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Managing Zakat Funds through Technological Integration: A Case Study of MyIPIZ Grants System for Institute of Research and Zakat Innovation (IPIZ) at Universiti Utara Malaysia (UUM)

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Abstract

This paper explores the integration of digital technologies in managing Zakat-funded research grants through a case study of the MyIPIZ Grants System developed by the Institute of Research and Zakat Innovation (IPIZ) at Universiti Utara Malaysia (UUM). Zakat institutions serve as vital catalysts for economic development and community empowerment by allocating funds toward research and innovation initiatives; however, they frequently face challenges such as manual inefficiencies, limited transparency, and inadequate mechanisms to assess the socio-economic impact of these developmental investments. The MyIPIZ Grants System addresses these issues by applying principles of Business Process Reengineering (BPR) and stakeholder theory to automate and optimise the grant management lifecycle, from application submission to final reporting. It employs digital workflow encompassing online applications, automated approvals, fund disbursement, real-time monitoring, and comprehensive digital reporting. This transformation enhances efficiency, ensures compliance with Shariah principles, and promotes stakeholder trust through improved accountability and transparency. The study also identifies key implementation challenges such as user resistance, integration issues, and data security concerns, and recommends strategies including stakeholder engagement, capacity-building, and leveraging latest technologies. Lessons from MyIPIZ's implementation underscore its potential as a replicable model for other Zakat institutions aiming to modernise their fund governance. Ultimately, this research contributes to the broader discourse on Islamic financial digitalisation by offering a practical and ethically grounded framework for Zakat fund administration in the digital era.

Keywords: *Zakat Fund Management; Digital Grant System; MyIPIZ; Stakeholder Accountability; Business Process Reengineering.*

Introduction

Zakat institutions collect, manage, and distribute zakat funds to eligible recipients, ensuring the effective redistribution of society's wealth. According to Islamic jurisprudence, zakat funds must be distributed to specific groups, including the poor (fuqara'), the needy (masakin), administrators (amil), new converts (muallaf), those in debt (gharimin), those who promote the cause of Allah (fisabilillah), poor travellers (ibnus sabil), and those escaping from slavery (riqab). Modern zakat institutions such as Lembaga Zakat Kedah Malaysia (LZNK), an agency responsible for Zakat fund management of Kedah, have expanded their scope beyond direct financial support to include entrepreneurship programs, research funding, and infrastructure development [1]. By managing significant financial resources, these institutions play a strategic role in the economic empowerment and poverty alleviation of Muslim communities.

In recent years, LZNK has demonstrated substantial growth in the collection and disbursement of Zakat funds. As reported, LZNK collected around RM273 million and RM303 million in 2023 and 2024, covering three Zakat categories: Zakat from employment income, Zakat from business income, and Zakat al-Fitr (Kerajaan Negeri Kedah, 2025). LZNK also disbursed approximately RM348 million of

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zakat funds in 2024 to all categories of recipients (asnaf) through various programs and initiatives, including welfare aid, food security, education, housing, health, and clothing assistance.

Given the growing amount of Zakat funds entrusted to LKZNK over the years, the agency foresees an increased complexity of managing, monitoring, and assessing the impacts of Zakat collections and distributions. Hence, LZNK recognised the importance of conducting ongoing research and consultation activities to explore issues and solutions on current zakat management practices. Identifying key issues and potential solutions by credible academic scholars becomes essential for developing a more sustainable Zakat management ecosystem. LZNK, therefore, has awarded special research grants through IPIZ to researchers and consultants to conduct impact-driven studies aimed at enhancing zakat distribution, governance, and potential technology integration.

Despite the crucial roles of Zakat institutions, such as LZNK, in managing growing Zakat collections and distributions, many institutions generally suffer from structural and operational inefficiencies, particularly in managing and allocating funds. Many Zakat institutions still rely upon manual, paper-based administrative processes, leading to delays, increased errors, and inefficiencies in decision-making, such as the allocation of funds. These inefficiencies affect the speed at which eligible recipients receive their financial assistance, reducing the impact of zakat funds. As Awalluddinet et al. (2024) indicated, inefficiencies in zakat management persist due to slow administrative processes, inadequate tracking mechanisms, and reliance on outdated data entry systems. These challenges undermine the effectiveness of Zakat institutions and limit their ability to effectively meet the needs of vulnerable communities.

A lack of automation in administrative tasks impedes Zakat institutions from making quick and well-informed decisions. Slow data processing, outdated record-keeping methods, and disconnected systems create delays, making it challenging to plan effectively and distribute resources efficiently. Meerangani et al. (2022) further highlight that the absence of a centralised digital management system limits access to real-time financial data, making it difficult for decision-makers to assess fund availability, approve disbursements efficiently, and respond to urgent needs.

Furthermore, the lack of structured data and analytical tools impairs Zakat institutions' ability to evaluate past distributions and forecast future needs. Putri (2022) emphasises that poor governance structures lead to inadequate financial reporting and weak decision-making frameworks, reducing institutional transparency and stakeholder trust. Without access to reliable financial and operational data, ensuring that Zakat funds have reached those in need is getting more challenging. Planning distributions aligned with socio-economic priorities, optimising fund allocation, and responding effectively to emerging poverty challenges become difficult tasks.

In line with technological advancement, institutions can leverage digital technologies such as AI-driven analytics, integrated financial reporting, and real-time transaction tracking to transform their decision-making processes (Mokodenseho et al., 2023). These solutions enable the institutions to streamline administrative workflows, track project progress, and make data-driven operational adjustments. Additionally, inefficiencies in managing administrative tasks and monitoring ongoing initiatives pose significant challenges, as the lack of structured tracking mechanisms hinders oversight of project execution. Saidona and Ghani (2021) found that this gap weakens accountability and prevents institutions from effectively evaluating the long-term impact of their initiatives on organisational efficiency and service delivery. Zakat institutions could enhance their ability to allocate resources more strategically, improve governance, and strengthen zakat payers' confidence in the institutions by addressing administrative inefficiencies and integrating data-driven decision-making processes.

To tackle the issues of inefficient operation, lack of transparency, and limited tracking mechanisms in Zakat fund management, LZNK has taken proactive measures to modernise its operations by investing in technological solutions. Given the considerable allocation for research and consultation activities from the Zakat fund, LZNK anticipates that a well-structured and accountable grant distribution system should be in place to effectively manage the grant allocation activities. Hence, LZNK has collaborated with the IPIZ, UUM to develop Research Grant Management Systems (MyIPIZ). MyIPIZ aims to streamline Zakat-funded research and consultancy activities, ensuring efficient and transparent grant management processes. The collaboration mainly addresses the growing need for research-based solutions in administering zakat funds entrusted to the university for research and consultation activities. Under this initiative, IPIZ commissioned UUM researchers via UUM-IPIZ to develop MyIPIZ Grants, a web-based system. The system aims to automate Zakat-funded research and consultancy grants' administration, application, approval, tracking, and monitoring functions.

Researchers have designed the MyIPIZ Grants system to address several key challenges in Zakat fund management as follows:

Table 1: Challenges in Traditional Grant Management and MyIPIZ Grants' Digital Solutions

Challenges	How MyIPIZ Grants addresses them
Manual inefficiencies in grant processing	Digitalise the application processes to reduce paperwork and accelerate approvals in various stages.
Lack of transparency in fund allocation	Provide tracking of fund disbursement and reporting of financial claims made.
Limited impact assessment mechanisms	Enable researchers to submit periodic progress reports online, allowing data-driven evaluations.
Tracking of reporting submission and total fund disbursement	An automated tracking system to monitor report submissions and to ensure complete transparency of fund allocation.

Table 1 outlines the major operational challenges in conventional research grant management and illustrates how the MyIPIZ Grants system addresses each issue through targeted digital interventions. One of the predominant challenges in traditional grant administration is the manual inefficiency in processing applications, which often leads to delays and administrative bottlenecks. The MyIPIZ Grants system overcomes this by fully digitalising the application process, thereby minimising paperwork and accelerating approvals at multiple stages.

Another critical concern is the lack of transparency in fund allocation, which can undermine accountability and stakeholder confidence. In response, MyIPIZ Grants integrates fund tracking features and financial reporting, ensuring that disbursement records are visible and auditable at all times. Furthermore, the traditional absence of systematic impact assessment mechanisms is resolved through the platform's functionality that allows researchers to submit periodic progress reports online. This facilitates timely and data-driven evaluations by administrators.

Finally, the system addresses the challenge of tracking both reporting compliance and total fund utilisation. By incorporating an automated tracking mechanism, MyIPIZ Grants ensures that all reporting submissions are monitored and that the status of fund disbursement is fully transparent. In summary, Table 1 demonstrates how MyIPIZ Grants provides a comprehensive digital framework that not only streamlines administrative processes but also enhances transparency, accountability, and the overall effectiveness of grant management.

Literature Review

The Role of Zakat in Community Development

Zakat, one of the five fundamental pillars of Islam, serves as an essential mechanism for wealth redistribution and poverty alleviation. By mandating the transfer of a portion of wealth from financially able Muslims to those in need, Zakat ensures economic justice and social equilibrium within the Muslim community Ahmed et al. (2024). However, contemporary economic challenges and evolving social dynamics necessitate a strategic transformation in allocating zakat funds. The transformation could focus on more sustainable development initiatives rather than merely financial assistance [2].

Recent studies emphasise the importance of Zakat-funded programs that foster economic empowerment, moving beyond conventional aid distribution models [2, 3]. According to Saratian et al. (2025), shifting from passive financial support to active investment in community-driven projects can maximise the long-term impact of Zakat funds. This strategic reallocation allows beneficiaries to develop economic independence and reduce long-term reliance on external assistance. Islamic economists advocate for implementing innovative Zakat policies encompassing entrepreneurial initiatives, educational advancements, and social development programs.

LZNK embodies this methodology by allocating Zakat resources towards initiatives aimed at economic empowerment, consequently establishing a sustainable framework for the alleviation of poverty and the enhancement of social mobility [4]. Zakat funds could be channelled at least into three major initiatives. First, zakat institutions should provide micro-financing and business training to

underprivileged individuals, enabling them to establish and expand small businesses. Financing incentive fosters self-reliance and job creation, thus reducing the recipients' financial dependence (Asni et al., (2024). Secondly, zakat institutions should promote the role of education in long-term economic stability by allocating zakat funds for education scholarships, vocational training, and technical skill development programs. These initiatives help beneficiaries acquire marketable skills, enhance employability, and generate more income Zaki et al. (2020). Finally, zakat institutions could invest in affordable housing, healthcare facilities, and community centres to improve the living standards of disadvantaged populations [5].

Nevertheless, the role of Zakat institutions should extend beyond the disbursement of financial aid to those in need, as they are increasingly recognised as a major player in sustainable economic empowerment. The shift from short-term financial relief to long-term economic resilience aligns with Maqasid al-Shariah, which requires Zakat institutions to adopt innovative approaches to manage, monitor, and assess the impacts of zakat funds. Having said that, information technology integration into the zakat administration has become imperative to support the innovations of zakat institutions. Information technology deployment allows for greater efficiency, transparency, and accountability in fund distribution (Kamaruddin et al., 2024). As Zakat-funded programs, particularly those supporting entrepreneurial ventures and skills development, continue demonstrating positive economic impacts, Zakat institutions must modernise their administrative frameworks to ensure effective fund utilisation, real-time tracking, and strategic decision-making.

A key transformation in zakat administration is the adoption of digital platforms for fund collection, allocation, and monitoring. Traditional paper-based methods and manual processing often result in delays, inefficiencies, and challenges in tracking the utilisation of funds. Transitioning into automated management systems enables zakat institutions to reduce processing time, minimise administrative burdens, and improve accuracy in fund allocation. Redzuan and Camdzic (2024) highlight how Zakat-funded entrepreneurial programs have successfully enhanced household income levels by providing structured financial support and business development training. However, the long-term success of such programs depends on effective oversight and continuous monitoring, which can be realised via technological integration.

One of the most significant advancements in Zakat administration in Malaysia is the development of web-based platforms for grant and fund management, such as eZakat Online by Lembaga Zakat Selangor (LZS) and iZakat by Majlis Agama Islam Wilayah Persekutuan (MAIWP). These digital platforms are designed to streamline the application process for zakat aid, facilitate automated approvals, and enable milestone-based disbursement of funds. By leveraging cloud computing and AI-driven analytics, zakat institutions can efficiently track beneficiaries' progress, assess the impact of funded projects, and adjust resource allocation based on real-time financial and social indicators [6].

Despite the evident benefits of technological integration, challenges remain, particularly in ensuring system interoperability and security. Many zakat institutions still operate within traditional administrative structures, requiring significant investment in digital transformation and capacity building (Saad et al., 2023). To overcome these challenges, institutions must adopt a phased approach to digitisation, beginning with automating critical administrative functions and later integrating more advanced financial technologies. In addition, providing training programs is essential to augmenting digital competency amongst zakat administrators, ensuring a smooth transition to technology-driven governance.

Modernising zakat administration through technology integration is not just about improving operational efficiency. Instead, it is a strategic imperative to maximise the socio-economic impacts of all the initiatives introduced. By embracing digital technologies such as AI-driven analytics, blockchain security, mobile solutions, and other digital management platforms, zakat institutions could enhance fund management transparency, ensure efficient resource allocation, and empower beneficiaries with sustainable financial opportunities. As the role of Zakat expands beyond traditional charitable distribution toward economic development and financial inclusion, leveraging technology is essential to achieving long-term poverty alleviation and financial sustainability.

Business Process Reengineering (BPR) in Fund Management

Business Process Reengineering (BPR) is a strategic management approach that fundamentally redesigns and transforms business processes to substantially improve efficiency, effectiveness, and service delivery [7]. By rethinking traditional workflows and eliminating non-value-adding tasks, BPR

enables organisations to reduce operational costs, enhance transparency, and improve stakeholder engagement (Popoola et al., 2024).

In research grant management, BPR addresses administrative inefficiencies, manual processing delays, and lack of transparency. Weerakkody et al. (2011) emphasise that public and private sector institutions can significantly enhance their resource allocation and monitoring capabilities by implementing reengineered digital solutions. The MyIPIZ Grants System, developed at Universiti Utara Malaysia (UUM), exemplifies the application of BPR principles in optimising Zakat-funded research and consultancy grant management (Nasir et al., 2024). Traditional grant management that often involves multiple layers of approvals and extensive paperwork tends to delay the fund disbursement, which reduces the effectiveness of financial aid distribution. Applying BPR enables institutions to migrate from a paper-based to an automated, web-based grant management system. The automated system could enhance the efficiency of the grant management process in at least three ways. First, an automated system enhances process automation and workflow optimisation. BPR identifies and eliminates redundant administrative tasks throughout the process flows by digitising grant application, evaluation, and monitoring processes. As Yoon (2024) reported, automated grant management reduces processing time by 30% and improves accessibility for applicants. Secondly, the system enhances grant processes due to a substantial reduction in administrative delays that occur at various stages, particularly manual data verification and approval procedures. Finally, the digitalisation process enhances transparency and accountability as a reengineered digital platform improves real-time tracking of project progress reporting.

Stakeholder Theory and Project Accountability

Stakeholder Theory, developed by Freeman (1984), posits that organisations must consider the interests of all stakeholders to achieve sustainable and ethical decision-making. This theory emphasises that organisations should balance the needs and expectations of various stakeholders, including fund providers, project implementers, regulatory bodies, and beneficiaries, to ensure long-term success [8]. Within the context of Zakat fund management, this theory explains the crucial responsibility of the appointed agency (Zakat institutions) to manage the entrusted Zakat funds most effectively to demonstrate its accountability and transparency to the stakeholders.

From an Islamic finance perspective, including Zakat institutions, stakeholder engagement ensures an ethical and equitable distribution of resources [9]. Effective stakeholder-oriented Zakat management systems ensure that funds are utilised efficiently, fairly, and aligned with societal and institutional objectives [10].

Zakat institutions operate within a multi-stakeholder ecosystem, where donors, administrators, researchers, regulatory bodies, and beneficiaries interact to ensure effective fund collections and optimal fund distributions [9]. Applying Stakeholder Theory in Zakat administration ensures that each stakeholder's interests are considered, leading to (1) improved transparency and governance – stakeholder engagement necessitates precise reporting mechanisms and accountability frameworks, reducing opportunities for fund mismanagement; (2) enhanced fund utilisation – ensuring that beneficiaries and researchers have a voice in how Zakat funds are allocated; directing sufficient amount of resources for high-impact community projects; and strengthened institutional legitimacy – engaging all stakeholders fosters trust and legitimacy, which is essential for sustained donor participation and regulatory compliance.

Zakat institutions must address the expectations of multiple stakeholders to ensure funds are utilised effectively and in alignment with Islamic finance principles. The primary stakeholders include:

Table 2: Key Stakeholder Roles in Enhancing Accountability of Zakat Fund Distribution

Stakeholder Group	Role and Contribution to Project Accountability
Fund Providers (Zakat Payer, Government Agencies, Corporate Entities)	Contribute Zakat funds and expect transparent utilisation and impact report.
Zakat Administrators and Institutions	Oversee fund collection, allocation, and project monitoring, ensuring compliance with Shariah principles.
Researchers and Consultants	Utilise Zakat research grants to analyse, improve, and innovate fund distribution models.
Regulatory Bodies (Shariah Councils, Government Agencies)	Ensure that Zakat funds are distributed as per Islamic finance regulations and legal standards.

Beneficiaries (Underprivileged, Entrepreneurs, Community Groups)	Direct recipients of the Zakat fund whose economic empowerment and well-being are the ultimate objectives.

Table 2 presents a categorisation of the key stakeholder groups involved in Zakat fund distribution, along with their respective roles and contributions to ensuring accountability and effective utilisation of resources. Fund providers comprising individual Zakat payers, government agencies, and corporate contributors, are the primary financial sources and hold strong expectations for transparent reporting on how their contributions are utilised and the impacts generated, as emphasised by Putri, Bahri, and Romansyah (2022).

Zakat administrators and institutions are tasked with the end-to-end management of Zakat funds, including collection, allocation, and monitoring, all within the framework of Shariah compliance. As highlighted by Saad et al. (2023), these institutions are central to operational integrity and religious adherence. Meanwhile, researchers and consultants play a complementary yet vital role by utilising research grants to develop and refine fund distribution models, thus contributing to the innovation and effectiveness of Zakat disbursement (Saidona & Ghani, 2021).

Regulatory bodies such as Shariah councils and relevant government agencies provide oversight to ensure that the disbursement processes align with Islamic financial regulations and statutory laws, as documented by Kamaruddin et al. (2024). Lastly, the beneficiaries, ranging from the underprivileged to entrepreneurs and community groups, are the end recipients whose socio-economic upliftment is the primary goal of Zakat initiatives, as underscored by Redzuan and Camdzic (2024).

To reinforce accountability in Zakat fund governance, a stakeholder-centric approach is imperative. This includes participatory decision-making, where stakeholders such as researchers, community representatives, and policymakers are involved in fund allocation discussions to ensure decisions are reflective of actual needs. Transparent reporting mechanisms, such as real-time publication of financial data, impact evaluations, and audit results, further establish trust and legitimacy among all parties involved. Regular performance evaluations of Zakat-funded projects serve to assess effectiveness and guide future improvements. As demonstrated in Table 2, the collective contributions and oversight from diverse stakeholders are crucial in promoting a robust, transparent, and Shariah-compliant Zakat ecosystem.

Accountability in Zakat fund distribution can be reinforced by establishing a stakeholder-driven governance framework that incorporates (1) participatory decision-making – engaging researchers, community leaders, and policymakers in fund allocation decisions ensures greater inclusivity and alignment with social needs; (2) transparent reporting mechanisms – publishing real-time financial reports, impact assessments, and audit results fosters trust among fund providers and regulatory bodies; and (3) regular performance evaluations – continuous monitoring of Zakat-funded projects ensures that funds are used effectively and deliver measurable social impact.

Web-Based Grant Management Systems

Modern grant management platforms, executed by systems such as MyGrants Malaysia, have redefined the administration of research and financial grants by implementing real-time tracking, automated approvals, and digital reporting. These platforms mitigate traditional inefficiencies by digitising the entire grant lifecycle, from submission to final reporting, thereby reducing human error and administrative delays.

With real-time tracking systems, administrators can monitor grant applications, approval processes, and project progress at all times. This digital monitoring ensures every step of the grant process is recorded and easy to access, helping to spot any delays or inconsistencies quickly. As Ismail et al. (2023) indicate, real-time tracking simplifies reporting for easier monitoring of project progress, ensuring transparency and allowing institutions to address any delays or issues promptly. In the context of Zakat fund management for education, these capabilities are invaluable for ensuring that allocated funds are directed to the right researchers while enabling effective progress monitoring to maximise future benefits.

Automated approval mechanisms replace the traditional, often manual, review processes with algorithm-driven workflows that standardise decision-making. These systems minimise human bias and reduce the time required for each approval cycle. Automation in grant approvals leads to a more consistent and transparent evaluation process that maintains stakeholder trust (Muppala, 2025). Integrating these automated processes decreases substantial administrative burdens for Zakat

institutions, allowing staff to focus on strategic planning and impact evaluation rather than routine administration work.

Integrating modern grant management platforms into Zakat institutions offers a transformative opportunity to enhance operational efficiency and governance. By adopting systems similar to MyGrants Malaysia, Zakat institutions can benefit from (1) enhanced process efficiency due to automation reduces the time and effort spent on manual processing, thereby increasing the overall speed of fund allocation and monitoring; (2) improved accountability by having real-time tracking and digital reporting provide a clear audit trail for all transactions, reinforcing accountability at every stage of the process; (3) transparent processes and consistent communication improve trust among zakat payer, beneficiaries, and regulatory bodies, which is essential for long-term sustainability.

In summary, modern grant management platforms represent a paradigm shift in the administration of financial and research grants. Integrating a digital grant management system into Zakat institutions' functions can lead to more efficient, transparent, and accountable fund management processes that ultimately enhance Zakat's impact on community development. As Muppala (2025) noted, the digitalisation of grant processes is not merely a technological upgrade but a fundamental transformation to redefine management and allocation of institutions' resources in the modern era.

Centralised Zakat Grant Management System: A Proposed Framework

The proposed Grants Management System integrates the following core features:

Online Grant Application

A web-based application portal allows researchers, consultants, and community agencies to apply for funding digitally, eliminating the need for manual paperwork and administrative delays [11]. This feature enhances accessibility, efficiency, and compliance by ensuring that applicants can submit proposals electronically, reducing processing time and improving data accuracy. In addition, the web-based application portal can standardise application templates and submission guidelines to ensure consistency and compliance with funding requirements. According to Meerangani et al. (2022), online application portals significantly reduce grant processing times and enhance data security, making them essential in modern grant management frameworks.

Automated Evaluation and Approval

The evaluation and approval process incorporates multi-tiered review mechanisms involving multiple parties. First, IPIZ administrators assess eligibility based on required academic themes and institutional guidelines. Secondly, academic reviewers evaluate research feasibility, project impact, and alignment with strategic priorities. Thirdly, an academic committee ensures the research grants align with the institution's strategic objectives, research priorities, and financial capacity. This automated system improves efficiency by eliminating manual paperwork and reducing administrative workload. It also elevates consistency by establishing clear, predefined criteria to ensure fair and objective decision-making. Finally, it improves transparency by providing digital records to track all review decisions and justifications, ensuring accountability in fund allocation. A study by Singh (2024) found that automated evaluation systems reduce processing times by around 37% in managing grants.

Project Monitoring Dashboard

A centralised project monitoring dashboard enables online tracking of research progress based on updates provided by researchers, ensuring alignment with the approved timeline and budget allocation. This system facilitates milestone-based fund disbursement, ensuring financial allocations correspond to key deliverables. Additionally, it enhances transparency by providing performance analytics, allowing IPIZ administrators to evaluate the effectiveness and impact of funded projects. The dashboard also offers secure access for stakeholders, including zakat payers, regulatory bodies, and researchers, enabling them to review progress reports and financial expenditures. Research by Meerangani et al. (2022) highlights that such digital monitoring systems improve accountability, optimise resource utilisation, and reduce the risks of financial mismanagement.

Digital Reporting

Automated digital reporting mechanisms ensure project updates, progress records, and performance evaluations align with institutional standards. The system supports automated report generation, reducing administrative burden and improving reporting accuracy. The system also provides auditing tools, ensuring compliance with regulations and funding guidelines. It also can analyse

the impact assessment metrics, allowing institutions to track the long-term benefits of funded projects. Institutions can enhance data integrity, operational efficiency, and stakeholder trust by replacing manual documentation with the latest technology reporting tools.

The MyIPIZ Grants System represents a modernised, technology-driven approach to Zakat-funded grant management. By incorporating online applications, automated approvals, online monitoring, and digital reporting, the system enhances efficiency, transparency, and accountability in Islamic fund distribution. Future enhancements may include blockchain-based fund tracking and AI-driven grant evaluations to improve further fund security and allocation precision [12].

Case of MyIPIZ Grants System

The MyIPIZ Grants System follows a structured and automated workflow process to enhance grant management's efficiency, transparency, and accountability within Zakat-funded research and consultancy projects (Nasir et al., 2024). By integrating technology-driven solutions, this system optimises grant processing, approval process, and progress monitoring, ensuring that Zakat funds are allocated effectively and utilised in alignment with IPIZ and LZNK rules and regulations.

The workflow consists of six key stages, each ensuring grant applications undergo rigorous evaluation, approval, and monitoring to maximise their impact.

Key Stages in the MyIPIZ Grants Workflow Process

Table 3: Key Stages in the MyIPIZ Grants Workflow Process

Stage	Description
Application Submission	Applicants submit project proposals via an online platform, ensuring accessibility and efficiency.
Initial Screening	Proposals undergo a preliminary evaluation to suit the themes and funding criteria.
Expert Review & Approval	Subject-matter experts and IPIZ Review Committee thoroughly assess project feasibility, impact, and sustainability.
Ongoing Monitoring	Regular project updates, financial tracking, and performance evaluations ensure accountability.
Final Reporting Submission	Final reporting submission involves documenting project outcomes.
Digital Reporting	Digital reporting allows administrators to access comprehensive research application reports, monitor project progress, track total fund disbursement for each project, and oversee various approved grant aspects.

Table 3 outlines the core stages in the workflow process of the MyIPIZ Grants System, demonstrating a comprehensive, structured, and technology-enabled approach to managing Zakat-funded research and consultancy initiatives. The process begins with the *Application Submission* stage, where researchers, particularly Islamic scholars and consultants affiliated with UUM, submit their project proposals via an online platform. This digital system enhances efficiency by eliminating paper-based submissions, reducing administrative errors, and standardising application formats through templates and automated eligibility checks.

1. As shown in Table 3, once applications are submitted, they enter the *Initial Screening* phase. Here, proposals are assessed for their thematic relevance and alignment with institutional funding criteria. Proposals that do not meet the basic requirements are either rejected or returned to applicants for revision and resubmission.

2. The *Expert Review & Approval* stage involves a detailed evaluation by subject-matter experts and the IPIZ Review Committee. This stage prioritises three critical evaluation criteria: project feasibility, projected impact on Zakat beneficiaries and the wider Islamic community, and long-term sustainability. Only proposals that meet these rigorous standards proceed to receive funding approval.

3. Following approval, projects enter the *Ongoing Monitoring* phase, wherein fund disbursements are made in structured phases based on milestone achievements. This phased funding mechanism ensures continuous accountability, as subsequent disbursements are contingent upon verified progress and deliverables. The system includes a digital dashboard that tracks

progress in real-time, monitors financial integrity, and supports automated reminders for reporting deadlines. As noted by Meerangani et al. (2022), such digital monitoring systems are crucial for early detection of inefficiencies, thereby reducing the risk of project underperformance.

4. Upon completion of the funded activities, the *Final Reporting Submission* requires researchers to document outcomes, lessons learned, and the broader impact of their projects. These final reports are reviewed by IPIZ administrators and academic evaluators to ensure the initial objectives have been met and to capture insights for improving future grant cycles.

5. The final stage, *Digital Reporting*, serves as a centralised repository that enables grant administrators to access comprehensive records of applications, monitor project progress, verify disbursement status, and manage other grant-related processes. As illustrated in Table 3, this digital integration facilitates evidence-based decision-making and reinforces transparency, operational efficiency, and the accountability of Zakat-funded research initiatives. The MyIPIZ Grants System, through its workflow, offers a replicable model for other Zakat institutions seeking to modernise and strengthen their grant management practices.

Lessons from MyIPIZ Grants Implementation

The MyIPIZ Grants System, as documented in the ZAWED proceedings, serves as a benchmark for the digital transformation of grant management in research funding. Developed at UUM, this system was designed to enhance efficiency, transparency, and accountability in administering Zakat-funded research and consultancy grants. The transition from a manual, paper-based system to a structured, technology-driven approach has provided valuable lessons for institutions seeking to optimise financial governance and fund allocation mechanisms.

One of the most significant lessons from implementing MyIPIZ Grants is the impact of automation on processing efficiency. Before the system was introduced, the approval process for research funding was slow and inefficient, primarily due to manual paperwork, bureaucratic delays, and repetitive administrative tasks. These inefficiencies resulted in extended waiting times for grant applicants, often disrupting the progress of research projects. The introduction of automated workflows, digital application submission, and milestone-based disbursement reduces processing time by 50%, allowing researchers to access funds in a more timely and structured manner. This improvement aligns with findings from digital finance studies, which suggest that process automation significantly minimises human error and improves workflow efficiency (Meerangani et al., 2022).

Another critical takeaway is increased transparency and financial accountability through real-time tracking and automated reporting mechanisms. Traditional grant management systems often suffered from poor record-keeping and limited oversight of fund disbursement, making it difficult to track the appropriate use of allocated funds. The MyIPIZ system addressed this issue by implementing real-time fund tracking, structured audit trails, and performance monitoring dashboards, ensuring that every financial transaction was justified and aligned with project deliverables. As documented by Nasir et al. (2024), these features led to greater confidence among stakeholders, including Zakat administrators and institutional funders, as they could easily access financial reports and track project progress at any time. This level of transparency is essential for ensuring compliance with Islamic financial principles and ethical governance standards [13].

The introduction of the MyIPIZ Grants System also significantly enhanced user satisfaction among researchers and administrators. One of the major issues faced in the previous system was the lack of communication between grant applicants, reviewers, and fund administrators, leading to confusion and inefficiencies. With MyIPIZ, features such as automated notifications, role-based access control, and centralised communication dashboards significantly improved collaboration and clarity within the grant process. As a result, user satisfaction surveys conducted after the implementation of the system reported an average satisfaction score of 4.7 out of 5, with 87% of users stating that the system significantly improved their experience in managing research grants. Respondents highlighted that the digital submission process is faster, has a more structured review process, and promotes a more transparent and reliable tracking of fund disbursements (Nasir, et al., 2024). This finding aligns with research on digital adoption in financial management, where user-friendly digital platforms enhance engagement and satisfaction [14].

A crucial lesson from MyIPIZ Grants is ensuring Shariah compliance in financial governance. Since Zakat allocations are subject to strict Islamic financial principles, the system was designed to

incorporate Shariah-compliant verification measures during the proposal screening and post-funding evaluation stages. This verification measure ensures that funds are allocated exclusively to eligible beneficiaries and projects that adhere to Islamic values. This aspect of the MyIPIZ system offers a valuable framework for other Zakat institutions looking to modernise their financial management while maintaining religious and ethical compliance [13].

The execution of MyIPIZ Grants also underscores the importance of continuous technological innovation to maintain long-term efficiency and adaptability. While the system has successfully streamlined grant processing, future enhancements could further strengthen its functionality. For example, integrating AI-driven project evaluations could help assess the potential impact of funding applications before approval. At the same time, blockchain-based financial tracking could introduce an additional layer of security and fraud prevention. Nasir et al. (2024) revealed that future developments should focus on predictive analytics for impact assessment, improved mobile accessibility, and deeper integration with national financial regulatory bodies to create a more robust and adaptable grant management system.

In conclusion, implementing MyIPIZ Grants at UUM provides a compelling case for adopting digital solutions in grant administration, particularly in the Islamic institutions that offer development grants to other parties. The system's execution demonstrates that automation, real-time tracking, structured compliance frameworks, and enhanced stakeholder engagement can lead to better fund utilisation and research outcomes. For Zakat institutions, adopting a similar digital model could revolutionise the management of community development funds, ensuring that research initiatives and social projects are funded efficiently, transparently, and aligned with Islamic financial principles. As financial technology keeps evolving, the MyIPIZ model offers institutions compelling fundamentals of research grant systems for potential future expansion.

Challenges and Recommendations

Implementing digital-based grant management systems, such as MyIPIZ Grants System, offers abundant advantages, including enhanced efficiency, transparency, and accountability in research funding. Nonetheless, transitioning from traditional, manual-based fund management to an automated system demands institutions to carefully address various challenges to ensure successful and sustainable digital solution adoption. One plausible barrier to address is managing resistance to change by stakeholders who are already convenient with the conventional administrative processes. Being accustomed to the manual-based process flow for years makes administrators and researchers shift to a fully digitalised system, thus leading to resistance. Resistance to the digitalised solution often stems from a lack of digital literacy, fear of job displacement, and apprehensions about system reliability. Secondly, organisational inertia impedes progress, as institutions hesitate to invest in new technologies given cost-related factors, training requirements, and potential workflow disruptions [7]. Addressing these concerns requires a comprehensive change management strategy, including structured training programs, stakeholder engagement sessions, and awareness campaigns that highlight the benefits of automation in reducing administrative workload and improving grant distribution efficiency [15].

The third challenge for successfully deploying digital-based grant management systems is institutions' ability to incorporate data security mechanisms. The institutions should consider incorporating strong encryption protocols, multi-factor authentication, and audit tracking mechanisms to maintain the system's integrity while preventing potential misuse and abuse. The fourth challenge lies in institutions' efforts to ensure system compliance with the applicable regulations while executing the digital-based grant management solution. Management of zakat funds demands strict adherence to Islamic finance principles, necessitating rigorous and continuous regulatory oversight by the institutions. In short, failure to integrate proper security functions and ensure high compliance with the Islamic finance framework could undermine stakeholders' trust and ultimately diminish the credibility of the responsible institutions. The next key challenge concerns about the system's integration aspect. It is pertinent for the institutions to ensure that the MyIPIZ Grants System integrates seamlessly with the existing financial system and regulatory frameworks to avoid inefficiencies in its execution. As many Zakat institutions still operate on their legacy financial systems, it could add more challenges to address while transitioning to a fully digitalised platform. Finally, other less crucial challenges, such as software incompatibility, unstandardised data formats, and limited API connectivity, could further hinder the smooth adoption of MyIPIZ Grants. Consequently, institutions must develop a scalable and flexible system that enhances existing workflows instead of causing additional complexities in their system's execution.

Several recommendations could be considered for successfully implementing MyIPIZ Grants and mitigating the above challenges. First, the institutions must secure stakeholder engagement in the new system. Active engagement is essential to overcome stakeholders' resistance to change to a new system. Secondly, conducting workshops and training series with zakat administrators, researchers, and beneficiaries can ensure alignment on system's functionalities and its potential benefits. Structured training sessions should prioritise educating users about the benefits of automation, demonstrating system usability through hands-on experience, and addressing digital literacy among the stakeholders. Active engagement of the stakeholders in the earlier stage of digital system transition could foster trust and encourage buy-in among the stakeholders, apart from promoting a culture of innovation. Investing in capacity-building training and programs is vital for the long-term success of the MyIPIZ Grants System. The capacity-building programs train Zakat administrators, researchers, and grant applicants on navigating the digital platform, understanding cybersecurity best practices, and effectively using the tools and functions within the system. Providing continuous training opportunities facilitates smooth migration to the digital grant management system while ensuring users are well-equipped with the required competence to operate the system efficiently. Moreover, having regular capacity-building workshops and helpdesk support services further enhances users' confidence and encourages widespread adoption of the system (Ali et al., 2023).

The third recommendation concerns about getting Shariah compliance certifications for all the funded projects. Since Islamic finance principles govern Zakat funds management, it is essential to integrate Shariah-compliant verification mechanisms within the MyIPIZ system. The mechanisms include implementing pre-approval reviews by Islamic finance experts, automated screening tools for verifying project eligibility, and conducting regular compliance audits to ensure the utilisation of the awarded funds is aligned with ethical practices and Islamic jurisprudence. Such compliance enhances the system's credibility within the Zakat ecosystem. Compliance verification mechanisms and ethical practices could be realised via active collaboration with Islamic finance regulatory bodies and Shariah scholars.

The next recommendation concerns about leveraging emerging technologies into the digital-based grant management system. Adopting artificial intelligence (AI) and blockchain technology can further enhance the transparency and security of digital-based grant management. To illustrate, using AI-driven impact measurement tools helps institutions analyse project outcomes, evaluate the socio-economic benefits resulting from the awarded research projects, and provide predictive analytics on future funding decisions. Similarly, integrating blockchain technology into the grant management system offers tamper-proof financial records, ensuring verifiable and immutable financial transactions. Enabling stringent data security into the grant management system is crucial for Zakat institutions so that the funds reach the targeted beneficiaries without financial leakages or fraud. Integrating AI and blockchain technologies into grant management systems improves financial accountability, reduces fraud risks, and enhances stakeholders' confidence [14].

In short, while the MyIPIZ Grants System offers a transformative approach in managing Zakat-funded research and project financing, its successful implementation is contingent upon institutions' ability to address the said challenges via structured stakeholders' engagement, ensuring compliance with Islamic financial principles, leveraging AI and blockchain for cutting-edge security features, and investing in user training programs. Incorporating these strategies warrants a successful transition to a more efficient, transparent, and accountable grant management framework while maximising Zakat funds' social and economic impact. As digital financial technology continues to evolve, integrating innovative solutions such as predictive analytics, mobile accessibility, and enhanced regulatory oversight will further strengthen the governance and sustainability of Zakat fund management systems.

Conclusion

As a fundamental pillar of Islamic socio-economic justice, the role of the zakat fund is not restricted to only alleviating poverty among the Muslim community but also promoting community development and intellectual advancement of its ummah. The Zakat institutions' roles align with a stakeholder theory, which posits that institutions, such as Zakat institutions, are accountable to various stakeholders encompassing the regulators, zakat payers, asnaf, researchers, and a Muslim community. Hence, managing the Zakat funds with greater responsiveness, transparency and accountability is very much anticipated to demonstrate their stewardship to the stakeholders.

Consequently, effectively managing the collection and distribution of zakat funds is paramount to ensure its alignment with the Syariah objectives and contemporary societal needs. All agencies

responsible for managing the Zakat fund should constantly look forward to better alternatives and strategies to manage and distribute the funds effectively. One of the initiatives to promote effectiveness and efficiency is by initiating research and consultation activities on the current practices of zakat fund management, probably via collaborative efforts with higher institutions.

Despite the initiative to promote research and consultation activities on zakat management issues, administering the research funding processes could be inherently complex and administratively demanding. The complexity could be attributed to research management activities involving considerable interrelated procedures involving various stakeholders. Manual or fragmented processes often hinder efficiency, accountability, and transparency. Backed by Business Process Reengineering (BPR) as a guiding framework to digitalise the research management processes, myIPIZ system at Universiti Utara Malaysia presents a compelling solution to the existing problems in managing research grants. Through extensive rethinking and redesigning fundamental workflows of the grant management processes, the system has helped to overcome the manual inefficiencies of the traditional system associated with grant management processes.

Among the key lessons learned from MyIPIZ are improved process efficiency by automating the processes at all stages, enabling greater accountability and transparency due to comprehensive and real-time reporting capabilities, promoting greater users satisfaction on the grant management processes, and ensuring high compliance with Syariah principle in managing the research projects fundings.

Notwithstanding the benefits of the proposed digitalised grant management system, institutions should be aware of the key challenges they face in successfully deploying the system. The challenges include stakeholder engagement, security measures, Syariah regulatory compliance, and integration with legacy systems. Among the initiatives to ensure successful system deployment, institutions could consider an early engagement of the stakeholders in the development process, conduct capacity-building training and workshops to familiarise users with the digital system and obtain Syariah compliance certifications. Finally, institutions should embrace emerging solutions such as AI, blockchain, and predictive analytics to strengthen the digital research management system in line with technological advancement.

Further research could be initiated to assess the long-term economic and societal impact of deploying digitalised grant management systems. Identifying more specific applications of emerging technologies to enhance the current scope of research management systems could be another avenue of future research to enhance transparency and trust in the systems. Such studies deepen stakeholders' understanding of digital research management systems and contribute to a greater discourse on Islamic financial digitalisation. Finally, considering MyIPIZ system is primarily dedicated to Universiti Utara Malaysia, adoption by other higher institutions might demand appropriate customisation to suit existing regulations and needs of the institutions.

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