Masyrif : Journal of Economics, Business and Management of Islamic Banking, Al-Amien Prenduan University
Vol. 07 No.1 pp. 82-98 2026

Analysis of the Realization of the Annual Work Plan and Budget (RKAT) at BAZNAS Pamekasan Regency Using the Six Sigma Method

Bahjat Qarinah Imtiyaz[1], Nurul Hidayati[2], Wardatus Syarifah[3], Fatthumah Nur Izza[4], Nur Iftitahul Husniyah[5], Nabila Maulidiyah[6]
[1,2,3,4,5,] **Al-Amien Prenduan University, [6]Al-Azhar University**
bahjatq19@gmail.com[1], nurulonly.hidayati@gmail.com[2], syarifah.ws13@gmail.com[3], fatumizza@gmail.com[4], titahsn@gmail.com[5], nabilamaulidiyah2003@gmail.com[6]
* *https://ejournal.unia.ac.id/index.php/masyrif*

ARTICLE INFO

Keywords
RKAT, Six Sigma, Budget realization, BAZNAS, Zakat management

JEL Classification: G28, L25, M11, D31

Article history
Received: 05 June 2026
Revised: 10 June 2026
Accepted: 28 June 2026
Available online: 30 June 2026

ABSTRACT

This study analyzes the realization of the Annual Work Plan and Budget (Annual Work Plan and Budget, RKAT) at the National Amil Zakat Agency (BAZNAS) of Pamekasan Regency and identifies the factors that keep realization below target. A mixed-methods design combined quantitative analysis of RKAT documents and realization reports for 2025 with in-depth interviews and documentation. The Six Sigma DMAIC framework structured the analysis. Define set each RKAT program as a unit and a program that missed its target or schedule as a defect; Measure calculated the physical realization rate, budget absorption rate, defects per million opportunities (DPMO), and sigma level; Analyze traced root causes through interview coding and cause-and-effect analysis; Improve and Control were used to formulate recommendations and to review existing control mechanisms. Four root causes were identified: limited funding, limited human resources, the absence of an integrated performance measurement system, and field-driven adjustment of programs. The improvement measures are proposals derived from the analysis and have not yet been implemented or tested, so the study does not claim that Six Sigma has improved RKAT realization. It shows that DMAIC provides a structured diagnostic for budget realization in a zakat institution and a baseline for a follow-up intervention study.

Introduction

Institutions that manage Islamic social funds face growing demands to improve performance, particularly in collecting and distributing zakat, infaq, sadaqah, and other religious social funds. Institutions such as the National Amil Zakat Agency (BAZNAS) must therefore maintain public trust while increasing the effectiveness of the programs they run. Smooth operations depend on effective planning and control, and one of the main instruments is the Annual Work Plan and Budget (*Rencana Kerja dan Anggaran Tahunan*, RKAT), which sets the programs an institution will run in a year and the funds allocated to them.

BAZNAS Pamekasan Regency manages zakat, infaq, and sadaqah (ZIS) funds through programs designed every year. In practice, however, problems remain: fundraising targets have not been met, program implementation has been delayed, and realization of the planned RKAT is not yet optimal. An institution's performance can be considered good when it achieves its targets effectively and efficiently; when realization departs from the approved plan, the gap can be treated as a nonconformity, or "defect," in the management process. Defining the gap in this way makes it measurable and open to process analysis, which is the logic of Six Sigma.

Previous studies have examined zakat institutions from several angles. Lestari and Nisa[1] found that the effectiveness of zakat management by BAZNAS in 2018–2022 still needed improvement in program planning and realization. Mahdi et al.[2] reported that the financial performance of BAZNAS Gresik in 2021–2024 fluctuated under internal and external influences, and Ma'ruf et al.[3], reviewing a decade of BAZNAS financial ratios, found generally good results but weak sub-ratios and recommended

[1] Lestari, R. P., & Nisa, F. L. (2024). Efektivitas pengelolaan zakat oleh Badan Amil Zakat Nasional (BAZNAS) di Indonesia: Periode tahun 2018–2022 [The effectiveness of zakat management by the National Amil Zakat Agency (BAZNAS) in Indonesia: 2018–2022 period]. *Jurnal Rumpun Manajemen dan Ekonomi, 1*(3), 503–509. https://doi.org/10.61722/jrme.v1i3.1469

[2] Mahdi, M., Wahib H., A. F., & Fitriana, A. Q. Z. (2025). Analisis kinerja laporan keuangan Badan Amil Zakat Nasional (BAZNAS) Gresik periode 2021–2024 [Performance analysis of the financial statements of BAZNAS Gresik, 2021–2024]. *Jurnal Ilmiah Ekonomi dan Manajemen, 3*(11), 351–363. https://doi.org/10.61722/jiem.v3i11.7063

[3] Ma'ruf, A., Hasyim, A., Yandhi, A. N., Sellani, T. I., & Fatoni, M. I. (2024). A review of zakat institution financial performance: A decade study from Indonesia. *Profit: Jurnal Kajian Ekonomi dan Perbankan Syariah, 8*(1), 71–91. https://doi.org/10.33650/profit.v8i1.5815

stronger fundraising and operational control. Miftahudin et al.[4] examined the efficiency and transparency of zakat funds at BAZNAS Semarang, and Nurfadillah and Hasbi[5] assessed zakat reporting against PSAK 109, an accountability concern. At the level of managerial control, Azhar and Dewi[6] proposed an OKR-based tool to refine performance measurement in a zakat institution. Aziz et al.[7] showed that BAZNAS programs contribute to poverty alleviation, but that the contribution depends on how the programs are designed and implemented.

These studies are valuable, but they share a limitation that matters here. They rely mainly on financial ratios, effectiveness judgments, or reporting compliance, which show how well an institution performs overall but not why specific planned programs are not realized. Among the studies reviewed here, none treats RKAT realization as a process with measurable defects, quantifies the gap between planned and realized programs at the program level, or traces its root causes systematically. Nor do they separate the causes of low realization from the improvements proposed to address them.

Six Sigma is a data-driven approach to reducing variation and defects in a process. It is a strategy because it is oriented toward stakeholder satisfaction, and a discipline because it follows the DMAIC cycle: Define, Measure, Analyze, Improve, and Control.[8] A systematic review reports that Lean Six Sigma improves organizational performance

---

[4] Miftahudin, Umam, M., & Hidayat, A. (2024). Pengaruh zakat online terhadap efisiensi dan transparansi dana zakat di Badan Amil Zakat Nasional (BAZNAS) Kota Semarang [The effect of online zakat on the efficiency and transparency of zakat funds at BAZNAS Semarang City]. *Journal of Applied Islamic Economics and Finance, 5*(1), 89–102. https://doi.org/10.35313/jaief.v5i1.5892

[5] Nurfadillah, N., & Hasbi, H. (2025). Analisis kesesuaian laporan pengelolaan zakat dengan standar PSAK 109 di Masjid Nurul Jannah Desa Poleonro Kabupaten Bone [Analysis of the conformity of zakat management reports with PSAK 109 at Nurul Jannah Mosque, Poleonro Village, Bone Regency]. *Journal Sains Student Research, 3*(2), 1–12. https://doi.org/10.61722/jssr.v3i2.3741

[6] Azhar, G. A., & Dewi, M. K. (2023). Refining performance measurement in zakat institutions: A holistic proposal of OKR implementation. *International Journal of Research in Business and Social Science, 12*(6), 351–366. https://doi.org/10.20525/ijrbs.v12i6.2693

[7] Aziz, A., Saoqi, Y., Choirin, M., & Hasbi, M. (2025). Empowering mustahik through da'wah zakat: Evaluating the impact of BAZNAS programs on poverty alleviation in Indonesia. *FALAH: Jurnal Ekonomi Syariah*, *10*(1), 1–14.

[8] Antony, J., Snee, R., & Hoerl, R. (2017). Lean Six Sigma: Yesterday, today and tomorrow. *International Journal of Quality & Reliability Management, 34*(7), 1073–1093.

through greater operational efficiency and fewer process errors.[9] A review of quality-management models in public organizations notes gains in efficiency and satisfaction, but also that public-sector research remains limited compared with the private sector and that human factors such as training and organizational readiness are recurring challenges.[10] In Indonesia, Sonhaji et al.[11] applied IT-based Lean Six Sigma with DMAIC in a civil registration office and reduced the average completion time from 17.12 to 0.48 days while raising the sigma level from −6.46 to 4.09, showing that DMAIC can be used in a public-service process under resource constraints. DMAIC has also been used to find root causes in manufacturing.[12]

Six Sigma is suitable for evaluating RKAT realization at BAZNAS Pamekasan for three reasons. First, RKAT realization is a recurring annual process with explicit targets, so a missed program is a countable defect. Second, the problem has several interacting causes (funding, staffing, measurement, and field conditions) that call for root-cause analysis rather than a single-factor explanation. Third, DMAIC separates diagnosis (Define to Analyze) from remedy (Improve and Control), which allows causes and proposed improvements to be reported separately.

This study therefore addresses the gap in three ways. Its novelty is that it applies DMAIC to the realization of a zakat institution's RKAT, using program-level defect and sigma-level measures alongside interview evidence. Its contributions are (1) empirical evidence on the level and pattern of RKAT realization at BAZNAS Pamekasan, (2) an explicit root-cause structure that links the identified factors to realization, and (3) an operationalized DMAIC framework for budget realization in zakat institutions. The

---

[9] Agustina, N., Aryani, P. D., Gandasari, N. A., Ramadhani, D. P. A., Aulia, S. N., & Relasari, R. (2025). Efektivitas Lean Six Sigma terhadap kinerja perusahaan: Tinjauan literatur sistematis [The effectiveness of Lean Six Sigma on company performance: A systematic literature review]. *Dinamika: Jurnal Manajemen Sosial Ekonomi, 5*(1), 184–192. https://doi.org/10.51903/x98v1t68

[10] Taraza, E., Anastasiadou, S., Masouras, A., & Papademetriou, C. (2023). Sustainable development and implementation of quality management excellence models in public organizations: A systematic literature review. *Sustainability, 15*(10), Article 7971. https://doi.org/10.3390/su15107971

[11] Sonhaji, A. I., Anityasari, M., & Mahendrawathi, E. R. (2024). IT-based Lean Six Sigma implementation in civil registration: Lesson learned from an Indonesian context. *Cogent Business & Management, 11*(1), Article 2396047. https://doi.org/10.1080/23311975.2024.2396047

[12] Fatoni, A., & Yuamita, F. (2026). Analisis pengendalian kualitas produk menggunakan metode Six Sigma dan FMEA pada perusahaan manufaktur logam [Analysis of product quality control using the Six Sigma and FMEA methods in a metal manufacturing company]. *Jurnal Ilmiah Research Student, 3*(1), 501–512. https://doi.org/10.61722/jirs.v3i1.8697

study is diagnostic: improvement measures are proposed, not implemented, and no claim of effectiveness is made.

The study addresses four research questions. RQ1: What is the level of RKAT realization at BAZNAS Pamekasan? RQ2: What factors cause realization to fall below target? RQ3: How can DMAIC be operationalized to analyze RKAT realization? RQ4: What improvement and control measures follow from the analysis? Accordingly, the objectives are to measure the level of RKAT realization, to analyze the root causes of the shortfall, to demonstrate the application of DMAIC, and to formulate improvement and control measures.

Literature Review and Analytical Framework

RKAT and budget realization

A budget is a systematic plan, expressed in financial terms, for a specified period. It serves as a planning tool for estimating financial needs and as a mechanism for monitoring progress, and an organization that plans ahead can follow the guidelines of the plan it prepared in advance.[13] Because the budget is rooted in planning, a discrepancy between plan and outcome signals a weakness in either planning or control.

The RKAT comprises two main components: the activities to be undertaken and the budget for each.[14] At BAZNAS, its preparation follows a fixed cycle. Provincial and regency/city BAZNAS set collection and distribution targets and evaluate current-year performance; technical guidance for the Work Plan (*Renja*) and the RKAT begins in July, with finalization by 31 October; the Renja matrix and RKAT financial statements are verified by the RKAT Division of BAZNAS RI, with documents due by 15 November; and the verified document is submitted for approval by 30 November, with regency/city BAZNAS submitting to the provincial BAZNAS.[15] The approved RKAT,

[13] Asman, N. (2022). *Anggaran perusahaan* [Corporate budgeting]. Cirebon: Penerbit Adab.

[14] Mubarak, A. Z. (2025). *Madrasah 'amil: Strategi dan langkah taktis penghimpunan, pendistribusian, pendayagunaan dan pelaporan zakat, infak, sedekah dan DSKL* [Madrasah 'amil: Strategies and tactical steps for the collection, distribution, utilization, and reporting of zakat, infaq, sadaqah, and DSKL]. Tasikmalaya: Zakimu.com.

[15] Mubarak, A. Z. (2025). *Madrasah 'amil: Strategi dan langkah taktis penghimpunan, pendistribusian, pendayagunaan dan pelaporan zakat, infak, sedekah dan DSKL* [Madrasah 'amil: Strategies and tactical steps for the collection, distribution, utilization, and reporting of zakat, infaq, sadaqah, and DSKL]. Tasikmalaya: Zakimu.com.

endorsed by decision of the BAZNAS Chair at each level, is the operational guideline for the calendar year from 1 January to 31 December.[16]

Budget realization is the stage after a budget has been approved, in which budgeted funds are used to carry out the planned programs and activities.[17] It should follow the principles of transparency, accountability, and efficiency. Its cycle runs through planning, budgeting, implementation, monitoring, evaluation, reporting, and auditing, and then returns to planning for the next cycle.[18]

For BAZNAS, realization has a feature that distinguishes it from appropriation-based government budgets: spending on programs depends on the zakat, infaq, and sadaqah actually collected. A collection shortfall therefore translates into a distribution shortfall, and RKAT realization depends on both fundraising and program execution. This is why realization is examined here as a process rather than as a single financial ratio. In this study it is measured in two ways: the physical realization rate (output achieved relative to the RKAT target) and the budget absorption rate (expenditure relative to allocation).

Performance measurement and RKAT realization in zakat institutions

Empirical work on zakat institutions in Indonesia centers on financial performance, effectiveness, and accountability. Ratio-based reviews of BAZNAS[19] and case analyses[20] describe the level and variation of financial performance; studies of effectiveness[21] identify planning and realization as areas needing improvement; and

---

[16] Nugraha, D. A. (2024). *Peta risiko RKAT BAZNAS RI 2024* [Risk map of the RKAT of BAZNAS RI 2024]. Jakarta: Puskas BAZNAS.

[17] Sopanah, A., et al. (2023). *Akuntabilitas publik organisasi nirlaba* [Public accountability of nonprofit organizations]. Surabaya: Scopindo Media Pustaka.

[18] Rusdianti, I. S., & Sopanah, A. (2023). *Mengenal akuntansi publik dan perkembangannya* [Understanding public accounting and its development]. Surabaya: Scopindo Media Pustaka.

[19] Ma'ruf, A., Hasyim, A., Yandhi, A. N., Sellani, T. I., & Fatoni, M. I. (2024). A review of zakat institution financial performance: A decade study from Indonesia. *Profit: Jurnal Kajian Ekonomi dan Perbankan Syariah, 8*(1), 71–91. https://doi.org/10.33650/profit.v8i1.5815

[20] Mahdi, M., Wahib H., A. F., & Fitriana, A. Q. Z. (2025). Analisis kinerja laporan keuangan Badan Amil Zakat Nasional (BAZNAS) Gresik periode 2021–2024 [Performance analysis of the financial statements of BAZNAS Gresik, 2021–2024]. *Jurnal Ilmiah Ekonomi dan Manajemen, 3*(11), 351–363. https://doi.org/10.61722/jiem.v3i11.7063

[21] Lestari, R. P., & Nisa, F. L. (2024). Efektivitas pengelolaan zakat oleh Badan Amil Zakat Nasional (BAZNAS) di Indonesia: Periode tahun 2018–2022 [The effectiveness of zakat management by the National Amil Zakat Agency (BAZNAS) in Indonesia: 2018–2022 period]. *Jurnal Rumpun Manajemen dan Ekonomi, 1*(3), 503–509. https://doi.org/10.61722/jrme.v1i3.1469

work on efficiency, transparency, and reporting[22] highlights accountability. Azhar and Dewi[23] address performance measurement itself, designing an OKR-based tool for a zakat institution whose priority goals included raising more funds and distributing all funds collected.

Taken together, this literature establishes that planning, measurement, and control are recurring weaknesses, but it does not provide a process-level diagnosis of why planned programs are not realized. This is the theoretical space the present study addresses by treating RKAT realization as a process to be measured, analyzed, and controlled.

Six Sigma and the DMAIC cycle

Six Sigma is an integrated and comprehensive system for achieving and sustaining business success. It emphasizes a deep understanding of customer needs (here, *muzakki* and *mustahiq*), the use of data and facts as the basis for decisions, and the careful management, improvement, and control of service or production processes.[24] It is applied through five connected steps: Define, Measure, Analyze, Improve, and Control.[25]

Applying Six Sigma to zakat management extends a method developed for manufacturing and later adopted in services and public administration[26] to a setting in

---

[22] Miftahudin, Umam, M., & Hidayat, A. (2024). Pengaruh zakat online terhadap efisiensi dan transparansi dana zakat di Badan Amil Zakat Nasional (BAZNAS) Kota Semarang [The effect of online zakat on the efficiency and transparency of zakat funds at BAZNAS Semarang City]. *Journal of Applied Islamic Economics and Finance, 5*(1), 89–102. https://doi.org/10.35313/jaief.v5i1.5892; Nurfadillah, N., & Hasbi, H. (2025). Analisis kesesuaian laporan pengelolaan zakat dengan standar PSAK 109 di Masjid Nurul Jannah Desa Poleonro Kabupaten Bone [Analysis of the conformity of zakat management reports with PSAK 109 at Nurul Jannah Mosque, Poleonro Village, Bone Regency]. *Journal Sains Student Research, 3*(2), 1–12. https://doi.org/10.61722/jssr.v3i2.3741

[23] Azhar, G. A., & Dewi, M. K. (2023). Refining performance measurement in zakat institutions: A holistic proposal of OKR implementation. *International Journal of Research in Business and Social Science, 12*(6), 351–366. https://doi.org/10.20525/ijrbs.v12i6.2693

[24] Arzaq, M. Y., et al. (2024). *Total quality management: Kunci kesuksesan pengelolaan pendidikan* [Total quality management: The key to successful education management]. Pekalongan: PT Nasya Expanding Management.

[25] Pangemanan, D. D. G., et al. (2024). *Pengantar manajemen proyek* [Introduction to project management]. Agam: Yayasan Tri Edukasi Ilmiah; Antony, J., Snee, R., & Hoerl, R. (2017). Lean Six Sigma: Yesterday, today and tomorrow. *International Journal of Quality & Reliability Management, 34*(7), 1073–1093.

[26] Agustina, N., Aryani, P. D., Gandasari, N. A., Ramadhani, D. P. A., Aulia, S. N., & Relasari, R. (2025). Efektivitas Lean Six Sigma terhadap kinerja perusahaan: Tinjauan literatur sistematis [The effectiveness of Lean Six Sigma on company performance: A systematic literature review]. *Dinamika: Jurnal Manajemen Sosial Ekonomi, 5*(1), 184–192. https://doi.org/10.51903/x98v1t68; Fatoni, A., & Yuamita, F.

which the "customers" are *muzakki* and *mustahiq*, the "product" is the realized program, and a "defect" is a planned program that is not realized as budgeted. The theoretical contribution is to link budgeting theory, in which the budget is both plan and control standard, with process-quality theory, in which deviation from a standard is a defect to be measured and removed. Table 1 shows how each DMAIC stage is operationalized in this study and how it is supported by measurable indicators.

Table 1. Operationalization of DMAIC for RKAT realization

Stage	Purpose in this study	Indicators and tools	Data source
Define	Identify RKAT programs with low realization and set the defect definition	Program inventory; critical-to-quality (CTQ) criteria: realization against target and on-time implementation; problem statement	RKAT document; interviews
Measure	Quantify baseline realization	Physical realization rate; budget absorption rate; share of delayed programs; DPMO; sigma level	RKAT realization reports; collection and distribution statistics
Analyze	Find the root causes of the gap between plan and realization	Interview coding; Pareto analysis of defects by cause; cause-and-effect (fishbone) diagram	Interviews; documents
Improve	Design measures aimed at the root causes	Improvement option per cause; responsible unit; target indicator; status (proposed or implemented)	Analysis results; interviews
Control	Sustain improvements and detect slippage early	Review of existing controls (evaluation meetings, audits, supervision); control plan with monitoring indicators and thresholds	Interviews; internal reports

Analytical framework

Figure 1 links the problem to the DMAIC stages. Planned RKAT targets are compared with realization (Define and Measure); gaps are classified as defects and attributed to root causes, namely funding, human resources, performance measurement, and field-driven adjustment (Analyze); improvement measures are matched to each root cause (Improve); and indicators and routines are specified to keep realization on target (Control).

(2026). Analisis pengendalian kualitas produk menggunakan metode Six Sigma dan FMEA pada perusahaan manufaktur logam [Analysis of product quality control using the Six Sigma and FMEA methods in a metal manufacturing company]. *Jurnal Ilmiah Research Student, 3*(1), 501–512. https://doi.org/10.61722/jirs.v3i1.8697; Sonhaji, A. I., Anityasari, M., & Mahendrawathi, E. R. (2024). IT-based Lean Six Sigma implementation in civil registration: Lesson learned from an Indonesian context. *Cogent Business & Management, 11*(1), Article 2396047. https://doi.org/10.1080/23311975.2024.2396047; Taraza, E., Anastasiadou, S., Masouras, A., & Papademetriou, C. (2023). Sustainable development and implementation of quality management excellence models in public organizations: A systematic literature review. *Sustainability, 15*(10), Article 7971. https://doi.org/10.3390/su15107971

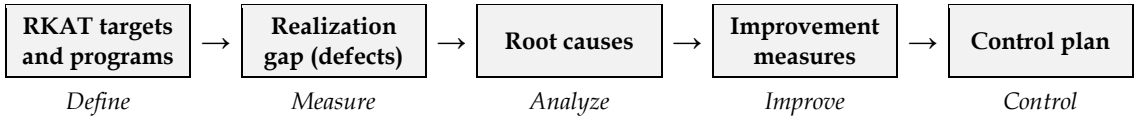


Figure 1. Analytical framework linking RKAT realization, the identified problems, and the DMAIC stages

Research Methods

Research design

This study uses a mixed-methods design[27] that combines quantitative analysis of RKAT documents with qualitative interviews, so that the two kinds of data complement each other. The strands were collected in the same period and integrated at the Analyze stage: the quantitative results show where and how far realization falls short, and the interviews explain why. The Six Sigma DMAIC framework organizes the analysis, and the research is a single-case study of BAZNAS Pamekasan Regency.

Data sources

Quantitative data come from the RKAT document and realization reports for 2025 and from the collection and distribution statistics of BAZNAS Pamekasan. Documentation provides the target, realized output, and expenditure of each program. Qualitative data come from in-depth interviews.

Informants

Informants were selected by purposive sampling[28] on the basis of direct involvement in preparing, implementing, or monitoring the RKAT. The study involved 1 informants: the Deputy Chair II for Distribution (the main informant).

Data collection procedures

Semi-structured interviews, each lasting about 150 minutes, were conducted in person between March and April using a guide that covered RKAT planning, obstacles to implementation, performance measurement, and control. Confirm: interviews were recorded with consent and transcribed. Documents were obtained from collection and cross-checked against interview statements.

---

[27] Sugiyono. (2013). *Metode penelitian kuantitatif, kualitatif, dan R&D* [Quantitative, qualitative, and R&D research methods] (19th ed.). Bandung: Alfabeta.

[28] Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.

Application of DMAIC

Define. Programs in the RKAT were inventoried and grouped. Following the Six Sigma convention, each program is one unit (U) with one opportunity (O) for a defect.

Measure. The following indicators were calculated from the realization reports:

$$\text{Physical realization rate (\%)} = (\text{actual output} \div \text{RKAT target}) \times 100 \quad (1)$$

$$\text{Budget absorption rate (\%)} = (\text{expenditure} \div \text{allocation}) \times 100 \quad (2)$$

$$\text{DPMO} = D \div (U \times O) \times 1{,}000{,}000 \quad (3)$$

$$\text{Sigma level} = \text{NORMSINV}(1 - \text{DPMO} \div 1{,}000{,}000) + 1.5 \quad (4)$$

where D is the number of defective programs, U the number of programs, and O the number of opportunities per program. The 1.5 term is the conventional long-term sigma shift.

Analyze. Interview transcripts were coded using data reduction, data display, and conclusion drawing.[29] Codes were grouped into candidate causes, mapped to the defective programs, ranked by frequency in a Pareto analysis, and organized in a cause-and-effect diagram. Quantitative results and interview evidence were then compared side by side to integrate the two strands.

Improve and Control. Improvement options were derived from each root cause and specified by responsible unit, indicator, and status (proposed or implemented). Existing control mechanisms (routine evaluation, internal and external audits, and supervision) were reviewed for gaps, and a control plan with monitoring indicators was formulated. In this study the improvement measures are proposals; none was introduced and re-measured.

Trustworthiness

Credibility was supported by triangulating interview statements with RKAT documents and reports, and by member checking/peer debriefing.

Results and Discussion

Define: problem identification

In the Define stage, the main problems in managing the RKAT at BAZNAS Pamekasan were identified through interviews and documentation. The central issue is that program realization is not yet optimal: some programs were not carried out,

[29] Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.

planning did not match field conditions, and the performance measurement system has limitations. Productive programs were not running to their full potential because of insufficient mentoring, and funding was the most dominant obstacle.

These results show that the planning and control functions are not yet working as intended. A budget should serve both as a plan and as a tool for supervising and assessing performance, so a gap between plan and action points to a weakness in the management system rather than in individual programs. This is consistent with Lestari and Nisa[30], who found that planning and realization still limited the effectiveness of zakat management at BAZNAS. The present study adds program-level evidence on where the gap arises.

Measure: baseline realization

In the Measure stage, report data and interview results were used to measure the level of program realization. Most programs were carried out, but not at an optimal level.

In practice, BAZNAS Pamekasan does not yet have an integrated quantitative measurement system, so evaluation remains general rather than data-based. Performance measurement is the basis of evaluation and an essential component of the financial management cycle, so this gap helps explain the low realization. The finding is in line with the concern in Azhar and Dewi[31], whose zakat institution also needed a more structured performance measurement tool, and with Miftahudin et al.[32], who examined the efficiency and transparency of zakat funds at BAZNAS Semarang. By contrast, ratio-based studies such as Ma'ruf et al.[33] report generally good aggregate

[30] Lestari, R. P., & Nisa, F. L. (2024). Efektivitas pengelolaan zakat oleh Badan Amil Zakat Nasional (BAZNAS) di Indonesia: Periode tahun 2018–2022 [The effectiveness of zakat management by the National Amil Zakat Agency (BAZNAS) in Indonesia: 2018–2022 period]. *Jurnal Rumpun Manajemen dan Ekonomi, 1*(3), 503–509. https://doi.org/10.61722/jrme.v1i3.1469

[31] Azhar, G. A., & Dewi, M. K. (2023). Refining performance measurement in zakat institutions: A holistic proposal of OKR implementation. *International Journal of Research in Business and Social Science, 12*(6), 351–366. https://doi.org/10.20525/ijrbs.v12i6.2693

[32] Miftahudin, Umam, M., & Hidayat, A. (2024). Pengaruh zakat online terhadap efisiensi dan transparansi dana zakat di Badan Amil Zakat Nasional (BAZNAS) Kota Semarang [The effect of online zakat on the efficiency and transparency of zakat funds at BAZNAS Semarang City]. *Journal of Applied Islamic Economics and Finance, 5*(1), 89–102. https://doi.org/10.35313/jaief.v5i1.5892

[33] Ma'ruf, A., Hasyim, A., Yandhi, A. N., Sellani, T. I., & Fatoni, M. I. (2024). A review of zakat institution financial performance: A decade study from Indonesia. *Profit: Jurnal Kajian Ekonomi dan Perbankan Syariah, 8*(1), 71–91. https://doi.org/10.33650/profit.v8i1.5815

results for BAZNAS; a program-level, defect-based view such as the one used here can show shortfalls that aggregate ratios may mask.

Analyze: root causes

In the Analyze stage, four main factors were identified: limited funding, limited human resources, situational (field) factors, and the absence of an integrated management system. Table 2explains how each factor affects RKAT realization. Funding is the main cause because program implementation depends heavily on the availability of funds. Limited human resources also reduce the quality of implementation and supervision, especially for productive programs.

Table 2. Root causes of low RKAT realization and their effect on realization

Root cause	Evidence	How it affects realization
Limited funding	Programs depend on funds available; funding is the most dominant obstacle (interviews; collection statistics)	A collection shortfall reduces the funds that can be disbursed, so programs are postponed, scaled down, or cancelled
Limited human resources	Too few staff for implementation, supervision, and mentoring, especially of productive programs	Programs run late or lack follow-up, so productive programs are not sustained
No integrated performance measurement system	Evaluation is general rather than data-based; records are not integrated between planning and implementation	Slippage is detected late, so corrective action is not taken within the budget year
Field-driven program adjustment	Programs changed or deferred in response to field conditions	The plan does not match conditions, so adjusted programs register as unrealized against the original RKAT

Source: interviews and documentation.

This pattern shows an imbalance between planning and the organization's resource capacity: the RKAT sets targets that assume resources that are not secured. The factors also interact. Weak measurement hides slippage that limited staff then cannot correct, and funding shortfalls make field-driven adjustment more likely. Mahdi et al.[34] likewise found that internal and external factors affect the financial performance of

[34] Mahdi, M., Wahib H., A. F., & Fitriana, A. Q. Z. (2025). Analisis kinerja laporan keuangan Badan Amil Zakat Nasional (BAZNAS) Gresik periode 2021–2024 [Performance analysis of the financial statements of BAZNAS Gresik, 2021–2024]. *Jurnal Ilmiah Ekonomi dan Manajemen, 3*(11), 351–363. https://doi.org/10.61722/jiem.v3i11.7063

zakat institutions; in the present case funding and field conditions are largely external, whereas staffing and measurement are internal and therefore more directly controllable. The emphasis on staffing agrees with Taraza et al.[35], who identify human factors as recurring challenges for quality programs in public organizations. The obstacles to RKAT implementation thus come from several interrelated factors, not from a single one.

Improve: proposed measures

Improvement measures follow from the Analyze stage and are summarized in Table 3. They include broader outreach and cooperation to raise collection, a data-based measurement system, stronger human resource capacity (especially for mentoring productive programs), and more flexible plans that fit field conditions. All are classified as proposed, because none was implemented and evaluated in this study.

Table 5. Proposed improvement measures linked to root causes

Root cause	Improvement measure	Indicator	Status
Limited funding	Wider outreach and cooperation with partners to raise collection; align the disbursement schedule with expected collection	Collection against target	Proposed
Limited human resources	Strengthen staff capacity, especially in mentoring productive programs; assign dedicated staff to monitor RKAT progress	Programs monitored monthly; mentoring visits per program	Proposed
No integrated measurement system	Build a data-based measurement system that integrates planning and implementation records	Realization and absorption rates reported monthly	Proposed
Field-driven adjustment	Prepare more flexible, realistic plans and schedules that fit field conditions	Programs rescheduled before the quarter starts	Proposed

In Six Sigma, the Improve stage aims to produce solutions that raise the efficiency and effectiveness of a process. Agustina et al.[36] report that Six Sigma improves

[35] Taraza, E., Anastasiadou, S., Masouras, A., & Papademetriou, C. (2023). Sustainable development and implementation of quality management excellence models in public organizations: A systematic literature review. *Sustainability, 15*(10), Article 7971. https://doi.org/10.3390/su15107971

[36] Agustina, N., Aryani, P. D., Gandasari, N. A., Ramadhani, D. P. A., Aulia, S. N., & Relasari, R. (2025). Efektivitas Lean Six Sigma terhadap kinerja perusahaan: Tinjauan literatur sistematis [The effectiveness of Lean Six Sigma on company performance: A systematic literature review]. *Dinamika: Jurnal Manajemen Sosial Ekonomi, 5*(1), 184–192. https://doi.org/10.51903/x98v1t68

performance through continuous process improvement, and Sonhaji et al.[37] show what such evidence looks like, namely a measured before-and-after change in completion time and sigma level. The present study cannot yet provide that kind of evidence, which is why its measures are presented as proposals whose effect on realization remains to be tested.

Control: sustaining performance

In the Control stage, the existing mechanisms are routine evaluation, internal and external audits, and supervision of program implementation. These have a weakness: the recording system is not yet integrated between program planning and implementation, so control cannot show early whether a program is drifting from the RKAT. In quality management, the Control stage aims to keep the process stable within the desired conditions, and Fatoni and Yuamita[38] likewise stress continuous control for sustaining process quality.

A control plan is therefore proposed: a monthly RKAT dashboard showing physical realization, budget absorption, and delays for each program; review of the dashboard in the monthly evaluation meeting; an updated standard operating procedure (SOP) for program implementation; and stronger coordination between divisions.

Implications and limitations

The results show that DMAIC can structure the diagnosis of RKAT realization: it identified the main problems and root causes and connected each to a specific improvement and control measure. The evidence does not show that Six Sigma improves RKAT realization, because no improvement was implemented and re-measured. For practice, the defect definition and monthly indicators give BAZNAS Pamekasan a baseline against which later improvement can be judged.

---

[37] Sonhaji, A. I., Anityasari, M., & Mahendrawathi, E. R. (2024). IT-based Lean Six Sigma implementation in civil registration: Lesson learned from an Indonesian context. *Cogent Business & Management, 11*(1), Article 2396047. https://doi.org/10.1080/23311975.2024.2396047

[38] Fatoni, A., & Yuamita, F. (2026). Analisis pengendalian kualitas produk menggunakan metode Six Sigma dan FMEA pada perusahaan manufaktur logam [Analysis of product quality control using the Six Sigma and FMEA methods in a metal manufacturing company]. *Jurnal Ilmiah Research Student, 3*(1), 501–512. https://doi.org/10.61722/jirs.v3i1.8697

The study has limitations. It is a single case with 1 informants and one fiscal year; the sigma level depends on the defect definition and the 1.5-sigma convention; and the findings cannot be generalized to other BAZNAS offices. Future research should implement the proposed measures, re-measure realization afterwards, and compare several BAZNAS offices.

Conclusion

Applying the Six Sigma DMAIC framework to RKAT realization at BAZNAS Pamekasan showed that realization is not yet optimal. Four root causes were identified: limited funding, limited human resources, a performance measurement system that is not yet integrated, and discrepancies between planning and implementation arising from field conditions.

The improvement measures, namely optimizing fund collection, strengthening human resources, building a data-based system, and carrying out continuous evaluation and supervision, are proposals consistent with these causes. Their effectiveness has not been tested. The study contributes program-level evidence on RKAT realization, a root-cause structure, and an operationalized DMAIC framework for zakat institutions; future research should implement the measures and re-measure realization to test whether Six Sigma improves it.

References

Agustina, N., Aryani, P. D., Gandasari, N. A., Ramadhani, D. P. A., Aulia, S. N., & Relasari, R. (2025). Efektivitas Lean Six Sigma terhadap kinerja perusahaan: Tinjauan literatur sistematis [The effectiveness of Lean Six Sigma on company performance: A systematic literature review]. *Dinamika: Jurnal Manajemen Sosial Ekonomi, 5*(1), 184–192. https://doi.org/10.51903/x98v1t68

Antony, J., Snee, R., & Hoerl, R. (2017). Lean Six Sigma: Yesterday, today and tomorrow. *International Journal of Quality & Reliability Management, 34*(7), 1073–1093.

Arzaq, M. Y., et al. (2024). *Total quality management: Kunci kesuksesan pengelolaan pendidikan* [Total quality management: The key to successful education management]. Pekalongan: PT Nasya Expanding Management.

Asman, N. (2022). *Anggaran perusahaan* [Corporate budgeting]. Cirebon: Penerbit Adab.

Azhar, G. A., & Dewi, M. K. (2023). Refining performance measurement in zakat institutions: A holistic proposal of OKR implementation. *International Journal of*

Research in Business and Social Science, 12(6), 351–366. https://doi.org/10.20525/ijrbs.v12i6.2693

Aziz, A., Saoqi, Y., Choirin, M., & Hasbi, M. (2025). Empowering mustahik through da'wah zakat: Evaluating the impact of BAZNAS programs on poverty alleviation in Indonesia. *FALAH: Jurnal Ekonomi Syariah*, *10*(1), 1–14.

Fatoni, A., & Yuamita, F. (2026). Analisis pengendalian kualitas produk menggunakan metode Six Sigma dan FMEA pada perusahaan manufaktur logam [Analysis of product quality control using the Six Sigma and FMEA methods in a metal manufacturing company]. *Jurnal Ilmiah Research Student, 3*(1), 501–512. https://doi.org/10.61722/jirs.v3i1.8697

Lestari, R. P., & Nisa, F. L. (2024). Efektivitas pengelolaan zakat oleh Badan Amil Zakat Nasional (BAZNAS) di Indonesia: Periode tahun 2018–2022 [The effectiveness of zakat management by the National Amil Zakat Agency (BAZNAS) in Indonesia: 2018–2022 period]. *Jurnal Rumpun Manajemen dan Ekonomi, 1*(3), 503–509. https://doi.org/10.61722/jrme.v1i3.1469

Ma'ruf, A., Hasyim, A., Yandhi, A. N., Sellani, T. I., & Fatoni, M. I. (2024). A review of zakat institution financial performance: A decade study from Indonesia. *Profit: Jurnal Kajian Ekonomi dan Perbankan Syariah, 8*(1), 71–91. https://doi.org/10.33650/profit.v8i1.5815

Mahdi, M., Wahib H., A. F., & Fitriana, A. Q. Z. (2025). Analisis kinerja laporan keuangan Badan Amil Zakat Nasional (BAZNAS) Gresik periode 2021–2024 [Performance analysis of the financial statements of BAZNAS Gresik, 2021–2024]. *Jurnal Ilmiah Ekonomi dan Manajemen, 3*(11), 351–363. https://doi.org/10.61722/jiem.v3i11.7063

Miftahudin, Umam, M., & Hidayat, A. (2024). Pengaruh zakat online terhadap efisiensi dan transparansi dana zakat di Badan Amil Zakat Nasional (BAZNAS) Kota Semarang [The effect of online zakat on the efficiency and transparency of zakat funds at BAZNAS Semarang City]. *Journal of Applied Islamic Economics and Finance, 5*(1), 89–102. https://doi.org/10.35313/jaief.v5i1.5892

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.

Mubarak, A. Z. (2025). *Madrasah 'amil: Strategi dan langkah taktis penghimpunan, pendistribusian, pendayagunaan dan pelaporan zakat, infak, sedekah dan DSKL* [Madrasah 'amil: Strategies and tactical steps for the collection, distribution, utilization, and reporting of zakat, infaq, sadaqah, and DSKL]. Tasikmalaya: Zakimu.com.

Nugraha, D. A. (2024). *Peta risiko RKAT BAZNAS RI 2024* [Risk map of the RKAT of BAZNAS RI 2024]. Jakarta: Puskas BAZNAS.

Nurfadillah, N., & Hasbi, H. (2025). Analisis kesesuaian laporan pengelolaan zakat dengan standar PSAK 109 di Masjid Nurul Jannah Desa Poleonro Kabupaten

Bone [Analysis of the conformity of zakat management reports with PSAK 109 at Nurul Jannah Mosque, Poleonro Village, Bone Regency]. *Journal Sains Student Research, 3*(2), 1–12. https://doi.org/10.61722/jssr.v3i2.3741

Pangemanan, D. D. G., et al. (2024). *Pengantar manajemen proyek* [Introduction to project management]. Agam: Yayasan Tri Edukasi Ilmiah.

Rusdianti, I. S., & Sopanah, A. (2023). *Mengenal akuntansi publik dan perkembangannya* [Understanding public accounting and its development]. Surabaya: Scopindo Media Pustaka.

Sonhaji, A. I., Anityasari, M., & Mahendrawathi, E. R. (2024). IT-based Lean Six Sigma implementation in civil registration: Lesson learned from an Indonesian context. *Cogent Business & Management, 11*(1), Article 2396047. https://doi.org/10.1080/23311975.2024.2396047

Sopanah, A., et al. (2023). *Akuntabilitas publik organisasi nirlaba* [Public accountability of nonprofit organizations]. Surabaya: Scopindo Media Pustaka.

Sugiyono. (2013). *Metode penelitian kuantitatif, kualitatif, dan R&D* [Quantitative, qualitative, and R&D research methods] (19th ed.). Bandung: Alfabeta.

Taraza, E., Anastasiadou, S., Masouras, A., & Papademetriou, C. (2023). Sustainable development and implementation of quality management excellence models in public organizations: A systematic literature review. *Sustainability, 15*(10), Article 7971. https://doi.org/10.3390/su15107971