailto:sisteminformasi@its.ac.id).

### **Information Systems Department**

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# The Impact of Social Media Usage on the Sales Process in Small and Medium Enterprises (SMEs): A Systematic Literature Review

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## Abstract

The dramatic growth of the internet has led to the emergence of two important phenomena: social media and online search engines. In business context, social media is a new communication channel between the companies including SMEs and customers, which allows them to interact directly. This study aims to conduct an analysis of the impact of social media usage on the sales process in SMEs. The method used in this study is Systematic Literature Review (SLR). The method is carried out by reviewing several journals that discuss about related research topics. The results of this study identified similar impacts of social media use in SMEs across different countries. The use of social media depends on the type of industry and the type of social media used in accordance with SMEs business objectives. The impact obtained is mostly related to customers, stakeholders, business partners and competitors. However, the impact produced in this study is still general. Therefore, further research needs to be done to gain more insights on the drivers of social media use in SMEs and their impact on the performance of SMEs.

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*Keywords:* Social Media; Small and Medium Enterprises; Sales; Marketing

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## 1. Introduction

Small and Medium Enterprises (SMEs) are important components of many countries in the world. This is because of their contribution in creating jobs and facilitating regional development and innovation, which have a positive

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impact on the country's economic status [1]. SMEs face new challenges in the current competitive scenario, which is characterized by the increasing variation and uncertainty in market demand and strong competition brought about by the globalization process. On one hand, SMEs have limitations in terms of finance, human resources, and organizational resources, which makes the company very vulnerable in the market. On the other hand, there are ways that can be used to improve SMEs in terms of expanding networks in new markets to overcome company limitations, pursue access to external resources, and to develop product innovations. This capacity seems to be supported by the adoption of information and communication technology, which affect sales performance [2].

In the past two decades, internet innovation has played an important role in business performance [3]. The dramatic growth of the internet has led to the emergence of two important phenomena: social media and online search engines. In business context, social media is a new communication channel between companies and customers that allows them to interact directly [4]. Social media is an effective virtual world for accessing reliable and updated information [3]. Social media also allows open communication that can help companies in understanding customer needs and motivate them to respond proactively and efficiently to customer needs [5]. The growth and various social media usage have encouraged SMEs to realize their ambitions to market their products, brands or services more easily and widely [6].

The number of social media users continues to increase every year. Furthermore, not only the users, various types of platforms on social media also continue to increase. Social media is a part of daily life to communicate and share information. This has changed consumer behavior and is a concern that must be addressed by companies. Strategies and tools for companies to interact with customers have changed dramatically with the advent of social media. Different social media platforms have become a natural part for the company to carry out marketing strategies, especially in small and medium enterprises (SMEs) [7].

In general, social media offers various benefits and opportunities for companies since it helps in attracting new customers and maintaining relationships with existing customers. In addition, social media can also be used to enhance collaboration with customers, which in turn may accelerate innovation [8]. According to an industry social media report, 86% of marketers believe that social media channels are an important component of their marketing initiatives. Social media allows companies to engage directly with end consumers at relatively low costs and a higher level of efficiency than is achieved by traditional communication tools. Companies have started embracing social media for various marketing purposes; including branding, research, customer relationship management, services, and sales promotions. From these various objectives, most companies use social media for branding. In addition, marketing through social media can positively affect a company's reputation [9]. By using social media, customers have access to various shared information sources from other customers in terms of experience and recommendations [3].

Based on the explanation above, the existence of social media has indeed been acknowledged by various communities, especially for SMEs. Social media can also be classified with various functionalities. This research described seven blocks of classification of social media functionality, including identity, conversations, sharing, presence, relationships, reputation, and groups [10]. Each type of social media with its respective functionality certainly has a varied impact if applied to SMEs. So, it needs an in-depth study of what social media has been used by SMEs and how it impacts SMEs. So far, there has been no research that has conducted the study which can be used as a reference for research.

## 2. Methodology

Research on the impact of social media usage on SMEs is not a new study. Some previous studies examined the factors that influence social media usage in SMEs and how SMEs succeed in utilizing social media for their business interests. However, there have not been a thorough study that examine the current findings related to social media impact on the sales process in SMEs. This study aims to answer the following research question **“What is the impact of social media on the sales process in SMEs?”**

The method used in this literature review is Systematic Literature Review (SLR). The first thing that need to be done in this SLR is to collect previous research literatures as a source in getting research results. Literature search was conducted using two database sources, namely:

- a. Emerald Insight on the link (<https://www.emeraldinsight.com/>)
- b. Science Direct on the link (<https://www.sciencedirect.com/>)



From the two databases the same keywords are used to search for the researches. However, the extraction is different since each database has different search method. Science Direct is more flexible, in which users can freely type keywords according to the coding rules that have been determined by science direct. In addition, in science direct the searches can also be performed based on more than one section, for example, researcher may combine titles, abstracts and keywords. It's different from the search conducted in Emerald Insight database. In this database, expert search can only be performed based on one part such as abstract, title or keyword.

The stages in the literature selection process were carried out are as follows:

- Searching for literature on the database with relevance based on the suitability of keywords with the title, in addition to the conditions specified in the plan.
- Performing literature elimination on those that do not meet inclusion criteria and meet exclusion criteria.
- Reading abstracts from each literature whose title meets the conditions. Elimination was then performed based on abstract relevance.
- Evaluating the literature by reading it in its entirety and evaluating its quality.
- Selecting literatures that pass the evaluation phase.

The literature search stage was carried out by searching using certain keywords in terms of certain sections, according to abstracts, titles or keywords in the journal. Literature search was performed using following keywords:

- In Science Direct database, journals search process used expert search by writing keywords: **“social media” OR “SM” AND “small medium enterprises” OR “SME's” AND “sales” OR “marketing”**.
- In Emerald Insight database, journals search process used Boolean search considering the content of the keywords: **ABSTRACT “social media” OR ABSTRACT “SM” AND ABSTRACT “small medium enterprises” OR ABSTRACT “SME's” AND ABSTRACT “sales” OR ABSTRACT “marketing”**.

The number of journals produced at each search stage and the final journal selection results are shown in Table 1.

Table 1. The number of journals from search results.

No.	Criteria	Science Direct	Emerald Insight (Abstract)
1	Corresponding with entered keywords	1201	1359
2	Journal/article received	213	545
3	Published in 2017-2018	73	241
4	Keywords correspond with the title, abstract, and keyword	17	19
5	Abstract is appropriate to answer the problem formulation in this study	11	13

The next stage performed to narrow down the review to more relevant literature is application of inclusion and exclusion criteria. Inclusion criteria are criteria for journals that will be used as material for review literature, while the exclusion criteria are the criteria of a journal that will be eliminated as a literature material. The inclusion criteria used in this study are as follows:

- The literature reviewed is a paper journal
- The journal examines the social media usage in SMEs
- The research was published in 2017 until 2018
- The literature is in English
- The paper journal is indexed (Q1 and Q2)

The exclusion criteria used in this study are as follows:

- The literature is not related to the topic of using social media in SMEs and does not correspond with research questions
- The literature is in languages that are not understood by researchers (not in English)
- The journal is published before 2017

After the literature was selected according to the inclusion and exclusion criteria, the next step is to assess each of the literature. The quality of the literature can be assessed based on the following points using the OR operation. The number of journals assessed that have suitable title, abstract and keyword is 36 journals. Of the 36 journals, re-selection would be carried out according to the values obtained. The final stage of journal selection is obtained by 24 journals. The journals were analysed to achieve deeper understanding, whether the journals correspond with the topic or formulation of the problem in this study.

The last step in the methodology is synthesizing. This stage was carried out to answer the formulation of the problem identified in the introduction. The synthesis of Systematic Literature Review (SLR) was carried out with several stages which can be seen in Fig. 1.

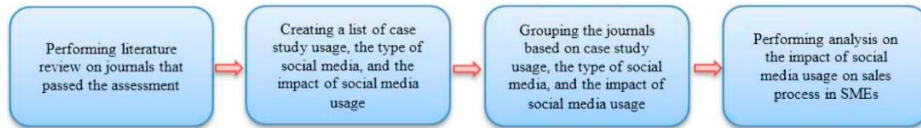


Fig. 1. Stages of synthesis.

The literature review was carried out on the journals accepted or passed the assessment stage. Of the 36 journals that were assessed, there were 24 journals that were accepted. Therefore, this systematic literature review is sourced from the 24 journals. The results of the literature review of 24 accepted journals were then listed and grouped base on the types of social media, types of industries, the impact of social media usage, and the case studies used. It aims to summarize the results of the literature review of 24 journals accepted and make it easier to understand the journals related to the formulation of the problem. The last step in this synthesis was to analyze the impact of social media usage on the sales process of SMEs. From this analysis the problem formulation in this systematic literature review (SLR) can be answered.

### 3. Results

Based on the synthesis results, there are 24 journals that are used as literature material in this study. The 24 journals used different case studies from various countries. In addition, the types of social media and the types of industries used in each journal also vary. The summary of results based on the type of industry, type of social media, and the case studies used in the 24 journals can be seen in Fig. 2.

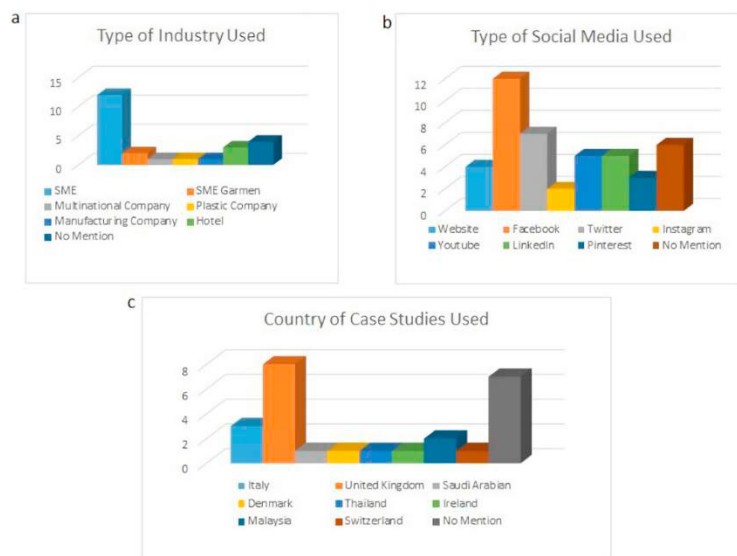


Fig. 2. (a) type of industry; (b) type of social media; (c) country of case studies.

Based on the type of industry (Fig. 2a) used in the study, most journals mention SMEs only and do not specify the specific type of SME. Fig. 2b shows that Facebook is the types of social media that are mostly investigated in the literature. This is because Facebook is a type of social media that is widely used by people and has a platform that is easy to understand. Some case studies in the literature investigated more than one social media, for example Facebook and Twitter. Most of the case studies reported in the literature are from the United Kingdom. This is because the UK has many SMEs and has utilized IT.

Social media as a communication channel helps companies to achieve different organizational goals including marketing, PR, advertising, branding, customer service, human resources and problem solving [3]. Social media is defined as a group of internet-based applications that are built on the foundation of Web 2.0 ideology and technology, which enables the creation and exchange of content created by users [11]. Social media includes various forms of online applications such as social networking sites (SNS), blogs, forums, microblogging, photo sharing, video sharing, product/service reviews, evaluation communities, and social gambling. Social media facilitates the process of sharing information and creating content by individuals. People use different online networks such as Facebook, YouTube, Wikipedia, Twitter, Instagram, TripAdvisor, online forums, rankings, and review forums to share experiences and interact with other users [3]. In social media, the interaction can be done anywhere as long as the location is reachable by the network, which allows users to continue to connect using personal mobile devices such as smartphones or tablets [7].

After performing the grouping of the literature, a more detailed analysis of social media usage on the sales process in SMEs was carried out on 24 journals that were used as research sources. The results of the impact analysis of social media usage on the sales process in SMEs can be seen in Table 2.

Table 2. The impact of social media usage on the sales process in SMEs.

Type of Industry	Type of Social Media	Country	The Impact of Social Media Usage in SMEs
SMEs	Website	United Kingdom, Denmark, Ireland, Malaysia, Italy	Improving relationships with customers [2, 5, 14]
			Improving marketing accessibility [2, 6, 8]
			Reach stakeholders [2, 14]
			Minimizing costs [5]
			Improving information accessibility [5, 6, 20, 23]
			Improving creativity [6]
			Gathering feedback from customer [6, 14]
			Expand communication with customers [8]
			Increasing income for SMEs [8, 12]
			Support sales [14]
SMEs	Facebook, Twitter, LinkedIn, Youtube, Instagram	United Kingdom, Ireland, Thailand, Switzerland	Build a corporate brand [14]
			Improving the innovation process [14, 23]
			Improving customer satisfaction [16, 20]
			Improving sales [1]
			Improving marketing [7]
Fashion or Garment	Social Network (Facebook, Twitter, Pinterest, LinkedIn)	United Kingdom, Italy	Attract new customers [7, 22]
			Improving brand satisfaction [9, 22]
			Building a network of companies [19]
			Monitor competitors and look for new business partners [19]
			Improving relationship and company ROI [13]
			Gathering feedback from customer [13, 21]

Type of Industry	Type of Social Media	Country	The Impact of Social Media Usage in SMEs
Multinational Company (MNC)	Facebook, Twitter, YouTube	Thailand	Get external insights in getting ideas for new product development [15] Improving the quality of existing products and services and add value to products [15] Improving company marketing [11]
Manufacturing Company	Not mentioning the type of Social Media	United Kingdom	Improving interaction, collaboration and networking between stakeholders [11]
Hotel	Facebook, Twitter, Pinterest, LinkedIn, Youtube, Instagram	United Kingdom, Saudi Arabian	Improving marketing effectiveness [3, 4, 24] Improving branding and innovation [3, 4, 24]

Based on the study results on the used literature, there are some impacts of social media usage on the sales process in SMEs. In the 24 papers reviewed, not all papers explain impact of social media usage on the sales process in SMEs. Some of these journals explain how to get customers from social media, how to see customer characteristics through social media, and the factors that influence success in adopting social media. Therefore, the impacts were found as results of social media usage on the sales process for SMEs according to different types of industries and different types of social media.

However, if viewed by each country, it can generally be concluded that there are similarities from the use of social media in SMEs. All depends on the type of SMEs and the type of social media used. They use social media according to the company's business goals. The impact obtained is mostly related to the SMEs sales and marketing processes, such as the relationship between the company and customers, the company with stakeholders, the company with business partners, and the company's relationship with competitors.

Social media marketing is divided into several types including social bookmarking, social networks, social streaming, social search, social knowledge, social blogging, social customer service, and social publishing [25]. Facebook, Twitter, LinkedIn, Instagram and Pinterest are part of the social network. While the website is part of social publishing. Most types of industries use social media within the scope of social networks. This is tailored to the strategies and objectives of the industry utilizing social media in the company. Furthermore, most of the industry targets in the use of social media are the wider community, so that the chosen social media is social media that can be used by all groups.

The impact of social media usage on the sales process in SMEs can increase income for SMEs in the intensive information industry (examples of television programs, films, books). However, this is not the case in primary industries (examples of agricultural, plantation, fishery products) characterized by low information intensity both in value chain information and product information [12]. Active application of social media by SMEs enables organizations to gather feedback and new ideas from various stakeholders, such as consumers, suppliers and employees. SMEs must take a more active role, revive organizational settings through online digital, social and transformational technology. With this, organizations can inspire and enhance industrial creativity and bring about the formation of entrepreneurial generations [13, 14]. Based on recent phenomena, SMEs use social media to get feedback from customers or other users. That is, SME explores information obtained through social media for their business interests. This is marketing research by gathering feedback and new ideas from various stakeholders (customers, suppliers, and employees) and turning them into products or services, so that companies can understand customer needs and create new innovations in developing products or service [13, 15]. In addition, social media usage has a very strong positive impact on organizational performance, in terms of reducing costs, improving customer relations, and increasing information accessibility. Extensive marketing through social media does not require large costs [5]. Reaching out and establishing contacts with new customers, distributors and end customers [2, 5], and getting increased visibility are also the impacts of social media usage on SMEs. By entering new markets, SMEs can develop relationships with new customers abroad, as well as reduce constraints in terms of space and time even though SMEs have limited human resources and finance [2]. For manufacturing industries, social media is used to improve marketing, interaction, collaboration, and networking between stakeholders. This kind of company needs more than one and interconnected social media. For example, a website is used to update information about a company, Facebook

is used to build relationships with customers, and online chat groups are used to discuss product or service development [11].

Social media usage implies the introduction of new resources that are used as communication tools and as innovative distribution channels. The process of selling and negotiating has been followed through e-mail and telephone contacts which can reduce the need for physical contact. The ability to use social media helps companies to make a more planned and proactive sales approach. Social media is formed by existing resources as well as by new resources that have a good influence on business relationships. Social media as a resource has displayed its effects in combination with other relevant and interconnected resources, as argued by the The Industrial Marketing and Purchasing (IMP) perspective and shown through the 4R model. First, the role of social media usage is played by entrepreneurs and sales managers. Second is the effective use of social media in sales activities. Third is the knowledge of resources regarding social media usage. Fourth is the changes in the features of interconnected resources might have an impact on the actual and potential contribution of social media as a resource [2].

The success of social media usage in the sales process in SMEs depends on the condition of the company itself. Not all SMEs have an interest in using social media. These factors can be caused by social media platforms that are difficult to use, especially by elderly entrepreneurs. This makes them reluctant to use social media and they prefer to use traditional methods [2]. The results of this literature study show that each SMEs has their own goals of social media implementation in the company. The success of social media implementation also depends on how SMEs' resources to manage social media in their business. However, some questions need to be addressed further:

- A good strategy for social media implementation will improve the performance of SMEs.  
The implementation of social media in SMEs can be supported by many factors. This depends on the business strategy and the objectives of SMEs to use social media. Analysis of the impact of social media adoption in increasing sales and sales process innovation by SMEs has been carried out by [2]. The study emphasizes that the role and impact of social media depends heavily on the nature and features of social media, as well as other resources within SMEs. Therefore, there is a need to analyse the influence of good social media strategy on the performance of SMEs.
- Alignment between social media functionalities with social media strategy can directly improve the performance of SMEs.  
Every social media has different functionalities and strategies. This is confirmed in research about the functionality of social media [10], and research on strategy social media [27]. This relationship analyzed how social media strategies that are aligned with social media used by SMEs can directly improve the performance of SMEs.
- The magnitude of social media impact on the performance of SMEs.  
In addition to implementing a good strategy in social media implementation, the results or perceived impact of social media used in SMEs also need to be known and measured. So that it can be seen how much social media contributes to the development of SMEs.

#### 4. Conclusion

This research was conducted to identify the impact of social media usage on the sales process in SMEs through Systematic Literature Review (SLR). Based on the results of studies from 24 journals, there are some impacts of social media usage. Each of these impacts is based on journals that were reviewed according to the research problem formulation. The impacts resulting from social media usage on the sales process in SMEs, among others, can improve customer relations, expand marketing at low cost, improving information accessibility by getting feedback and ideas from stakeholders, and can improve company performance. The impacts resulting from SLR mapping vary, all depending on the type of industry and the type of social media used.

This research only focuses on the impacts resulting from the use of different types of social media for the sales process in SMEs competing in different industries. In general, the impact explains in broad terms the benefits that SMEs obtained. Further research is needed to gain more insights related to the driving factors of the use of social media in several SMEs with the same type of industry and the same type of social media. Another aspect that need to be investigated is the relationship between the alignment of social media functionality and strategies with SMEs performance.

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# The Impact of Social Media Usage on the Sales Process in Small and Medium Enterprises (SMEs): A Systematic Literature Review

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Small and Medium Enterprises (SMEs) are important components of many countries in the world. This is because of their contribution in creating jobs and facilitating regional development and innovation, which have a positive

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impact on the country's economic status [1]. SMEs face new challenges in the current competitive scenario, which is characterized by the increasing variation and uncertainty in market demand and strong competition brought about by the globalization process. On one hand, SMEs have limitations in terms of finance, human resources, and organizational resources, which makes the company very vulnerable in the market. On the other hand, there are ways that can be used to improve SMEs in terms of expanding networks in new markets to overcome company limitations, pursue access to external resources, and to develop product innovations. This capacity seems to be supported by the adoption of information and communication technology, which affect sales performance [2].

In the past two decades, internet innovation has played an important role in business performance [3]. The dramatic growth of the internet has led to the emergence of two important phenomena: social media and online search engines. In business context, social media is a new communication channel between companies and customers that allows them to interact directly [4]. Social media is an effective virtual world for accessing reliable and updated information [3]. Social media also allows open communication that can help companies in understanding customer needs and motivate them to respond proactively and efficiently to customer needs [5]. The growth and various social media usage have encouraged SMEs to realize their ambitions to market their products, brands or services more easily and widely [6].

The number of social media users continues to increase every year. Furthermore, not only the users, various types of platforms on social media also continue to increase. Social media is a part of daily life to communicate and share information. This has changed consumer behavior and is a concern that must be addressed by companies. Strategies and tools for companies to interact with customers have changed dramatically with the advent of social media. Different social media platforms have become a natural part for the company to carry out marketing strategies, especially in small and medium enterprises (SMEs) [7].

In general, social media offers various benefits and opportunities for companies since it helps in attracting new customers and maintaining relationships with existing customers. In addition, social media can also be used to enhance collaboration with customers, which in turn may accelerate innovation [8]. According to an industry social media report, 86% of marketers believe that social media channels are an important component of their marketing initiatives. Social media allows companies to engage directly with end consumers at relatively low costs and a higher level of efficiency than is achieved by traditional communication tools. Companies have started embracing social media for various marketing purposes; including branding, research, customer relationship management, services, and sales promotions. From these various objectives, most companies use social media for branding. In addition, marketing through social media can positively affect a company's reputation [9]. By using social media, customers have access to various shared information sources from other customers in terms of experience and recommendations [3].

Based on the explanation above, the existence of social media has indeed been acknowledged by various communities, especially for SMEs. Social media can also be classified with various functionalities. This research described seven blocks of classification of social media functionality, including identity, conversations, sharing, presence, relationships, reputation, and groups [10]. Each type of social media with its respective functionality certainly has a varied impact if applied to SMEs. So, it needs an in-depth study of what social media has been used by SMEs and how it impacts SMEs. So far, there has been no research that has conducted the study which can be used as a reference for research.

## 2. Methodology

Research on the impact of social media usage on SMEs is not a new study. Some previous studies examined the factors that influence social media usage in SMEs and how SMEs succeed in utilizing social media for their business interests. However, there have not been a thorough study that examine the current findings related to social media impact on the sales process in SMEs. This study aims to answer the following research question **“What is the impact of social media on the sales process in SMEs?”**

The method used in this literature review is Systematic Literature Review (SLR). The first thing that need to be done in this SLR is to collect previous research literatures as a source in getting research results. Literature search was conducted using two database sources, namely:

- a. Emerald Insight on the link (<https://www.emeraldinsight.com/>)
- b. Science Direct on the link (<https://www.sciencedirect.com/>)

From the two databases the same keywords are used to search for the researches. However, the extraction is different since each database has different search method. Science Direct is more flexible, in which users can freely type keywords according to the coding rules that have been determined by science direct. In addition, in science direct the searches can also be performed based on more than one section, for example, researcher may combine titles, abstracts and keywords. It's different from the search conducted in Emerald Insight database. In this database, expert search can only be performed based on one part such as abstract, title or keyword.

The stages in the literature selection process were carried out are as follows:

- Searching for literature on the database with relevance based on the suitability of keywords with the title, in addition to the conditions specified in the plan.
- Performing literature elimination on those that do not meet inclusion criteria and meet exclusion criteria.
- Reading abstracts from each literature whose title meets the conditions. Elimination was then performed based on abstract relevance.
- Evaluating the literature by reading it in its entirety and evaluating its quality.
- Selecting literatures that pass the evaluation phase.

The literature search stage was carried out by searching using certain keywords in terms of certain sections, according to abstracts, titles or keywords in the journal. Literature search was performed using following keywords:

- In Science Direct database, journals search process used expert search by writing keywords: **“social media” OR “SM” AND “small medium enterprises” OR “SME's” AND “sales” OR “marketing”**.
- In Emerald Insight database, journals search process used Boolean search considering the content of the keywords: **ABSTRACT “social media” OR ABSTRACT “SM” AND ABSTRACT “small medium enterprises” OR ABSTRACT “SME's” AND ABSTRACT “sales” OR ABSTRACT “marketing”**.

The number of journals produced at each search stage and the final journal selection results are shown in Table 1.

Table 1. The number of journals from search results.

No.	Criteria	Science Direct	Emerald Insight (Abstract)
1	Corresponding with entered keywords	1201	1359
2	Journal/article received	213	545
3	Published in 2017-2018	73	241
4	Keywords correspond with the title, abstract, and keyword	17	19
5	Abstract is appropriate to answer the problem formulation in this study	11	13

The next stage performed to narrow down the review to more relevant literature is application of inclusion and exclusion criteria. Inclusion criteria are criteria for journals that will be used as material for review literature, while the exclusion criteria are the criteria of a journal that will be eliminated as a literature material. The inclusion criteria used in this study are as follows:

- The literature reviewed is a paper journal
- The journal examines the social media usage in SMEs
- The research was published in 2017 until 2018
- The literature is in English
- The paper journal is indexed (Q1 and Q2)

The exclusion criteria used in this study are as follows:

- The literature is not related to the topic of using social media in SMEs and does not correspond with research questions
- The literature is in languages that are not understood by researchers (not in English)
- The journal is published before 2017

After the literature was selected according to the inclusion and exclusion criteria, the next step is to assess each of the literature. The quality of the literature can be assessed based on the following points using the OR operation. The number of journals assessed that have suitable title, abstract and keyword is 36 journals. Of the 36 journals, re-selection would be carried out according to the values obtained. The final stage of journal selection is obtained by 24 journals. The journals were analysed to achieve deeper understanding, whether the journals correspond with the topic or formulation of the problem in this study.

The last step in the methodology is synthesizing. This stage was carried out to answer the formulation of the problem identified in the introduction. The synthesis of Systematic Literature Review (SLR) was carried out with several stages which can be seen in Fig. 1.

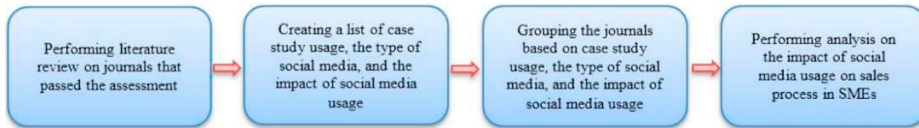


Fig. 1. Stages of synthesis.

The literature review was carried out on the journals accepted or passed the assessment stage. Of the 36 journals that were assessed, there were 24 journals that were accepted. Therefore, this systematic literature review is sourced from the 24 journals. The results of the literature review of 24 accepted journals were then listed and grouped base on the types of social media, types of industries, the impact of social media usage, and the case studies used. It aims to summarize the results of the literature review of 24 journals accepted and make it easier to understand the journals related to the formulation of the problem. The last step in this synthesis was to analyze the impact of social media usage on the sales process of SMEs. From this analysis the problem formulation in this systematic literature review (SLR) can be answered.

### 3. Results

Based on the synthesis results, there are 24 journals that are used as literature material in this study. The 24 journals used different case studies from various countries. In addition, the types of social media and the types of industries used in each journal also vary. The summary of results based on the type of industry, type of social media, and the case studies used in the 24 journals can be seen in Fig. 2.

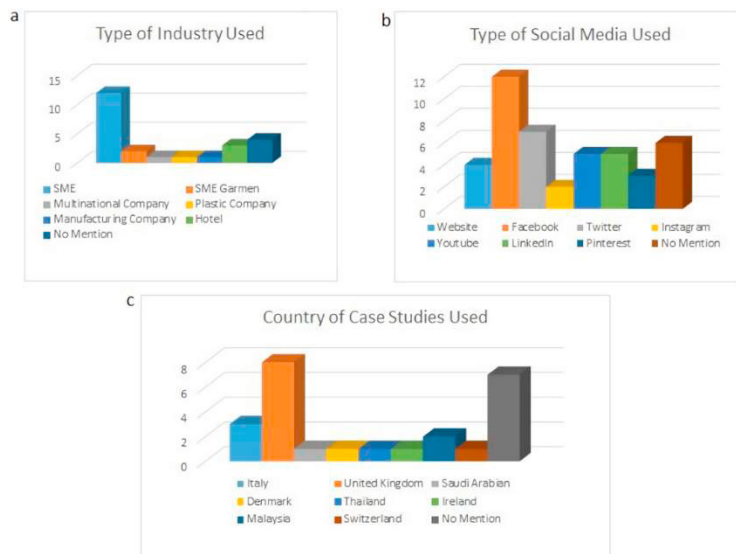


Fig. 2. (a) type of industry; (b) type of social media; (c) country of case studies.

Based on the type of industry (Fig. 2a) used in the study, most journals mention SMEs only and do not specify the specific type of SME. Fig. 2b shows that Facebook is the types of social media that are mostly investigated in the literature. This is because Facebook is a type of social media that is widely used by people and has a platform that is easy to understand. Some case studies in the literature investigated more than one social media, for example Facebook and Twitter. Most of the case studies reported in the literature are from the United Kingdom. This is because the UK has many SMEs and has utilized IT.

Social media as a communication channel helps companies to achieve different organizational goals including marketing, PR, advertising, branding, customer service, human resources and problem solving [3]. Social media is defined as a group of internet-based applications that are built on the foundation of Web 2.0 ideology and technology, which enables the creation and exchange of content created by users [11]. Social media includes various forms of online applications such as social networking sites (SNS), blogs, forums, microblogging, photo sharing, video sharing, product/service reviews, evaluation communities, and social gambling. Social media facilitates the process of sharing information and creating content by individuals. People use different online networks such as Facebook, YouTube, Wikipedia, Twitter, Instagram, TripAdvisor, online forums, rankings, and review forums to share experiences and interact with other users [3]. In social media, the interaction can be done anywhere as long as the location is reachable by the network, which allows users to continue to connect using personal mobile devices such as smartphones or tablets [7].

After performing the grouping of the literature, a more detailed analysis of social media usage on the sales process in SMEs was carried out on 24 journals that were used as research sources. The results of the impact analysis of social media usage on the sales process in SMEs can be seen in Table 2.

Table 2. The impact of social media usage on the sales process in SMEs.

Type of Industry	Type of Social Media	Country	The Impact of Social Media Usage in SMEs
SMEs	Website	United Kingdom, Denmark, Ireland, Malaysia, Italy	Improving relationships with customers [2, 5, 14] Improving marketing accessibility [2, 6, 8] Reach stakeholders [2, 14] Minimizing costs [5] Improving information accessibility [5, 6, 20, 23] Improving creativity [6] Gathering feedback from customer [6, 14] Expand communication with customers [8] Increasing income for SMEs [8, 12] Support sales [14] Build a corporate brand [14] Improving the innovation process [14, 23] Improving customer satisfaction [16, 20] Improving sales [1] Improving marketing [7]
SMEs	Facebook, Twitter, LinkedIn, Youtube, Instagram	United Kingdom, Ireland, Thailand, Switzerland	Attract new customers [7, 22] Improving brand satisfaction [9, 22] Building a network of companies [19] Monitor competitors and look for new business partners [19]
Fashion or Garment	Social Network (Facebook, Twitter, Pinterest, LinkedIn)	United Kingdom, Italy	Improving relationship and company ROI [13] Gathering feedback from customer [13, 21]

Type of Industry	Type of Social Media	Country	The Impact of Social Media Usage in SMEs
Multinational Company (MNC)	Facebook, Twitter, YouTube	Thailand	<ul style="list-style-type: none"> <li>Get external insights in getting ideas for new product development [15]</li> <li>Improving the quality of existing products and services and add value to products [15]</li> <li>Improving company marketing [11]</li> </ul>
Manufacturing Company	Not mentioning the type of Social Media	United Kingdom	<ul style="list-style-type: none"> <li>Improving interaction, collaboration and networking between stakeholders [11]</li> </ul>
Hotel	Facebook, Twitter, Pinterest, LinkedIn, Youtube, Instagram	United Kingdom, Saudi Arabian	<ul style="list-style-type: none"> <li>Improving marketing effectiveness [3, 4, 24]</li> <li>Improving branding and innovation [3, 4, 24]</li> </ul>

Based on the study results on the used literature, there are some impacts of social media usage on the sales process in SMEs. In the 24 papers reviewed, not all papers explain impact of social media usage on the sales process in SMEs. Some of these journals explain how to get customers from social media, how to see customer characteristics through social media, and the factors that influence success in adopting social media. Therefore, the impacts were found as results of social media usage on the sales process for SMEs according to different types of industries and different types of social media.

However, if viewed by each country, it can generally be concluded that there are similarities from the use of social media in SMEs. All depends on the type of SMEs and the type of social media used. They use social media according to the company's business goals. The impact obtained is mostly related to the SMEs sales and marketing processes, such as the relationship between the company and customers, the company with stakeholders, the company with business partners, and the company's relationship with competitors.

Social media marketing is divided into several types including social bookmarking, social networks, social streaming, social search, social knowledge, social blogging, social customer service, and social publishing [25]. Facebook, Twitter, LinkedIn, Instagram and Pinterest are part of the social network. While the website is part of social publishing. Most types of industries use social media within the scope of social networks. This is tailored to the strategies and objectives of the industry utilizing social media in the company. Furthermore, most of the industry targets in the use of social media are the wider community, so that the chosen social media is social media that can be used by all groups.

The impact of social media usage on the sales process in SMEs can increase income for SMEs in the intensive information industry (examples of television programs, films, books). However, this is not the case in primary industries (examples of agricultural, plantation, fishery products) characterized by low information intensity both in value chain information and product information [12]. Active application of social media by SMEs enables organizations to gather feedback and new ideas from various stakeholders, such as consumers, suppliers and employees. SMEs must take a more active role, revive organizational settings through online digital, social and transformational technology. With this, organizations can inspire and enhance industrial creativity and bring about the formation of entrepreneurial generations [13, 14]. Based on recent phenomena, SMEs use social media to get feedback from customers or other users. That is, SME explores information obtained through social media for their business interests. This is marketing research by gathering feedback and new ideas from various stakeholders (customers, suppliers, and employees) and turning them into products or services, so that companies can understand customer needs and create new innovations in developing products or service [13, 15]. In addition, social media usage has a very strong positive impact on organizational performance, in terms of reducing costs, improving customer relations, and increasing information accessibility. Extensive marketing through social media does not require large costs [5]. Reaching out and establishing contacts with new customers, distributors and end customers [2, 5], and getting increased visibility are also the impacts of social media usage on SMEs. By entering new markets, SMEs can develop relationships with new customers abroad, as well as reduce constraints in terms of space and time even though SMEs have limited human resources and finance [2]. For manufacturing industries, social media is used to improve marketing, interaction, collaboration, and networking between stakeholders. This kind of company needs more than one and interconnected social media. For example, a website is used to update information about a company, Facebook

is used to build relationships with customers, and online chat groups are used to discuss product or service development [11].

Social media usage implies the introduction of new resources that are used as communication tools and as innovative distribution channels. The process of selling and negotiating has been followed through e-mail and telephone contacts which can reduce the need for physical contact. The ability to use social media helps companies to make a more planned and proactive sales approach. Social media is formed by existing resources as well as by new resources that have a good influence on business relationships. Social media as a resource has displayed its effects in combination with other relevant and interconnected resources, as argued by the The Industrial Marketing and Purchasing (IMP) perspective and shown through the 4R model. First, the role of social media usage is played by entrepreneurs and sales managers. Second is the effective use of social media in sales activities. Third is the knowledge of resources regarding social media usage. Fourth is the changes in the features of interconnected resources might have an impact on the actual and potential contribution of social media as a resource [2].

The success of social media usage in the sales process in SMEs depends on the condition of the company itself. Not all SMEs have an interest in using social media. These factors can be caused by social media platforms that are difficult to use, especially by elderly entrepreneurs. This makes them reluctant to use social media and they prefer to use traditional methods [2]. The results of this literature study show that each SMEs has their own goals of social media implementation in the company. The success of social media implementation also depends on how SMEs' resources to manage social media in their business. However, some questions need to be addressed further:

- A good strategy for social media implementation will improve the performance of SMEs.  
The implementation of social media in SMEs can be supported by many factors. This depends on the business strategy and the objectives of SMEs to use social media. Analysis of the impact of social media adoption in increasing sales and sales process innovation by SMEs has been carried out by [2]. The study emphasizes that the role and impact of social media depends heavily on the nature and features of social media, as well as other resources within SMEs. Therefore, there is a need to analyse the influence of good social media strategy on the performance of SMEs.
- Alignment between social media functionalities with social media strategy can directly improve the performance of SMEs.  
Every social media has different functionalities and strategies. This is confirmed in research about the functionality of social media [10], and research on strategy social media [27]. This relationship analyzed how social media strategies that are aligned with social media used by SMEs can directly improve the performance of SMEs.
- The magnitude of social media impact on the performance of SMEs.  
In addition to implementing a good strategy in social media implementation, the results or perceived impact of social media used in SMEs also need to be known and measured. So that it can be seen how much social media contributes to the development of SMEs.

#### 4. Conclusion

This research was conducted to identify the impact of social media usage on the sales process in SMEs through Systematic Literature Review (SLR). Based on the results of studies from 24 journals, there are some impacts of social media usage. Each of these impacts is based on journals that were reviewed according to the research problem formulation. The impacts resulting from social media usage on the sales process in SMEs, among others, can improve customer relations, expand marketing at low cost, improving information accessibility by getting feedback and ideas from stakeholders, and can improve company performance. The impacts resulting from SLR mapping vary, all depending on the type of industry and the type of social media used.

This research only focuses on the impacts resulting from the use of different types of social media for the sales process in SMEs competing in different industries. In general, the impact explains in broad terms the benefits that SMEs obtained. Further research is needed to gain more insights related to the driving factors of the use of social media in several SMEs with the same type of industry and the same type of social media. Another aspect that need to be investigated is the relationship between the alignment of social media functionality and strategies with SMEs performance.

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