1. 114-Darmawan-JEME

By Agus Iskandar Darmawan

WORD COUNT	2105	TIME SUBMITTED	29-JAN-2024 03:09PM
		PAPER ID	106496438

Journal of Economics, Management, and Entrepreneurship
Vol. 1 No. 2, December 2023, X-X
ISSN Online: 3026-0906, https://doi.org/10.55208/jeme
Published by P3M, STIE Pasundan, Bandung, Indonesia.

Implementation Of ISO 55001 Framework for Waqf Asset Management System (Study At One of The Professional Waqf Institutions in Bandung)

Agus Iskandar Darmawan[1], Dani Rohpandi [2], Ikbal Jamaludin[3], Susanto[4]
[1,2,3,4] *STMIK Mardira Indonesia, Bandung*
Email: agusiskandar9@gmail.com[1], dani@stmik-mi.ac.id[2], ikbal@stmik-mi.ac.id[3], susanto@stmik-mi.ac.id[4]

Abstract

The waqf asset management system is essential for maximizing and optimizing the managed assets to achieve the highest and most favorable outcomes. A professional waqf institution in Bandung possesses waqf assets dispersed throughout several regions in Indonesia, and its management has successfully reached the level of optimizing productive waqf. Nevertheless, waqf assets are managed manually, leading to slower and worse management practices. This research aims to address the issue of managing waqf assets by applying ISO 55001 to the waqf asset management system in a selected professional waqf institution in Bandung. The research approach employs descriptive analysis with the Object-Oriented Software Engineering (OOSE) system development process.

The results reveal eight functions based on 8 and 9 criteria that should be present in the asset management system according to ISO 55001. The program incorporates these eight functionalities and achieves a System Usability Scale (SUS) score of 84.6, signifying a B grade and outstanding acceptance. The ISO 55001 certification readiness level is 57.14%, as determined by the ISO 55001 Self-assessment conducted by the British Standard Institute (BSI). The researcher utilized Black Box testing to evaluate the program's functionality, and the findings indicate that all operations are functioning as anticipated.

Keywords: *Asset Management System, Waqf, ISO 55001*

Introduction

The Ministry of Religious Affairs reported 2020 that the entire area of waqf land in Indonesia was 3 billion square meters, spread across 420 hectares in different locations. The estimated value of this land was 2000 trillion Indonesian rupiah (Capela et al., 2020). Regrettably, the management of waqf assets has not yet reached its maximum efficiency.

Munawar (2021) , which proposes implementing a waqf asset information system to manage waqf assets efficiently and prevent their misappropriation or seizure by beneficiaries. In addition, the administration of waqf assets necessitates a dedicated waqf asset management system.

ISO 55001

Sangreman Lima et al., (2018); Silva & Souza (2020) ISO publishes the ISO 5500x series as asset management and asset management systems standards. The ISO 5500x series comprises three documents:

1. ISO 55000:2014 is a standard that provides an overview, principles, and terminology for asset management.
2. ISO 55001:2014 is a standard that outlines the requirements for an asset management system.
3. ISO 55002:2014, subsequently revised to ISO 55002:2018, is a standard that provides guidelines for implementing ISO 55001, which pertains to asset management.

The three documents are interconnected, with ISO 55000 offering a comprehensive summary, principles, and definitions for the other two documents. ISO 55001 specifies the necessary steps for implementing ISO 55000, whereas ISO 55002 serves as a manual for the practical application of ISO 55001 (ISO 55000: Asset Management-Overview Principles and Terminology, 2014).

As per ISO 55000:2014, an *asset* is defined as an item, thing, or entity that holds potential and value for an organization. Asset management refers to an organization's structured efforts to maximize its assets' value. On the other hand, an asset management system is a collection of interconnected components that establish guidelines, goals, and procedures for effective

asset management (ISO 55000: Asset Management-Overview Principles and Terminology, 2014).

Asset management systems oversee, synchronize, and govern asset management operations. The asset management system offers a systematic method for organizing, coordinating, and overseeing all asset management activities to ensure they align with the company's goals. (Milina et al., 2017) The asset management system defines the collection of assets within the boundaries of the established asset management system (ISO 55000: Asset Management-Overview Principles and Terminology, 2014).

Asset management should be grounded on four essential principles:

1. Value - Assets serve the purpose of delivering value to the firm and its stakeholders.
2. Alignment - Management converts corporate objectives into technical and financial choices, planning, and operations.
3. Leadership - Leadership and organizational culture determine The application of values.
4. Assurance - Asset management ensures that assets can perform their intended purposes.

The essential components necessary for asset management are developed from these fundamental factors. These components include the organizational context, leadership, planning, support, operation, performance evaluation, and improvement. The asset management system incorporates these seven parts based on the organization's requirements and circumstances. As to ISO 55002:2018, the asset management system encompasses:

1. Policy for managing assets (subclause 5.2)
2. Objectives of managing assets (subclause 6.2)
3. Strategy for planning asset management
4. Plan for managing assets (subclause 6.2.2)
5. Facilitating asset management operations (clause 7)
6. Control and operational plans encompassing personnel protocols and procedures for effectively managing assets within the asset portfolio by the asset life cycle (as stated in clause 8).
7. Evaluation of asset performance (clause 9)

8. Activities related to the development and improvement (as outlined in clause 10)
9. Instructions on the interconnection or linkage of all elements to pertinent policies, procedures, and management systems.

Waqf Assets

Waqf is the act of allocating wealth to Allah to benefit the community. Waqf assets, also known as waqf properties, are specifically devoted to Allah and maintained for the community's betterment. Waqf assets are classified as fixed assets due to their worth surpassing one year. (Senjiati & Yadiati, 2021; Suhendi, 2018)

In Indonesia, the legal framework for Waqf is established by Law No. 41 of 2004, which explicitly addresses Waqf matters, and Government Regulation No. 25 of 2018, which clarifies the implementation of Government Regulation No. 41 of 2004. Both regulations encompass all aspects of Waqf, including the administration of waqf assets. According to Article 6 of Law No. 41 of 2004, Waqf is implemented by satisfying the specific requirements outlined in Government Regulation No. 25 of 2018.

1. Waqif, the giver of a waqf, might be an institution, individual, or group.
1. Nazir is the manager responsible for overseeing the Waqf.
2. Waqf Assets refer to physical assets dedicated as Waqf.
3. The Waqf Pledge is a commitment made by the waqif (the person making the Waqf) to dedicate the Waqf, which is subsequently documented in a written pledge document.
4. The objective of Waqf Assets, which includes the Waqf beneficiaries known as "maukuf alaih".
5. Duration of Waqf

(Iman et al., 2020) categorizes Waqf into two distinct forms based on their duration: temporary and eternal. Temporary Waqf is limited to a specified time as stipulated in the agreement. Perpetual Waqf refers to a waqf with no specific duration and whose assets are dedicated indefinitely.

Waqf is categorized into three distinct types based on its purpose: khairi waqf, ahli waqf, and mustard waqf. Khairi waqf is utilized to promote the overall well-being and advancement of the wider community. Ahli waqf is exclusively devoted to the progeny and kin of the family. Musytarak waqf is allocated for both the broader community and individual families.

A prominent waqf institution in Bandung is a sizable religious and missionary organization that possesses waqf assets accredited with ISO 9001, guaranteeing high standards of organizational quality management.

With over twenty years of operation, this esteemed waqf organization in Bandung currently holds several immovable waqf assets spread over different places, along with movable assets like vehicles and other commodities.

The assets encompassed in this category consist of land, buildings, cars, and various other goods that support the organization's missionary activities. Nevertheless, an established method for managing these assets currently needs to be established, particularly an asset management system based on ISO standards that would align with the existing ISO 9001 standard. (Ali & Rakshan, 2022; Senjiati et al., 2020)

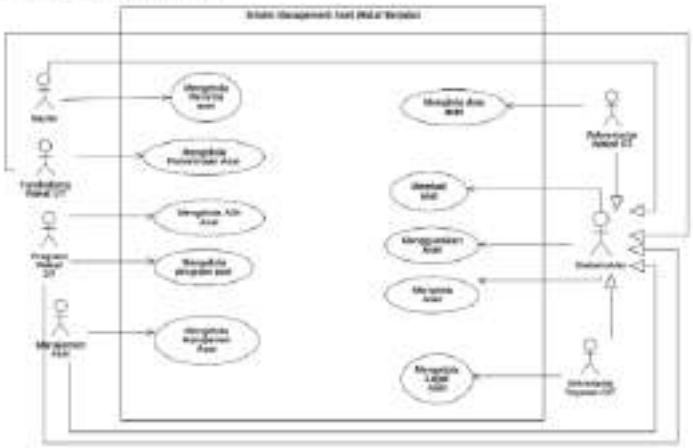
The lack of a waqf asset portfolio in this professional waqf institution in Bandung poses a challenge in providing information about its managed waqf assets. Consequently, this hinders the timely formulation of policies and decision-making processes related to asset management. Furthermore, the institution in Bandung that manages waqf assets still relies on manual recording and administration through Microsoft Excel, which increases the risk of human errors. This vulnerability is observed across all institutions associated with managing waqf assets in this professional waqf institution. The researcher intends to resolve these concerns by adopting ISO 55001 as a foundation for the professional waqf institution in Bandung.

Research Method

Analysis and Design

a) Running System Analysis

One of the professional waqf institutions in Bandung directly manages the waqf assets to raise revenue for waqf funds and initiatives. Lemstra's Asset Management division collaborates in administering and enhancing waqf assets. In contrast, the Secretariat of a prominent waqf organization in Bandung legally validates waqf assets. Meanwhile, the administration of a professional waqf institution in Bandung serves as the Nazhir, responsible for setting asset management rules, along with its affiliated professional waqf institution in Bandung.



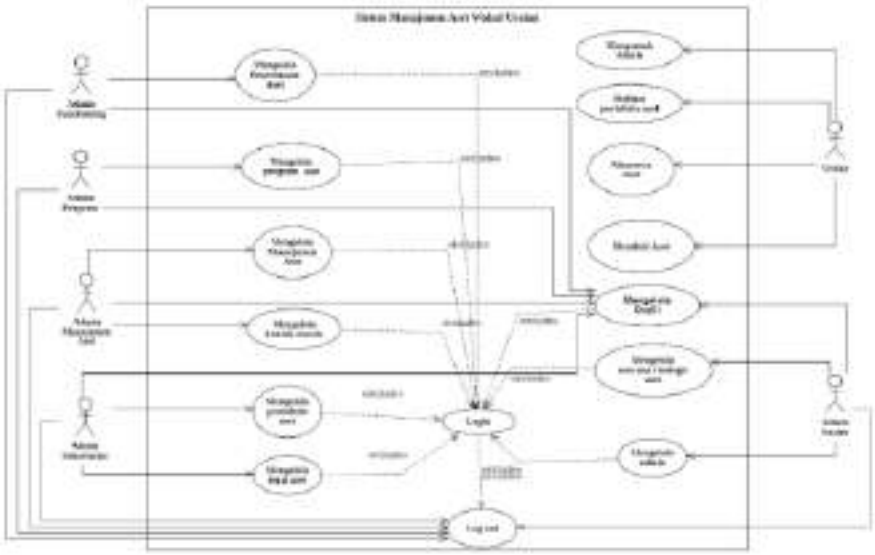
b) Analysis of the Proposed System

i) Gap Analysis

ii) Functional Requirements Analysis

No	Kebutuhan [illegible]	Kebutuhan Fungsional Sistem	Keterangan
1	Adanya [illegible]	[illegible]	[illegible]
2	Adanya [illegible]	[illegible]	[illegible]
3	Adanya [illegible]	[illegible]	[illegible]
4	Adanya [illegible]	[illegible]	[illegible]
5	Adanya [illegible]	[illegible]	[illegible]
6	Adanya [illegible]	[illegible]	[illegible]
7	Adanya [illegible]	[illegible]	[illegible]
8	Adanya [illegible]	[illegible]	[illegible]

iii) Usecase Diagram



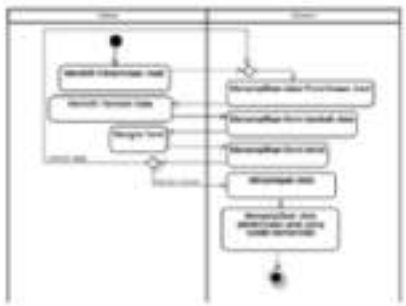
iv) Actor Description

No.	Aktor	Sinonim	Deskripsi
1.	Admin Nazhir	Manajemen Tayasan, Top Manajemen, Admin	Admin Nazhir ialah Nazhir yang merupakan manajemen Tayasan DT yang menggunakan SMAN yang memberikan arahan tentang suatu aktor.
2.	Admin Program	Admin	Admin Program Wakaf DT ialah admin yang mengelola profil aset. Yang termasuk profil aset wakaf, yakni kode aset, spesifikasi aset (luas, tinggi), nama aset, dan tanggal penerimaan aset. Admin juga mengelola data program aset.
3.	Admin Fundraising	Admin	Admin Fundraising Wakaf DT ialah admin yang mengelola data penerimaan aset dan penghimpunan dana aset wakaf. Ia juga mengelola progress Fundraising aset wakaf berserta dana yang dibutuhkan dan telah diputuskan.
4.	Admin Manajemen Aset	Admin	Admin Manajemen Aset ialah admin yang mengelola data optimalisasi dan potensi aset, termasuk penerimaan aset.
5.	Admin Sekretariat	Sekretariat Tayasan, Sekretariat Wakaf, Admin	Admin Sekretariat ialah admin yang mengelola legal aset dan inventory aset.
6.	Visitor	Jamaah	Semua pihak selain admin yang memiliki kepentingan terhadap aset.

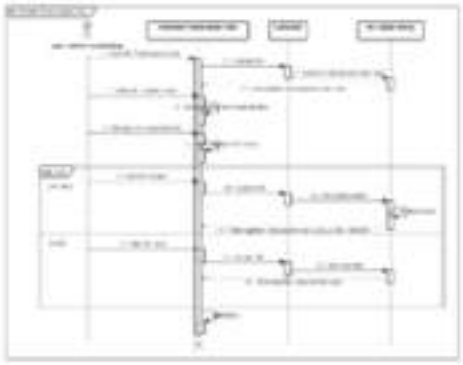
v) Narrative Usecase

Nama Use Case	Mengelola Penerimaan Aset		
Deskripsi Use Case	Usecase membuat, mengedit, menghapus, dan membuat laporan penerimaan aset wakaf.		
Aktor	Admin Fundraising		
Precondition	Admin Fundraising berada di halaman admin fundraising		
Postcondition	Sistem menampilkan perubahan data penerimaan aset		
Event Pemicu	Admin Fundraising Mengklik Menu "Penerimaan Aset"		
Alur Utama			
	Tindakan Aktor		Respon Sistem
1	Mengklik tombol Penerimaan Aset	2	Menampilkan data penerimaan aset
3	A. Memilih tombol tambah B. Memilih data untuk dilihat atau diedit C. Menandai data untuk dihapus	4	A. Menampilkan form tambah data penerimaan aset B. Menampilkan detail data untuk dilihat atau diedit C. Menampilkan ceklik tanda di data pilihan
5	A. Mengisi form tambah data B. Menekan tombol edit C. Menekan tombol hapus D. Melihat data	6	A. Menampilkan form terisi B. Menampilkan halam edit data C. Menampilkan pesan yakin dihapus
7	Jika A. Menekan tombol simpan B. Menekan tombol simpan C. Menekan tombol "Ya"	8	Maka A. Menyimpan data baru B. Menyimpan perubahan data C. Menghapus data
9	Jika tombol batal	10	Maka menampilkan halaman sebelumnya

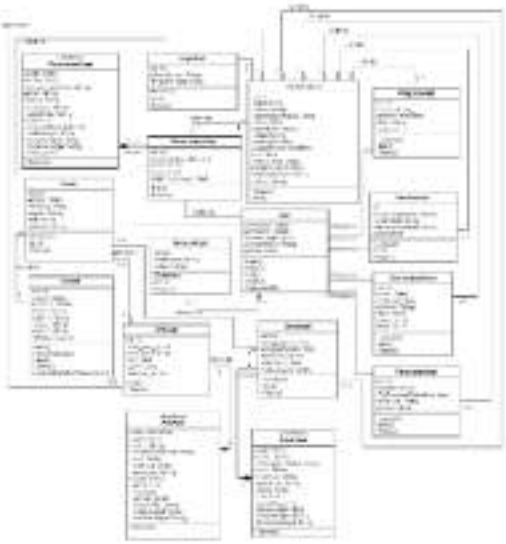
vi) Activity Diagram



vii) Sequence Diagram



viii) Class Diagrams



c) Database System Design

i) Asset Receipt Table

Nama Field	Tipe Data	Panjang Data	Keterangan
Penerimaan_id	Varchar	11	Primary Key
Aset_id	Varchar	11	Foreign Key
Waktu Terima	datetime		
Nilai	Bigint	11	
Wakif_id	Varchar	11	Foreign Key

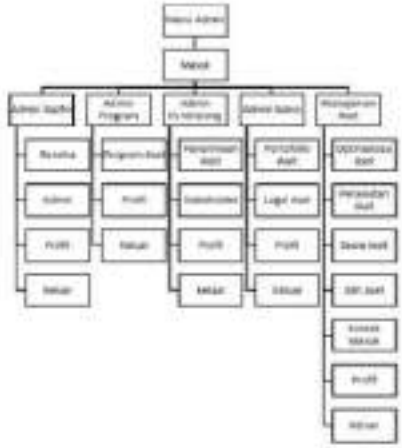
ii) Database ID Codification

Kode	Nomor Urut
PN-	00000001

d) Menu Structure

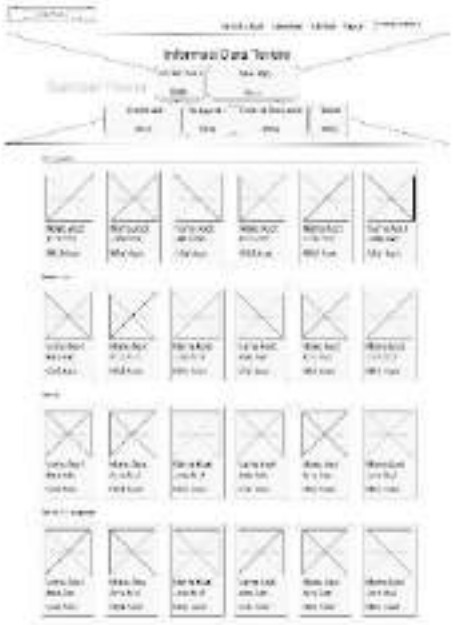
i) Main Menu

ii) Admin Menu



e) Interface Design

i) Home Page



ii) Halaman Dashboard

Result and Discussion

a) Database System Implementation

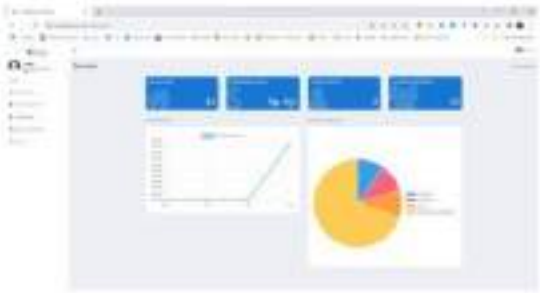
User (Admin) Table

#	Name	Type
1	**username**	varchar(20)
2	**password**	varchar(40)
3	**session_key**	varchar(16)
4	**access_right_id**	int(11)
5	**photo**	text

b) Implementation of an Asset Management System Waqf

i) Home/Portfolio Page

ii) Dashboard Page



Conclusion

Based on the study results, eight functionalities have been discovered that align with the eight elements mandated by ISO 55001 for an asset management system out of 9 points. The eight functional requirements were subsequently transformed into 15 Use Cases, which were employed

in developing the software application.

Following utilization and evaluation by administrators and visitors, the system attained a System Usability Scale (SUS) score of 84.6, signifying a grade B classification, denoting excellence, and acceptability.

Based on the BSI version, the ISO 55001 self-assessment findings for the asset management system indicated that 28 out of 49 checkboxes were successfully completed. Hence, the system's preparedness for ISO 55001 certification is 57.14%.

The recommendations for this research are as follows:

1. A comprehensive examination and additional research on ISO 55001 as a framework for managing waqf assets is necessary.
2. The software's interface (UI) and user experience (UX) might be enhanced to be more visually appealing and interactive.
3. We require data regarding the overall extent of land owned as assets.
4. Including a dedicated field for the asset's location city to enhance data organization and filtering based on city.
5. Including a field to input the identification number of legal papers is necessary.
6. To include the available dates, it is necessary to incorporate scheduling into the lease display.
7. Additional comprehensive checkboxes and precise asset depreciation figures are required to enhance asset maintenance.

References

Ali, M. W., & Rakshan, A. (2022). A STUDY OF WAQF ASSET MANAGEMENT SYSTEM OF INDIA (WAMSI) SOFTWARE: GOVERNANCE, UTILITY AND SOCIO-ECONOMIC IMPACT. *Journal of Asian and African Social Science and Humanities*, *7*(4), 29–40. https://doi.org/10.55327/jaash.v7i4.253

Capela, M., Santos, A., & Luís, A. (2020). ISO 55001 Certification at EPAL – the pains and the gains. *Water Practice and Technology*, *15*(2), 321–326. https://doi.org/10.2166/wpt.2020.015

Iman, N., Santoso, A., & Kurniawan, E. (2020). E-Waqfuna System Development: Management Solutions for Productive Waqf Asset Management in the Digital Age. *Proceedings of the Proceedings of the 1st Conference on Islamic Finance and Technology, CIFET, 21*

September, Sidoarjo, East Java, Indonesia. https://doi.org/10.4108/eai.21-9-2019.2293938

Milina, J., Kristiansen, P., Jacobsen, A. S., & Sundve, A. I. (2017). Molding the asset management system to PAS 55-1/ISO 55001 in one Scandinavian water and wastewater works. *Water Practice and Technology*, *12*(1), 234–239. https://doi.org/10.2166/wpt.2017.001

Munawar, W. (2021). Profesionalitas Nazir Wakaf: Studi Manajemen Wakaf Produktif di Lembaga Wakaf Daarut Tauhiid. *Journal of Islamic Economics and Finance Studies*, *2*(1), 17. https://doi.org/10.47700/jiefes.v2i1.2731

Sangreman Lima, E., Freire de Lorena, A. L., & Cabral Seixas Costa, A. P. (2018). Structuring the Asset Management Based on ISO 55001 and ISO 31000: Where to Start? *2018 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, 3094–3099. https://doi.org/10.1109/SMC.2018.00524

Senjiati, I. H., Malik, Z. A., Ridwan, I. L., & Irwansyah, S. (2020). Management of Waqf Assets at Waqf Institutions in Indonesia. *Proceedings of the 2nd Social and Humaniora Research Symposium (SoRes 2019)*. https://doi.org/10.2991/assehr.k.200225.062

Senjiati, I. H., & Yadiati, W. (2021). Strategy To Improve The Potential Waqf Asset Management in Indonesia : Efficiency Approach. *Jurnal ASET (Akuntansi Riset)*, *13*(2), 274–283. https://doi.org/10.17509/jaset.v13i2.40044

Silva, R. F. da, & Souza, G. F. M. de. (2020). Asset management system (ISO 55001) and Total Productive Maintenance (TPM): a discussion of interfaces for maintenance management. *Revista Gestão Da Produção Operações e Sistemas*, *15*(2), 288. https://doi.org/10.15675/gepros.v15i2.2528

Suhendi, H. H. (2018). OPTIMALISASI ASET WAKAF SEBAGAI SUMBER DANA PESANTREN MELALUI PELEMBAGAAN WAKAF (Studi Kasus Pelembagaan Wakaf Pesantren Baitul Hidayah). *Tahkim (Jurnal Peradaban Dan Hukum Islam)*, *1*(1). https://doi.org/10.29313/tahkim.v1i1.3417

1. 114-Darmawan-JEME

ORIGINALITY REPORT

11%
SIMILARITY INDEX

PRIMARY SOURCES

1	journal.iainkudus.ac.id Internet	52 words —	2%
2	Natividad, Gabriel. "Quotas, Productivity, and Prices: The Case of Anchovy Fishing : Anchovy Fishing", Journal of Economics & Management Strategy, 2015. Crossref	40 words —	2%
3	Anu Hanish Nithin, Michael Hobbs, Srinivas Sriramula, Yaji Sripada. "An approach to improve asset maintenance and management priorities using machine learning techniques", Safety and Reliability, 2022 Crossref	18 words —	1%
4	Ma, Zhao, Limei Zhou, and Wanxing Sheng. "Analysis of the new asset management standard ISO 55000 and PAS 55", 2014 China International Conference on Electricity Distribution (CICED), 2014. Crossref	18 words —	1%
5	Gopinath Chattopadhyay. "Issues and challenges of balancing cost, performance and risk in heavy-haul rail asset management", 2016 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM), 2016 Crossref	15 words —	1%
6	Nicholas Anthony John Hastings. "Physical Asset Management", Springer Science and Business Media LLC, 2021	13 words —	1%

Crossref

7	textilesworldwide.blogspot.com Internet	13 words — 1%
8	Imtiyaz Wizni Aufa, Anugrah Muhtarom Pratama, Umi Khaerah Pati. "Cash Waqf Linked Sukuk Through Securities Crowdfunding in Indonesia", Jambura Law Review, 2023 Crossref	12 words — 1%
9	www.efficientplantmag.com Internet	12 words — 1%
10	mro.massey.ac.nz Internet	11 words — 1%
11	libweb.kpfu.ru Internet	9 words — < 1%
12	www.researchgate.net Internet	8 words — < 1%
13	Renan Favarão da Silva, Gilberto Francisco Martha de Souza. "Modeling a maintenance management framework for asset management based on ISO 55000 series guidelines", Journal of Quality in Maintenance Engineering, 2021 Crossref	7 words — < 1%
14	"Handbook of Advanced Performability Engineering", Springer Science and Business Media LLC, 2021 Crossref	6 words — < 1%
15	Lamya Nurul Fadhilah, Abdurrahman Azmi. "The Urgency of Optimizing Productive Waqf in Pesantren to Foster the Halal Industry Development", KnE Social Sciences, 2024 Crossref	6 words — < 1%

EXCLUDE QUOTES	ON	EXCLUDE SOURCES	OFF
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	OFF