

# EXPLORING THE DIGITAL ERA'S INFLUENCE ON WAQF DEVELOPMENT IN INDONESIA: A NARRATIVE REVIEW APPROACH

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**ABSTRACT:** *The integration of digital technologies into Islamic philanthropic instruments, particularly waqf, has marked a transformative shift in Indonesia's socio-economic landscape. This narrative literature review explores how the digital era influences waqf development in Indonesia by synthesising recent academic works published between 2015 and 2024. Drawing on 18 selected studies from a pool of 55 eligible sources, the review examines the impact of digital tools on waqf fundraising, management, and distribution mechanisms. The findings reveal that innovations such as Islamic crowdfunding, blockchain-based waqf platforms, and mobile waqf applications have expanded public engagement, increased transparency, and enhanced operational efficiency. However, challenges persist, including uneven digital literacy, regulatory constraints, and resistance to structural change among stakeholders. This study contributes to the literature by mapping key themes, identifying research gaps, and offering a conceptual lens to understand the evolving digital waqf ecosystem.*

*The review highlights the importance of enhancing digital infrastructure, developing adaptive regulatory frameworks, and promoting digital literacy among nazhir and donors. Policymakers and waqf institutions should prioritise the integration of secure and inclusive digital systems to optimise waqf mobilisation and governance in the digital era.*

Keywords: digital waqf, Islamic endowment, fintech, blockchain, Islamic social finance, Indonesia

## INTRODUCTION

Waqf represents a pivotal instrument in Islamic philanthropy, offering significant potential to contribute to socio-economic development and the well-being of the Muslim community. In Indonesia, which hosts the largest Muslim population globally, the prospects for waqf advancement are substantial, ranging from the increasing number of potential donors (wakif) and the diverse forms of waqf assets to the broad base of beneficiaries [1]. Despite this potential, the practical implementation of waqf faces persistent challenges, including limited public literacy regarding waqf, weak institutional capacity and professionalism among *nazhir*, and inadequate transparency in waqf fund governance [2].

As information and communication technologies continue to evolve, Indonesia has entered the digital era, transforming how people interact, transact, and access information. This transformation has significantly influenced the Islamic finance sector, including the management of waqf. Digitalisation presents new opportunities in the collection, management, and distribution of waqf funds. Through digital platforms, waqf becomes more accessible, efficient, and inclusive, reaching a broader audience, particularly younger generations who are highly familiar with digital technologies [3-5].

Various innovations have emerged in the form of Sharia-compliant crowdfunding platforms, mobile waqf applications, and the utilisation of blockchain technology and smart contracts to enhance transparency and accountability in waqf fund management [3, 6]. The Indonesian Waqf Board (BWI), along with several private waqf institutions, has begun integrating digital systems into their fundraising and reporting strategies [7]. However, this digital transformation also presents several challenges, including low digital literacy, regional disparities in technological infrastructure, insufficiently adaptive regulations, and resistance from stakeholders accustomed to traditional management systems [4, 8].

The digital transformation that has swept across nearly all sectors of life has also significantly influenced the dynamics of waqf development. The digital era presents various opportunities to revolutionise the way waqf is collected, managed, and distributed. Digital platforms have made waqf contributions more accessible, faster, and able to reach a broader segment of society, including millennials and digital natives [9, 10]. Innovations such as crowdfunding, mobile-based waqf applications, and the adoption of blockchain technology and smart contracts are increasingly utilised to enhance transparency and efficiency in waqf management [11].

The Indonesian Waqf Board (BWI) and several Islamic philanthropic institutions have also leveraged digital media for campaigns, public education, and fundraising activities. BWI, for example, has launched an integrated digital reporting system and collaborated with Islamic fintech platforms to facilitate the distribution of cash waqf [12]. Nevertheless, the digitalization of waqf still faces significant challenges, including disparities in digital literacy, uneven technological infrastructure across regions, and the lack of comprehensive regulation and standardisation in digital waqf systems [13, 14].

In light of the growing influence of digital transformation on Islamic philanthropic practices, it is essential to conduct a comprehensive literature review to assess how the digital era has shaped the development of waqf in Indonesia. While numerous studies have addressed the opportunities and challenges of digital waqf, few have systematically mapped the literature or synthesised key thematic insights. This narrative review seeks to bridge that gap by critically analysing and integrating existing scholarship to develop a structured conceptual framework. It aims to deepen understanding of how digital technologies are transforming waqf practices and to offer practical and theoretical insights for future research in the context of evolving technological ecosystems.

## RESEARCH QUESTION

How has the digital era influenced the development of waqf in Indonesia, as reflected in academic literature and policy discourse?

## OBJECTIVES OF THE STUDY

1. To identify and categorise key findings from academic literature related to the digitalisation of waqf in Indonesia.
2. To analyse how digital technologies have affected the collection, management, and distribution of waqf.
3. To highlight existing challenges, emerging opportunities, and research gaps that warrant further scholarly exploration

## METHODS

This study adopts a narrative literature review approach, which is a descriptive and thematic method aimed at identifying, summarising, and synthesising key ideas from a diverse body of relevant literature[15]. This approach is deemed suitable for exploring emerging and multidisciplinary topics such as digital waqf, which intersects with Islamic economics, financial technology, and public policy. The narrative review enables the development of a comprehensive conceptual understanding while identifying research trends, gaps, and future directions

### Sources and Literature Search Strategy

The literature search was conducted systematically using several reputable academic databases and digital repositories, including Google Scholar, Directory of Open Access Journals (DOAJ), ScienceDirect, Scopus, Portal Neliti, as well as institutional repositories and publications from official organizations such as the Indonesian Waqf Board (Badan Wakaf Indonesia/BWI), Bank Indonesia, and the Sharia Division of the Financial Services Authority (OJK Syariah).

A set of targeted keywords was employed in both English and Indonesian, such as: digital waqf, digitalisation of waqf, online cash waqf, Islamic crowdfunding, waqf blockchain, smart contract for waqf, waqf and fintech, Islamic endowment and technology, and digital waqf in Indonesia.

The search focused on publications from 2015 to 2024 to ensure the inclusion of recent developments and up-to-date insights related to digital technology and its application in waqf management. Both English and Indonesian language sources were considered to enhance the breadth and depth of analysis.

### Inclusion and Exclusion Criteria

#### Inclusion Criteria:

1. Peer-reviewed journal articles, conference papers, reports, and institutional publications.
2. Published between 2015 and 2024.
3. Written in English or Indonesian.
4. Focused on topics related to the digitalisation of waqf, including collection, management, distribution, and governance.

5. Studies addressing digital tools such as crowdfunding, blockchain, smart contracts, and fintech in the context of Islamic endowments (waqf) in Indonesia.

#### Exclusion Criteria:

1. Articles published before 2015.
2. Literature unrelated to waqf or not addressing digital aspects.
3. Studies focusing solely on zakat, infaq, or sadaqah without connection to waqf.
4. Non-academic blog posts, opinion pieces, or sources lacking credibility and academic rigour.

## FINDING AND DISCUSSION

This PRISMA flow diagram illustrates the step-by-step process of identifying, screening, and including articles for this narrative review. Initially, 55 records were identified through database searches and other sources. After removing 5 duplicates, 50 records were screened based on titles and abstracts. Subsequently, 25 articles were excluded due to a lack of relevance to digital waqf, and 25 full-text articles were assessed for eligibility. Of these, 7 articles were excluded because they did not meet the inclusion criteria, either due to methodological limitations, lack of conceptual relevance, or insufficient data. As a result, a total of 18 articles were deemed eligible and included in the final narrative synthesis. This rigorous selection process ensures the reliability and thematic coherence of the literature analysed in this study

## DISCUSSION

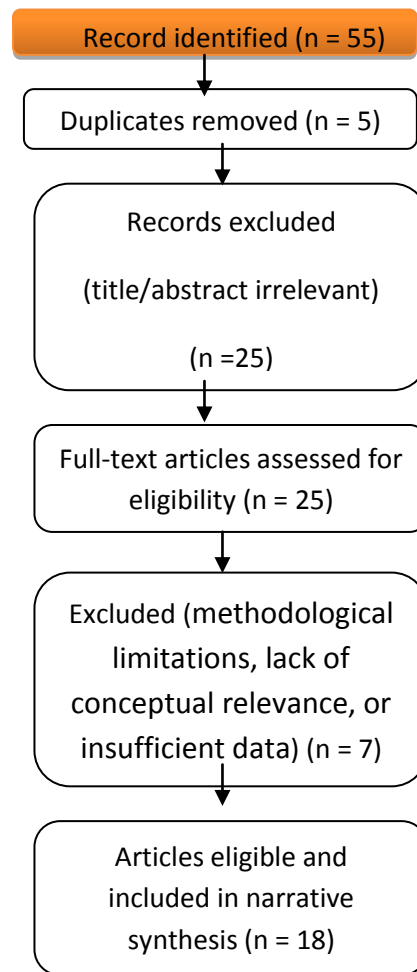
The transformation of waqf in the digital era has led to an increasing integration of technology in various aspects of waqf practices in Indonesia. From the reviewed 18 key studies, several thematic insights emerge that highlight the nature, direction, and implications of digitalisation on waqf development

### 1. Technological Innovation in Waqf Collection

Digital platforms have significantly enhanced the reach and efficiency of waqf fundraising. Studies by Syahbibibi and Hisan [16] and Fitriyah [17] emphasise the emergence of crowdfunding mechanisms and mobile-based waqf platforms that simplify public participation. These innovations reduce geographical barriers and facilitate micro-donations, making waqf more inclusive. The adoption of Society 5.0 principles further integrates technological utility with social well-being [18].

### 2. Blockchain and Transparency

Transparency and trust are critical for waqf sustainability. Blockchain technology, as explored by Firdaus [19], Khairunisah [20] and Suryaningsih *et al.* [21], offers decentralised, immutable ledgers that enhance accountability in waqf transactions. Smart contracts ensure automatic execution of waqf disbursements, reducing human error and potential mismanagement.



**Figure 1. Prisma Flowchart Diagram**

### 3. Legal and Institutional Innovation

The institutional response to digital waqf includes policy development and IT infrastructure enhancement. Rahmawati *et al.* [22] and Iman *et al.* [23] document the initiatives by Badan Wakaf Indonesia (BWI) in digitising waqf reporting systems and improving nazih professionalism. These efforts indicate a growing institutional maturity in adapting to digitalisation.

### 4. Waqf Education and Digital Literacy

The success of digital waqf depends on public understanding and acceptance. Ratna *et al.* [24] and Maulana & Kangko [25] stress the need for waqf literacy campaigns, especially among the youth. Enhancing digital and religious literacy can bridge the knowledge gap and promote waqf as a viable socio-economic instrument.

### 5. Legal Protection and Regulatory Frameworks

As Luthfie, *et al.* [26] pointed out, digital waqf must be underpinned by a robust legal framework to safeguard donors and beneficiaries. Legal adaptation to digital waqf models is essential to mitigate misuse and enhance confidence in online waqf mechanisms.

### 6. Alignment with SDGs and Environmental Innovation

The alignment of digital waqf initiatives with Sustainable Development Goals (SDGs) is evident in several studies. For example, Seggiono *et al.* [27] and Maisyarah & Hadi [28] highlighted blockchain-based educational waqf and digital platforms promoting sustainable development. Moreover, Rohmaningtyas & Sa'idaturrohman introduce innovative models such as waste-for-waqf programs [29].

### 7. Organisational Adaptation and Challenges

Organisational transformation remains critical for digital waqf success. Rachmawati *et al.* [22] and Zainur & Soemitra [30] identify institutional barriers such as resistance to change and lack of capacity among waqf managers. These call for continuous capacity-building and regulatory support.

### 8. Economic Empowerment and Societal Impact

Fauzi *et al.* [31] and Rachman & Salam [32] underline the economic development potential of digital waqf. By leveraging financial technology, waqf can empower communities through social enterprises, microfinance, and infrastructure development.

## CONCLUSION

The literature indicates that digitalisation holds immense promise for revitalising the waqf ecosystem in Indonesia. However, the transition requires coordinated efforts across technological, institutional, and regulatory dimensions to realise its full potential

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