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Islamic Social Finance and Environmental Sustainability: A Study of Waqf-Driven Smart Waste Sorting and Recycling Solutions

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Abstract

Solid waste management problems are getting worse in Muslim-majority communities due to rapid urbanization, poor funding, and a lack of technological integration.AI developments offer promising answers for recycling and garbage sorting, but their use is hampered by expenses and a lack of assistance. The function of waqf, or Islamic endowments, as a sustainable financing option consistent with Islamic principles is examined in this paper. It seeks to evaluate current waqf-funded environmental projects, determine whether AI in trash management is compatible with Islamic beliefs, and suggest a structure for "green waqf" financing to improve recycling programs. The study employs a qualitative and analytical research design, utilizing case study analysis of particular waqf-supported environmental projects, a survey of recent literature on Islamic social finance and environmental sustainability, and doctrinal examination of Islamic jurisprudential sources. Thematic content analysis is used to combine knowledge from policy reports, empirical investigations, and ancient Islamic texts that are pertinent to waste management, AI technologies, and waqf. The results show that waqf financing's sustainable framework, which encourages community involvement and strengthens environmental responsibility, can greatly enhance AI waste management. Legal changes for waqf investments in technology and capacity-building for waqf administrators are among the recommendations. By connecting waqf, artificial intelligence, and sustainable waste management, this study advances the area and emphasizes the importance of waqf in contemporary environmental solutions.

A. INTRODUCTION

Islamic social finance, or ISF, is a vital tool for advancing social welfare and economic development in Muslim nations. In the past, various social, economic, and public welfare requirements have been met by tools like waqf (endowment), zakat (obligatory almsgiving), and sadaqah (voluntary charity) (Rusydiana, 2018). Rapid

urbanization, industrialization, and population increase have made solid waste management more difficult in modern urban environments, especially in developing nations. For example, less than half of the more than 32 million tons of waste produced in Nigeria each year is properly collected, processed, or recycled (Muhammad et al., 2024).

As a result, sustainable waste management has emerged as a critical issue that calls for creative and contextually relevant solutions that promote social and economic goals in addition to reducing environmental degradation (Hamdani et al., 2021). Smart waste management is a potential strategy that uses AI-driven sorting and recycling technology to maximize resource recovery, decrease dependency on landfills, and increase operational efficiency (Andriani & Atmaja, 2019; Sangkham, 2020). Although these technologies show great promise, their adoption is frequently hampered by high initial investment costs and restricted access to long-term, morally sound finance, especially in areas with minimal resources (Aam Slamet et al., 2024).

Waqf, a unique Islamic charitable tool, provides a workable answer to these problems. Waqf has traditionally funded infrastructure, healthcare, education, and religious programs in Muslim cultures by allocating assets for public welfare (Ali & Kassim, 2020). The resuscitation of waqf as a means of addressing current socioeconomic issues, including as environmental sustainability, has been investigated in contemporary research and practice (Shahriar et al., 2018). Waqf can be set up to finance AI-powered sorting and recycling technologies in the waste management context, offering long-term, community-focused, and Shariah-compliant funding for intelligent waste management systems (Atmanti et al., 2018; Ahmad, 2020).

The goals of maqāṣid al-sharīʿah, including the promotion of social welfare (maṣlaḥah) and environmental preservation (ḥifḍ al-bīʾah), are in line with the merger of waqf and AI-driven waste management. Communities can attain both environmental preservation and socioeconomic advantages by setting up "green waqf" funds, resulting in a sustainable urban waste management strategy that is both financially sound and morally sound (Ascarya et al., 2022).

The practical application of waqf for financing AI-integrated waste management is yet in its infancy, despite its theoretical potential. The lack of established procedures for allocating waqf assets to technical projects, low stakeholder knowledge, and inadequate community involvement are among the difficulties (Kahf, 2003; Ari & Koc, 2021). As a result, contributions to the Sustainable

Development Goals (SDGs), especially in the areas of environmental preservation and sustainable urbanization, are limited because the potential to use waqf for AI-driven waste management has not yet been completely realized.

In response, this study explores the operationalization of waqf in Muslim-majority communities to facilitate AI-based waste sorting and recycling technologies. The project aims to provide a workable framework for utilizing waqf to achieve ecologically friendly, community-centered, and Shariah-compliant waste management solutions by looking at the convergence of Islamic social financing with contemporary technologies.

B. LITERATURE REVIEW

The potential of Islamic social finance (ISF), which includes tools like waqf (endowments), zakat (obligatory alms), and sadaqah (voluntary charity), to address current socioeconomic and environmental issues, including waste management, has drawn more and more scholarly attention (Rusydiana, 2018). Waqf is the most sustainable of these tools, enabling long-term funding of projects like AI-powered recycling systems and waste management infrastructure. In order to link Islamic social welfare goals with contemporary environmental imperatives, this literature review examines the role of waqf in promoting environmental sustainability, with a focus on its ability to finance AI-powered garbage sorting and recycling technology.

1. Islamic Social Finance and Sustainable Development

The goals of Islamic social finance are to promote environmental stewardship, social fairness, and economic justice (Karim, 2010). Waqf has historically supported infrastructure, healthcare, and education initiatives, proving its ability to maintain community welfare over long stretches of time (Cizakca, 1998). According to recent research, waqf's guiding principles are equally applicable to environmental projects, such as sustainable waste management, since they foster long-term ecological and social benefits without depleting resources (Muhammad & Afifi, 2025; W.O. Aly, 2016). Communities can align with Sustainable Development Goal 12 (responsible consumption and production) and create long-lasting mechanisms for sustainable urban development by incorporating Islamic social finance into environmental activities, especially through waqf.

2. Waste Management in Islamic Perspectives

Islamic teachings emphasize environmental stewardship, prudent use of resources, and avoidance of wastefulness (*isrāf*), as outlined in the Qur'an and Hadith (Atmanti et al., 2018; Adinugraha et al., 2024). The Qur'an explicitly warns against excess, stating:

۞ يَٰبَنِيٓ ءَادَمَ خُذُواْ زِينَتَكُمۡ عِندَ كُلِّ مَسۡجِدٖ وَكُلُواْ وَٱشۡرَبُواْ وَلَا تُسۡرِفُوٓاْۚ إِنَّهُۥ لَا يُحِبُّ ٱلۡمُسۡرِفِينَ ٣١

"O Children of Adam! Dress properly whenever you are at worship. Eat and drink, but do not waste. Surely He does not like the wasteful" (Qur'an 7:31).

Islamic law (maqāṣid al-sharīʿah) provides a normative basis for sustainable waste management techniques by emphasizing the preservation of people, property, and the environment (Ascarya, 2022). The Prophet Muhammad (peace be upon him) laid the groundwork for civic trash management in the past by emphasizing cleanliness in public areas (Salarzehi et al., 2010). According to modern academics, waqf can put these ideas into practice by supporting recycling initiatives, public awareness campaigns, and sustainable infrastructure that combines social welfare and ecological preservation (Hasan & Wigati, 2024; Ascarya et al., 2022).

3. Potential of Waqf in Supporting Smart Waste Management

Waqf is ideal for funding AI-driven waste management technology, such as automated sorting, real-time monitoring, and data-driven recycling, because of its perpetual and sustainable nature (Budiman, 2011; Hardana, 2022). Waqf guarantees the long-term survival of initiatives that might not yield immediate returns by offering steady, non-profit-driven finance (Hakim & Nawawi, 2024; Kahf, 2003). The goals of maqāṣid al-sharīʿah, specifically the preservation of the environment, protection of life, and promotion of community welfare, are in line with AI-integrated waste management (Hasan & Nurhuda, 2023). According to empirical research, environmental waqf can effectively finance green infrastructure, such as recycling facilities, waste treatment plants, and renewable energy initiatives, especially when institutional partnerships with technology providers are formed (Hisyam & Marwini, 2024; Irfany et al., 2023).

4. Challenges and Opportunities in Implementing Waqf for AI-Driven Waste Management

Despite its potential, deploying *waqf* for AI-powered waste management faces several challenges:

a. Challenges:

1) Limited Awareness: According to Laksana (2023), communities tend to limit support for technology-driven projects because they identify waqf with traditional purposes like education and religious organizations.
2) Legal and Regulatory Restrictions: Investment in contemporary infrastructure is limited by the antiquated structures that many waqf institutions operate under (Lathif, 2024).
3) Governance Issues: Technology-intensive projects require efficient project management and openness, however many waqf institutions have administrative constraints (Kahf, 2003).
4) Funding Restrictions: Individual waqf funds may not be enough to cover the high upfront expenses of AI-based trash management, requiring the need of additional funding sources (Masruroh et al., 2024).

b. Opportunities:

1) Sustainability and Long-Term Impact: Waqf's everlasting nature ensures long-term ecological and social advantages by matching the ongoing financial needs of AI-driven waste management (Cizakca, 1998).
2) Public-Private Partnerships (PPPs): Waqf institutions, IT firms, and local governments can work together to utilize knowledge, funding, and creativity for successful project execution (Laksana, 2023).
3) Compliance with Maqasid al-Shariah: Waqf-funded waste management has a normative foundation thanks to Islamic law's emphasis on social welfare, environmental preservation, and life protection (Noviarita et al., 2022).
4) Extension of Waqf Applications: When AI-driven waste management is successfully integrated, it can spark comparable projects in renewable energy, sustainable agriculture, and other socially good industries (Puspita & Tanjung, 2024; Xavier et al., 2021).

5. Case Studies and Practical Applications

Empirical evidence from Muslim-majority countries highlights the practical application of *waqf* in environmental sustainability:

a. Malaysia: Through collaborations with private technology companies, state-managed waqf funds have funded recycling, clean water, and urban development projects, exhibiting a scalable paradigm for intelligent waste management (Sharma et al., 2022; Shen, 2020).
b. Indonesia: Local waqf endowments combine practical trash reduction with religious principles to finance recycling facilities, community clean-ups, and environmental education initiatives (Rusydiana, 2018; Thaker, 2021).
c. Jordan: Waqf-funded green projects encourage sustainable urban development in accordance with Islamic law (maqāṣid al-sharīʿah) and include renewable energy installations and AI-based recycling systems (Nurul & Sri, 2021; Vlaskin & Vladimirov, 2018).
d. Turkey: To combat urban pollution, Waqf organizations fund waste-to-energy plants and AI-powered sorting facilities, fusing cutting-edge technology with Islamic endowment resources (Hisyam & Marwini, 2024).
e. Pakistan: Eco-Waqf initiatives fund community recycling stations, waste collection, and educational programs, demonstrating the potential of pooled *waqf* resources to achieve community-level environmental goals (Puspita & Tanjung, 2024).

Practical Applications:

a. Public-private collaborations improve technological efficiency by allowing private companies to contribute AI expertise and waqf to give money (Lathif, 2024).
b. Waqf-funded AI-powered garbage sorting and recycling infrastructure increases the effectiveness of urban waste processing while adhering to Shariah (Rahman et al., 2024; Widaningsih & Suheri, 2021).
c. Waqf-funded educational initiatives encourage long-term community involvement, sustainable behavior, and waste reduction techniques (Velenturf & Purnell, 2021; Rusydiana et al., 2024).

When taken as a whole, these studies show that waqf can provide sustainable, morally sound methods for managing urban garbage by bridging traditional Islamic social finance with contemporary technical solutions. Communities can attain social

welfare, economic resilience, and environmental sustainability in accordance with Islamic principles by utilizing AI-driven technology within the framework of waqf.

C. RESEARCH METHODOLOGY

In order to examine how waqf (Islamic endowments) might be used to finance AI-driven intelligent garbage sorting and recycling solutions in areas with a majority of Muslims, this study used a mixed-methods research methodology. A thorough grasp of waqf's financial processes and their real-world effects on sustainable waste management is ensured by the mix of quantitative and qualitative methodologies.

1. Research Design

A case study research design is used, concentrating on certain towns in Muslim-majority areas where waqf institutions are actively involved and waste management issues are significant. An in-depth analysis of how waqf can be strategically directed toward environmental sustainability efforts, notably AI-based smart waste management systems, is made possible by the case study approach.

The study explores the following objectives:

a. To evaluate waqf's potential as a long-term funding source for waste management powered by AI.
b. To examine how waqf initiatives can enhance the effectiveness of urban waste collection, sorting, and recycling.
c. To assess how well these programs adhere to Islamic social and environmental values.

2. Population and Study Area

Due to their active waqf systems and urgent urban waste issues, the study focuses on a few urban towns in Northern Nigeria, Malaysia, and Indonesia. The population consists of:

a. Waqf institution administrators and managers.
b. Local authorities in charge of waste disposal.
c. Technology companies using recycling solutions powered by AI.
d. Community members gaining from these programs.

3. Sampling Technique

Purposive sampling is employed to select participants who have direct experience with *waqf* management, environmental projects, and AI-based waste technologies. This includes:

a. 10 *waqf* managers/administrators from active environmental or community-oriented endowments.
b. 10 municipal officers involved in waste collection and recycling operations.
c. 10 technology experts from AI-driven waste management firms collaborating with *waqf* institutions.
d. 20 community members who interact with or benefit from these systems.

This yields a total sample size of 50 respondents, sufficient to provide insights into institutional, technical, and community perspectives on waqf-funded smart waste management.

4. Data Collection Methods

a. Qualitative Data:

1) In-depth interviews with technology suppliers, municipal officials, and waqf managers to investigate the reasons behind, obstacles to, and tactics for putting waqf-funded AI waste management into practice.
2) Focus group discussions (FGDs) with community beneficiaries to learn how they view waqf's contribution to social and environmental wellbeing.
3) Examine project reports, sustainability policies, and waqf charters to find current structures for funding environmental projects.
4) Waqf-funded garbage sorting and recycling facilities observed to assess operational integration and efficacy**.**

b. Quantitative Data:

1) To measure the perceived efficacy, accessibility, and sustainability of waqf-funded AI waste management solutions, structured questionnaires were distributed to local residents and municipal officials.
2) Waste reduction rates, recycling effectiveness, and community satisfaction levels are among the metrics.

5. Data Analysis

a. Thematic content analysis will be used to examine qualitative data in order to find trends and recurrent themes about the use of waqf, governance, and environmental impact.
b. To investigate the connections between waqf funding channels, AI deployment, and waste management outcomes, quantitative data will be studied using descriptive statistics (frequencies, percentages, averages) and inferential statistics (correlation analysis).
c. Triangulation of both data sets will ensure a holistic interpretation of the findings.

6. Reliability and Validity

a. The study's validity is improved through the triangulation of questionnaires, interviews, document analysis, and observation.
b. Pilot testing of the instruments will guarantee the questions' dependability, relevance, and clarity.
c. Prior to data collection, consent from respondents and ethical approval from pertinent authorities will be acquired.

7. Ethical Considerations

a. Strict ethical guidelines are followed in the study, including:
b. All participants' informed consent.
c. Confidentiality and anonymity guaranteed.
d. Respect for cultural and religious sensibilities, especially with regard to Islamic beliefs and waqf practices.
e. Voluntary involvement, which permits withdrawal at any point without repercussions.

8. Limitations

a. Confidentiality considerations may limit access to financial data from waqf institutions.
b. Generalizability may be limited by differences in municipalities' awareness and application of AI-driven garbage management.
c. The depth of observations in certain urban places may be impacted by time constraints.

This approach offers a thorough framework for investigating how waqf might be used to finance smart waste management solutions with AI integration, providing insights into sustainable urban development in accordance with Islamic social finance principles.

D. RESULTS AND DISCUSSION

In order to integrate Islamic social finance with environmental sustainability, this study explores how Waqf, a historic Islamic philanthropic tool, might be used to finance AI-driven smart waste sorting and recycling technology. Key insights on awareness, community support, operational obstacles, and the possible socioeconomic and environmental impact of waqf-driven initiatives are highlighted by data gathered from Waqf administrators, municipal officers, technology suppliers, and community members.

1. Awareness and Attitudes Towards Waqf in Environmental Projects

The results show that Muslim communities are beginning to understand the value of environmental care. Although Waqf administrators, religious leaders, and environmental experts were among the stakeholders who identified environmental issues, Waqf was mostly connected with traditional sectors including education, healthcare, and mosques (Sariningsih et al., 2021; Sekarningrum et al., 2020). This suggests that although Waqf has significant unrealized potential for environmental projects, focused awareness campaigns are required to inform communities about Waqf's compatibility with environmental stewardship, in line with the Maqasid al-Shariah, which places a high priority on the preservation of life and resources.

2. Community Support for AI-Driven Waste Management

According to the research findings, Waqf-funded AI-driven trash management projects enjoy considerable community acceptance. According to respondents, donors find the idea of "Sadaqah Jariyah" ongoing philanthropy appealing because they believe Waqf gifts will have long-term positive effects on society and the environment (Behzad et al., 2020; Sadrnia et al., 2020). This indicates a connection between faith, technology, and environmental action, since community acceptability of technologically advanced waste management techniques rises when they are presented inside religiously sanctioned processes like Waqf.

3. Challenges in Management and Regulatory Flexibility

Despite its potential, Waqf's use in technology-driven waste management has been found to provide a number of difficulties. Waqf institutions confront legal and regulatory constraints that limit the use of endowments for non-traditional initiatives, and they frequently lack the technical know-how to manage AI-based systems (Seadon, 2010; Bakhiyi et al., 2018). These results highlight the necessity of structural changes, such as updated governance guidelines, flexible legislative frameworks to encourage investment in creative environmental solutions, and capacity training for Waqf administrators.

4. Public-Private Partnerships (PPPs)

The findings show that working with private technology companies is a practical way to get beyond operational and technical obstacles. Projects can increase efficiency, innovation, and scalability by integrating Waqf finance with private sector knowledge of AI-driven trash management. This is consistent with case studies from Jordan and Malaysia, where PPPs effectively combined private technical expertise and Waqf financing to promote sustainable urban development (Vlaskin & Vladimirov, 2018; Muhammad et al., 2024).

5. Economic and Environmental Impacts

According to the study, Waqf-funded AI waste management systems can minimize reliance on landfills, increase recycling efficiency, and lessen environmental damage (Brotosusilo & Handayani, 2020; WaCIDS, 2021). In terms of the economy, these programs provide jobs in the waste management, recycling, and technology sectors while offering long-term financial assistance through the Waqf. Incorporating

Waqf funds guarantees the long-term viability of the project and is consistent with Islamic values of continuous communal benefit.

6. Long-Term Sustainability and Alignment with Islamic Values

Results demonstrate that using Waqf for environmental initiatives ensures ongoing community involvement while promoting sustainable stewardship, a fundamental principle of Islamic ethics. Waqf offers a faith-based, long-lasting mechanism for sustainability, which is in line with the long-term funding requirements of AI-powered waste management (Muhammad et al., 2025; Arifatul et al., 2020; Nabila et al., 2022).Waqf can be used as a practical and theological instrument for sustainable urban development by tying environmental responsibility to Islamic principles.

The findings highlight how Waqf may revolutionize sustainable waste management through:

a. Updating Waqf governance and management procedures.
b. Improving legal structures to make it easier to finance technological initiatives.
c. Promoting public-private collaborations to take use of technical know-how.
d. Aligning waste management programs with Islamic ethical beliefs and community values.

In summary, the results show that combining Islamic social finance with AI-driven waste management not only solves environmental issues but also improves long-term sustainability, economic viability, and community support. This provides a model for other areas looking to integrate technology-driven environmental solutions with faith-based finance.

E. CONCLUSION

This study shows that Waqf, a crucial tool of Islamic social financing, has significant potential to enhance AI-driven intelligent waste management systems, thereby promoting environmental sustainability and social welfare at the same time. Communities can create long-term financial sources that are consistent with Islamic values of justice, stewardship, and unceasing charity by utilizing the permanent character of Waqf (Sadaqah Jariyah). Waqf's incorporation into contemporary trash management technology offers a special fusion of innovation, ecological responsibility, and faith-based finance, offering long-term solutions to urban garbage problems. The results show that although the community is becoming more conscious of environmental issues, Waqf has historically been connected to fields like healthcare,

education, and religious infrastructure. Waqf administrators must implement institutional changes and capacity-building initiatives in order to fully achieve their potential in environmental sustainability. The strategic distribution of Waqf funding to technology-driven projects will be made easier by improvements in governance, technical training, and clear legal frameworks, guaranteeing efficiency, accountability, and alignment with Shariah goals. The report also emphasizes the significance of community involvement and public awareness. Educating donors and stakeholders about the social and environmental effects of Waqf-driven AI waste management can boost community ownership, boost participation, and strengthen the connection between Islamic ethical principles and the Sustainable Development Goals (SDGs), especially Goals 11 (Sustainable Cities and Communities) and 12 (Responsible Consumption and Production).

The research also highlights opportunities for innovation through public-private partnerships (PPPs). Collaboration between Waqf institutions, private technology providers, and local governments can combine financial sustainability with technical expertise, enabling the deployment of efficient AI-driven waste sorting and recycling systems. Such partnerships not only enhance project feasibility but also ensure scalability and long-term impact.

In conclusion, adapting Waqf to fund AI-enabled environmental solutions represents a pragmatic and religiously grounded approach to sustainable urban development. By bridging traditional Islamic social finance with modern technology, Waqf can address contemporary environmental challenges, foster community well-being, and provide a replicable model for other Muslim-majority regions. For this potential to be fully realized, it requires coordinated efforts across institutions, governance frameworks, and communities, all guided by the principles of Maqasid al-Shariah, ensuring that the benefits are sustainable, equitable, and ethically sound.

Recommendations

Based on the findings of this study, the following recommendations are proposed to optimize the use of Waqf in funding AI-driven waste management solutions, ensuring alignment with Islamic social finance principles, environmental sustainability, and sustainable urban development.

1. **Recommendations for Governments**

a. Regulatory Support for Waqf Innovations: Governments should provide adaptable legislative frameworks that enable Waqf organizations to fund environmental and technical projects, such as waste management systems driven by artificial intelligence. Wider involvement and investment can be promoted by offering Waqf contributions to green initiatives tax benefits, grants, or subsidies.

b. Policies to Encourage Public-Private Partnerships (PPPs): Governments ought to encourage cooperation between private waste management or technology companies and Waqf organizations. Governments can guarantee the successful execution of AI-driven environmental projects by offering infrastructure support, shared resources, or policy incentives.

c. Capacity-Building Programs: Waqf administrators should participate in training courses that emphasize governance procedures, environmental sustainability, and technology management. By strengthening Waqf bodies' institutional capability, long-term project viability and operational efficacy would be ensured.

2. **Recommendations for the Private Sector**

a. Collaborative Ventures with Waqf Institutions: Waqf institutions should work with private businesses that specialize in recycling, waste management, and artificial intelligence. Their knowledge can guarantee that AI-driven waste management solutions are successfully implemented, maintained technically, and optimized.

b. Corporate Social Responsibility (CSR) Initiatives: As part of CSR strategy, companies can provide AI tools, training, or materials for environmental programs sponsored by Waqf. These programs improve a company's reputation while offering long-term social and environmental advantages.

c. Joint Research and Development (R&D): Waqf institutions and private sector entities can collaborate to create context-specific AI garbage sorting and recycling solutions. In developing countries, adapting technology to local needs guarantees affordability, increased accessibility, and improved impact**.**

3. **Recommendations for Religious Institutions**

a. Encourage Environmental Stewardship through Religious Education: Sermons, community initiatives, and educational campaigns should all incorporate environmental stewardship and responsibility (Khilafah). Emphasizing the

relationship between Waqf, environmental preservation, and Maqasid al-Shariah helps boost support for green initiatives and community involvement.

b. Encourage Community Awareness Campaigns: By highlighting the social and environmental advantages of Waqf-funded AI-driven garbage management, religious leaders may actively inform communities. Raising awareness can motivate contributions and involvement in these programs.
c. Promote Partnerships with Waqf and Environmental Organizations: Religious institutions can guarantee that initiatives fulfill community needs while respecting Islamic values by working with Waqf foundations, non-governmental organizations, and governmental agencies. This will increase the projects' efficacy and sustainability.

4. **Recommendations for Communities**

a. Promote Waqf Contributions for Environmental Projects: Communities should be encouraged to contribute to Waqf monies set aside for recycling and environmentally friendly waste management programs. Participation and support may increase if people are aware of the advantages for religion and the environment.
b. Volunteer and Take Part in Local Waste Management Programs: Waqf-funded initiatives, including as waste sorting, recycling, and cleanup efforts, are open to community members. Increasing local involvement guarantees the sustainability of projects and strengthens project ownership.
c. Encourage Sustainable trash Practices: To support Waqf-driven efforts, households and communities should embrace eco-friendly practices like recycling, appropriate disposal, and trash reduction. The goals of Islamic environmental stewardship are strengthened by community-led sustainability initiatives.

Governments, businesses, communities, and religious organizations can work together to create a unified framework for Waqf-funded AI-driven trash management by putting these suggestions into practice. Utilizing each stakeholder's special talents guarantees that Islamic social financing is in line with social welfare, technical innovation, and environmental sustainability, offering a long-term and reproducible model for sustainable urban development.

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