Universitas Pertamina

WASTE MANAGEMENT REPORT 2025

UNIVERSITAS PERTAMINA

MORE INFORMATION

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Waste Management Report 2025

Sustainable Waste Management System in Universitas Pertamina

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The findings and results presented in this Waste Management Report have been independently reviewed and verified by an external professional with recognized experience in waste management. This independent verification enhances the credibility, accuracy, and reliability of the information disclosed in this report.

This document serves as a summary of the original report. For access to the full report and more comprehensive data, please contact the Sustainability Center at sustainabilitycenter@universitaspertamina.ac.id.

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List of Abbreviations

3R	Reduce, Recycle, Reuse
B3	Bahan Berbahaya dan Beracun (Hazardous Material)
BSUP	Bank Sampah Universitas Pertamina (Universitas Pertamina Waste Bank)
GOR	Gelanggang Olahraga (Sport Center)
IPA	Importance Performance Analysis
KPI	Key Performance Indicator
LST	Laboratorium Sains, Teknik, dan Teknologi (Science, Engineering, and Technology Laboratory)
SNI	Standar Nasional Indonesia (Indonesian National Standard)
THE SIR	Times Higher Education Sustainability Impact Rankings
TPS	Tempat Pembuangan Sementara (Temporary Waste Storage)
UPGRADES	Universitas Pertamina Grant for Research and Action on Development and Environmental Sustainability

Glossary

Term	Definition
Importance Performance Analysis (IPA)	A quantitative analytical method used to evaluate the gap between the perceived importance of indicators and their actual performance.
Single-Use Items	Products designed to be used once before disposal, such as plastic cups, cutlery, and packaging.
Stakeholder Engagement	The process of involving relevant stakeholders in planning, decision-making, and evaluation processes.
TPS (Temporary Waste Storage Site/Tempat Pembuangan Sementara)	A designated site for the temporary collection and storage of waste before it is transported to processing or disposal facilities.
Waste Bank	A community-based system where recyclable waste is collected, sorted, and deposited by participants to encourage waste segregation and recycling while providing economic value.
Waste Generation	The total amount of waste produced within a specific period and area.
Waste Management Infrastructure	Facilities, equipment, and systems that support the collection, transportation, processing, and disposal of waste.
Waste Sorting	The process of separating waste into various categories at the source to facilitate recycling and proper treatment.

Executive Summary

This report presents the Waste Management Report of Universitas Pertamina, which constitutes an essential component of the university's efforts to achieve a sustainable campus. Both academic and non-academic activities within the university environment generate various types of waste, thereby necessitating a well-planned, effective, and sustainable waste management system to reduce environmental impacts and enhance campus environmental quality. The report functions as a baseline assessment to identify waste generation patterns, waste composition characteristics, and current management performance as a foundation for strategic improvement. This initiative reflects the university's commitment to supporting the Sustainable Development Goals (SDGs), particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action), through resource efficiency, waste reduction, and environmentally responsible campus operations.

The study employed a comprehensive methodological approach, including field observations, stakeholder interviews, waste sampling conducted over eight consecutive days in accordance with SNI 3964:2025, and a questionnaire survey involving 410 respondents representing the campus community. In addition, Importance Performance Analysis (IPA) was applied to assess stakeholder perceptions regarding the importance and performance of waste management practices at the university.

The following quantitative findings summarize the main results of the waste measurement and perception analysis conducted in this study:

- Waste sampling was conducted for 8 consecutive days.
- Waste composition was dominated by plastic (43.5%), paper (31.6%), and food waste (16.7%).
- These three fractions account for more than 90% of total campus waste generation.
- Hazardous and special waste fractions contributed 4.1%, while other fractions remained relatively minor.
- The canteen area was identified as the largest contributor to total waste generation, particularly for organic and plastic waste.
- Waste generation fluctuated in line with academic and operational activity levels.
- The perception survey used Importance-Performance Analysis (IPA) Methods 410 respondents representing students, lecturers, and staff.
- IPA results indicate that food waste management, landfill reduction policies, and waste processing infrastructure are priority areas for improvement.

1. Introduction

1.1 Background

Waste has become one of the most pressing environmental issues as population growth and human activities continue to increase, including within university campuses. Waste management is a critical concern due to its impacts on public health, environmental quality, and campus aesthetics. Therefore, a sustainable and integrated waste management system is required, covering all stages from storage and collection to treatment and final disposal, while considering both technical and non-technical aspects.

Universitas Pertamina, as a higher education institution with a strong focus on energy and environmental sustainability, faces significant challenges in managing campus waste. High levels of activity by students, academic staff, and administrative personnel generate various types of waste, including organic waste, inorganic waste, and hazardous waste. If not properly managed, waste accumulation on campus may lead to environmental pollution, health risks, degradation of campus environmental quality, and increased greenhouse gas emissions resulting from uncontrolled waste disposal practices.

Sustainable waste management is an integrated approach that combines various waste handling methods, such as waste reduction, segregation, recycling, and reuse, based on sustainability principles. This approach aims to minimize the amount of waste sent to landfills while maximizing resource recovery. Many universities worldwide have adopted sustainable waste management systems as part of their commitment to green campus initiatives and the achievement of the Sustainable Development Goals (SDGs), particularly SDG 12 on Responsible Consumption and Production.

1.2 Purpose and Objectives

Based on the background and the challenges identified in campus waste management practices, a waste audit was conducted as part of a research initiative aimed at developing an integrated and sustainable waste management framework. The study seeks to address existing gaps in policies, infrastructure, and operational practices within Universitas Pertamina. This research was carried out under the title "Sustainable Waste Management System in Universitas Pertamina.".

Currently, Universitas Pertamina faces several critical challenges, including the absence of a formal waste management policy, high waste generation rates without adequate source segregation, lack of baseline data on per capita waste generation and specific waste streams (e.g., food waste and plastic waste), and limited recycling or on-campus waste processing mechanisms. These conditions highlight the urgent need for a systematic and data-driven approach toward sustainable waste management.

In response to these challenges, the objectives of this research are as follows:

1. Investigate the existing waste generation conditions within the Universitas Pertamina area, including projections of future waste generation, waste composition, and waste density.
2. Analyze the estimated volume and recycling potential of waste generated at Universitas Pertamina, as well as the amount of waste transported to the landfill.

3. Examine the perceptions of the academic community regarding waste management policies, practices, and the availability of supporting infrastructure at Universitas Pertamina.
4. Design a more effective and sustainable waste management system for Universitas Pertamina by integrating environmental (technical), social, and economic aspects.
5. Formulate and recommend a Waste Management Policy for Universitas Pertamina.

1.3 Regulatory Basis

This report is prepared as a strategic initiative to strengthen waste management governance, enhance the participation of the academic community, and support the improvement of Universitas Pertamina's reputation at both national and international levels. The preparation of this report is based on several key considerations, as outlined below:

1. Regulatory compliance, in alignment with national policies, including the Regulation of the Minister of Environment and Forestry Number 14/2021 and the Indonesia Zero Waste 2050 strategy under the Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR).
2. International benchmarking, where leading global universities have adopted waste management as a living laboratory for research activities and the implementation of circular economic practices.
3. Universitas Pertamina Research Strategic Plan 2023-2028, which identifies the development of innovative solutions in sustainability.
4. Universitas Pertamina Green Campus Guidelines 2024, which serve as an internal reference for the development of an environmentally friendly and sustainable campus.
5. Contribution to sustainability indicators, particularly those included in THE Sustainability Impact Rankings (THE SIR), as part of the university's efforts to enhance institutional sustainability performance.

1.4 Study Area Profile

Universitas Pertamina is a private higher education institution located in South Jakarta, Indonesia. The university is situated within the Learning Center complex owned by PT Pertamina (Persero), covering a total land area of 68,569 m^2 (Figure 1). The Universitas Pertamina area consists of various buildings and facilities that support both academic and non-academic activities, as indicated in the Figure by buildings outlined with colored polygon boundaries. However, the scope of this waste audit study was limited to selected buildings identified in the Figure by shaded markings. The audit was conducted in the following buildings: (1) Griya Legita Building, (2) GOR 2/Sport Center (Selasar Area), (3) Rectorate Building, (4) Science, Engineering, and Technology Laboratory Building (Laboratorium Sains, Teknik, dan Teknologi/LST), (5) Canteen Facility, and (6) GOR 1 Building. These buildings were designated as the primary focus of the study due to their functional significance and their potential contribution to campus waste generation.

Figure 1 Study Area Profile at Universitas Pertamina

Based on the location mapping of buildings and facilities at Universitas Pertamina, the following outlines the functional designation of each building unit that served as sampling points for measuring waste generation quantities and waste composition within the Universitas Pertamina campus.

Table 1 Academic Buildings and Facilities at Universitas Pertamina

No	Building	Functional Use
1	Griya Legita Building	Academic and instructional activities facility
2	GOR 2 (Selasar) Building	Communal area and sports facilities
3	Rectorate Building	University administrative and management offices, including education support staff
4	LST Building	Laboratory facilities for practicum and research activities
5	Canteen, Cafeteria	Food service facility and dining area for the academic community
6	GOR 1 Building	Supporting academic and instructional activity spaces

2. Methodology

2.1 Audit Team

The Sustainable Waste Management System research was conducted by a multidisciplinary team from the Environmental Engineering and Mechanical Engineering Study Programs at Universitas Pertamina. The project was led by Nova Ulhasanah, with team members I Wayan Koko Suryawan, Mega Mutiara Sari, Purwo Kadarno, Ari Rahman, and Agung Buana. This research was funded by the Research Grant of UPGRADES (Universitas Pertamina Grant for Research and Action on Development and Environmental Sustainability) in 2025, an internal competitive funding scheme that supports research initiatives aligned with sustainable development and environmental advancement objectives.

2.2 Measurement and Analysis Methods

Waste Generation and Composition Measurement

Waste data collection and measurement in this study were conducted in accordance with Indonesian National Standard SNI 3964:2025. Waste samples were collected from labeled waste bags generated in each designated building and facility to ensure representative sampling. Each bag was sorted according to the waste fraction categories specified in the standard to determine total waste generation and composition. The measurement activities were carried out over 8 (eight) consecutive days at the same location to obtain representative data reflecting campus activities. Waste volume was measured using a standardized container, while weight was determined through direct weighing. The waste was then further segregated to identify detailed composition. Supporting data were collected through field observations and interviews with housekeeping staff and the contracted waste collection service provider to assess existing waste management practices.

Community Preference Analysis using Importance Performance Analysis (IPA)

Importance-Performance Analysis (IPA) is a managerial analytical method used to identify and map key factors based on their perceived level of importance and performance as evaluated by respondents. In this study, the IPA approach was applied using primary data collected through field observations and questionnaire surveys distributed to members of the campus community. The IPA method was employed as a tool to assess the perceptions of academic stakeholders regarding waste management practices at Universitas Pertamina. Furthermore, it served as a participatory approach to enhance stakeholder engagement in the continuous improvement of the campus waste management system.

Table 2 Details of Collected Data

No	Variable	Data Collection	Data Source	Remark
1	Total campus population	Literature review	Secondary	To determine the required sample size of respondent for the questionnaire survey, ensuring proportional distribution and

No	Variable	Data Collection	Data Source	Remark
				representative campus community.
2	Sociodemographic Data	Questionnaire	Primary	To identify respondents' age, gender, education level, and employment status.
3	Behavior, Attitude, and Awareness Survey	Questionnaire	Primary	To identify the characteristics of the campus community.
4	Evaluation of Waste Management Infrastructure using the IPA Method	Questionnaire close ended	Primary	To assess the performance and importance level of waste management infrastructure that needs improvement from the respondents' perspective.
5	Observation of Waste Management Infrastructure	Observation	Primary	To identify the existing condition of waste management infrastructure.
6	Existing conditions, programs, and policies related to waste management	Stakeholder interviews	Primary	To identify and assess the current waste management practices within the university.

3. Results

3.1 Existing Waste Management Conditions

The current waste management system at Universitas Pertamina remains largely conventional and lacks an integrated framework. Waste generated from various campus activities, including academic operations, administrative functions, laboratory work, and student activities is collected through bins distributed across rooms and building corridors and subsequently transported by cleaning personnel to the Temporary Waste Storage Area (TPS) without segregation at the source, resulting in mixed waste streams. The accumulated waste is then collected by a third-party contractor and transported to final treatment or disposal facilities, with limited monitoring of subsequent processing activities. This condition is further exacerbated by the absence of 3R (reduce, reuse, recycle) supporting infrastructure, such as segregation systems, internal recycling programs, and waste banks, as well as the lack of institutional policies on waste reduction and segregation, limited environmental education facilities, and the absence of periodic monitoring systems for waste quantity and composition. Consequently, the development of a more holistic, integrated, and sustainability-oriented waste management strategy is necessary to enhance the effectiveness and long-term performance of campus waste management practices.

Figure 2 Scheme of Waste Management System in Universitas Pertamina

To assess the existing waste management conditions at Universitas Pertamina, a comprehensive approach was employed combining field observations and systematic waste sampling activities. The preliminary observation phase was conducted at designated sampling locations to examine the physical condition of waste storage points, collection routes, and on-site handling practices. This phase was complemented by interviews with relevant stakeholders, including campus management representatives and housekeeping personnel, to obtain contextual and operational insights into the current waste management system. Following the initial observation and interview phase, waste sampling was conducted over 8 (eight) consecutive days. The daily procedures were implemented in the following sequence:

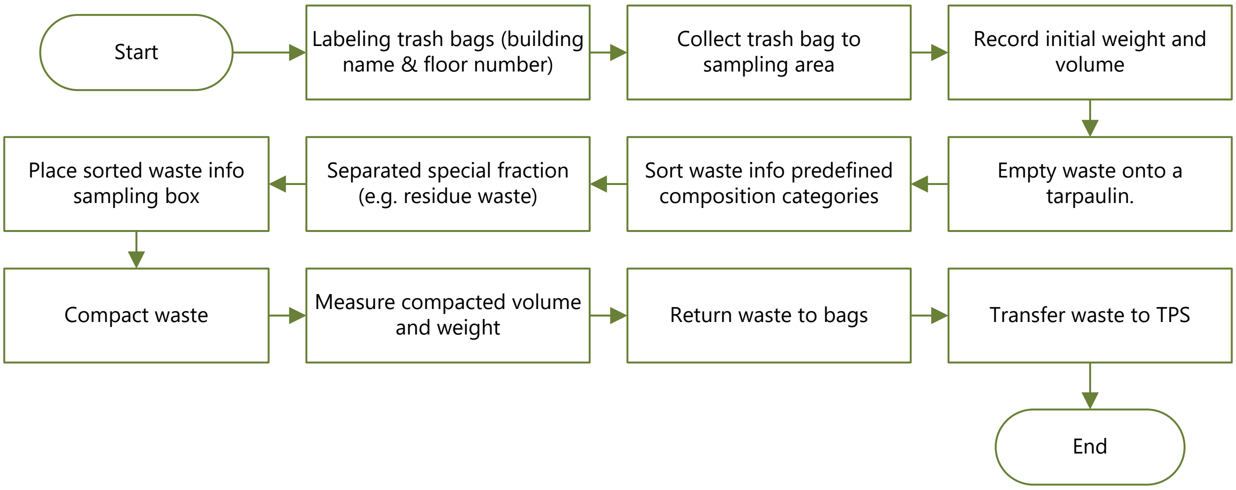


Figure 3 Waste Sampling Process Procedures

The waste sampling procedure was conducted to obtain representative data on waste generation rates and composition across campus buildings. The results provide a quantitative baseline to evaluate existing waste management practices and support the development of an integrated and sustainable waste management strategy at Universitas Pertamina.

3.2 Waste Generation and Waste Composition Distribution

Based on the sampling results of waste generation collected from all campus buildings and facilities over eight consecutive days using consistent measurement units, quantitative data on daily waste generation were obtained. The collected data were subsequently processed and presented in graphical form to provide a clear illustration of the patterns, variations, and trends in waste generation throughout the measurement period, thereby supporting the analysis of existing waste management conditions within Universitas Pertamina.

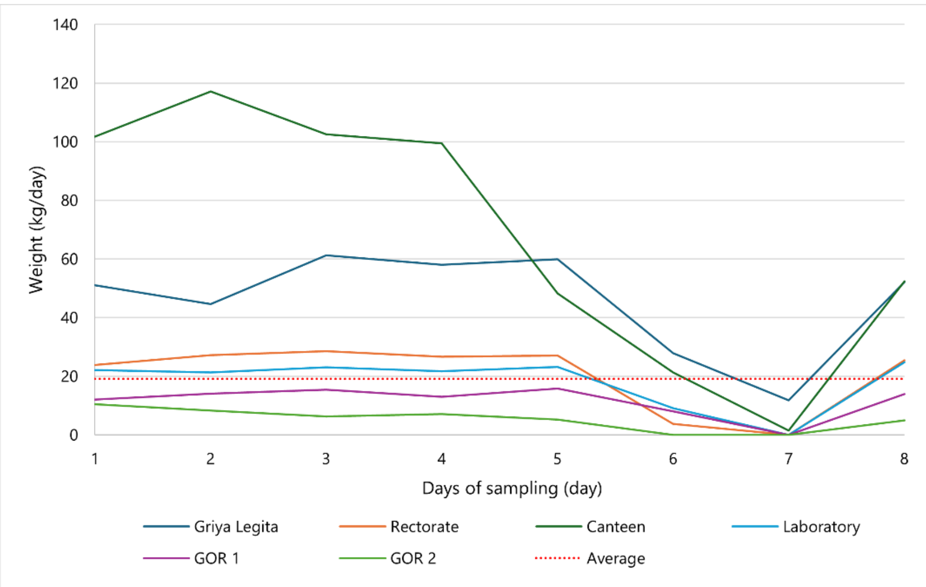


Figure 4 Total Waste Generation

Based on the trend of the total waste weight graph representing daily waste generation in each building, it is evident that waste volumes fluctuated considerably throughout the sampling period. The peak waste generation was recorded on Day 2, with the largest contribution originating from the Canteen Building. The elevated waste volume on that day correlates with increased campus population activity, leading to higher food and beverage consumption and consequently a direct rise in waste generation.

Overall, the Canteen Building consistently demonstrated the most dominant contribution to total waste generation compared to other buildings across nearly all sampling days, particularly from Day 1 to Day 4. This finding indicates that consumption-related activities constitute one of the primary sources of waste generation within the campus environment. While, Griya Legita Building and the Laboratory exhibited relatively stable yet fluctuating waste generation trends, corresponding to the intensity of academic activities such as lectures and laboratory sessions.

Overall, daily variations in waste generation are influenced by the dynamics of academic and operational campus activities, including the number of students and staff present, lecture schedules, and supporting activities such as canteen operations. These findings highlight that campus waste management systems must account for daily and seasonal activity patterns. Accordingly, waste collection, processing systems, and sorting facility provisions should be adjusted to align with peak and low activity periods to achieve optimal efficiency and effectiveness in waste management.

Based on the total waste generation measurements that were conducted, waste sorting was subsequently performed to determine the percentage distribution of waste composition generated during the sampling period. The waste composition was classified according to detailed waste composition criteria as specified in SNI 3964:2025. The following section presents the distribution of the resulting waste composition.

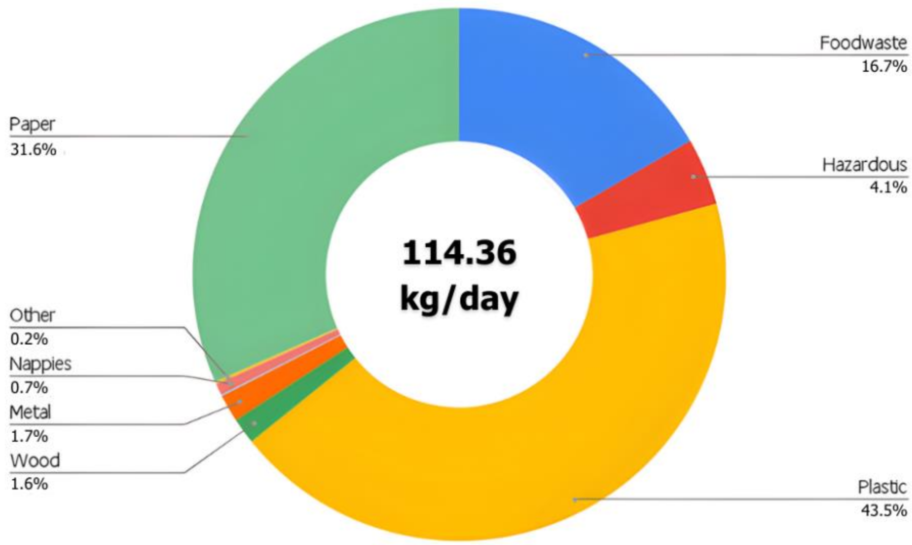
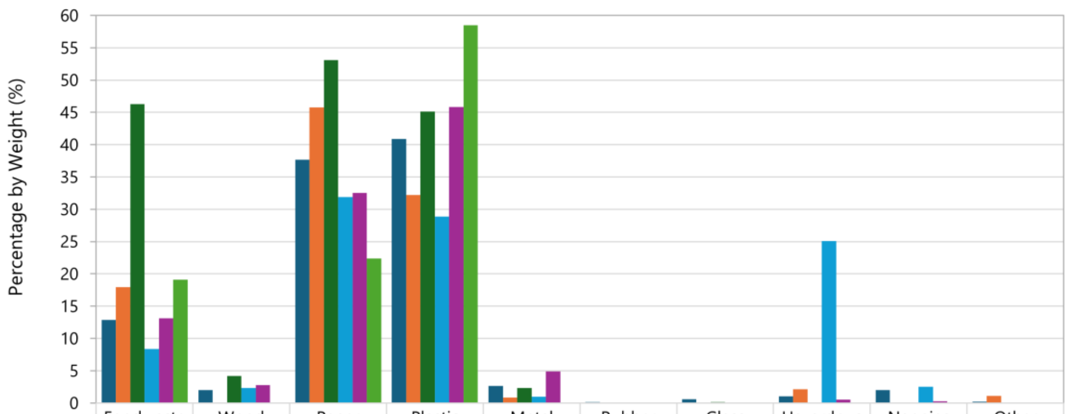


Figure 5 Percentage of Waste Composition

Based on the waste composition diagram above, plastic is the most dominant waste type, accounting for 43.5%, followed by paper at 31.6% and food waste at 16.7%. These three fractions together represent more than 90% of the total waste generation, making them the primary priorities in planning the campus waste management system.

The dominance of plastic waste correlates with the continued high use of single-use plastics within the campus environment, such as food and beverage packaging, bottled water containers, plastic bags, and other logistical packaging materials. Meanwhile, the substantial proportion of paper waste aligns with the characteristics of Universitas Pertamina as an educational institution that produces various administrative documents, lecture materials, assignments, and office operational paperwork. The relatively significant fraction of food waste mainly originates from canteen activities and student dining areas, with volumes tending to increase during periods of high academic activity (e.g., active lecture weeks).

On the other hand, hazardous waste (B3) contributes 4.1%, while other categories such as metal (1.7%), wood (1.6%), diapers (0.7%), and miscellaneous waste (0.2%) contribute relatively small proportions to the total waste generation. This composition pattern indicates that campus waste management strategies should prioritize reducing single-use plastics, optimizing digitalization to minimize paper consumption, and strengthening organic waste processing systems to reduce the volume of waste sent to landfills.



	Foodwaste	Wood	Paper	Plastic	Metal	Rubber	Glass	Hazardous	Nappies	Other
Griya Legita	12.89	1.991	37.65	40.89	2.631	0.129	0.560	1.033	2.030	0.192
Rectorate	17.96		45.74	32.19	0.876			2.137		1.095
Canteen	46.29	4.177	53.07	45.14	2.333		0.141			
Laboratory	8.359	2.300	31.88	28.87	0.953			25.11	2.535	
GOR 1	13.14	2.780	32.55	45.84	4.915			0.497	0.278	
GOR 2	19.10		22.40	58.50						

Griya Legita Rectorate Canteen Laboratory GOR 1 GOR 2

Figure 6 Waste Composition Distribution Each Building

Based on the graph in Figure 3.5, the measurement results illustrate the distribution and variation of waste types generated by each building unit during the sampling period, representing the daily waste composition at Universitas Pertamina. Overall, plastic waste constitutes the largest fraction compared to other types, contributing 43.5% of the total waste generation. Based on analyzed by building, GOR 2 recorded the highest proportion of plastic waste (58.50%), followed by GOR 1 (45.84%) and the

Canteen (45.14%). The high percentage of plastic waste in GOR 2 correlates with its function as a communal area and sports facility with a high level of campus community activity. This area is frequently used as a gathering space for students, both before and after academic and sports activities. This condition is further reinforced by student behavior, as many food and beverages from the canteen bring in single-use packaging, such as plastic wrappers, beverage bottles, and disposable utensils, thereby increasing the accumulation of plastic waste in that location.

These findings indicate a strong correlation between building function, activity characteristics, and user behavior with the resulting waste composition. Therefore, waste management strategies should be specifically designed according to the characteristics of each building. For example, strengthening single-use plastic reduction policies in communal and canteen areas, promoting document digitalization to reduce paper waste in administrative areas, and developing organic waste processing systems to manage food waste fractions in a more sustainable manner.

3.3 Community Preference Analysis

Community Preference Analysis aims to assess the preferences, perceptions, and perceived importance levels of the Universitas Pertamina academic community regarding various aspects of campus waste management. Preferences were evaluated using a quantitative survey method through a structured questionnaire designed to measure respondents' perceptions, priority needs, and expectations related to existing waste management policies, facilities, and practices. A rating scale was applied to enable comparative analysis and systematic identification of priority areas for improvement.

This approach also reflects a stakeholder engagement framework, whereby students, lecturers, administrative staff, and other campus community members were actively involved in evaluating the waste management system. Engaging stakeholders ensures that the resulting policy recommendations and infrastructure development plans are participatory, inclusive, and aligned with the actual needs of the campus community.

Based on the applied methodology, total number population at Universitas Pertamina served as the baseline for determining the required sample size and respondent distribution. The survey involved 410 respondents with a margin of error of 5%. The findings provide an empirical foundation for identifying improvement priorities and supporting strategic decision-making toward a more effective and sustainable campus waste management system.

Table 3 Distribution of the Universitas Pertamina Population and Total Questionnaire Respondents

Category	Number	Respondent Distribution
A. Student	**4047**	**390**
Environmental Engineering	171	17
Civil Engineering	229	22
Geophysics Engineering	171	17

Category	Number	Respondent Distribution
Geology Engineering	563	54
Chemistry Engineering	277	27
Logistic Engineering	228	22
Mechanical Engineering	259	25
Electrical Engineering	167	16
Petroleum Engineering	603	57
Economic	134	13
International Relations	317	30
Computer Science	192	19
Chemistry	76	8
Communication	262	25
Management	398	38
B. Lecturer	**100**	**10**
C. Academic Staff	**63**	**6**
D. Supporting Staff	**38**	**4**
Total	**4.248**	**410**

The questionnaire was distributed to a determined population size to serve as the primary basis for analyzing behavioral aspects, attitudes, and awareness levels of the academic community toward waste management, as well as for evaluating the performance of existing waste management infrastructure on campus. The number of respondents who participated met the sample requirements in accordance with the applied methodology. The collected data were subsequently analyzed using IPA method, which was further developed into a mapping of waste management indicators based on their perceived importance and performance levels. This mapping classifies indicators into priority categories, providing a clearer understanding of which aspects are considered highly important by respondents and the extent to which they are currently being implemented effectively.

The results are presented in the form of a priority scale consisting of four categories: (1) *Maintain Performance*, (2) *Main Priority*, (3) *Low Priority*, and (4) *Over-Served/No Immediate Improvement Required*. This classification reflects the position of each indicator based on its level of importance and performance, thereby facilitating a proportional allocation of attention and resources. These results also support the identification of priority areas that require improvement and strategic intervention and serve as a basis for developing policy recommendations and improving waste management systems that are more effective, participatory, and sustainable.

4. Recommendations

Based on the analysis results, the following key recommendations are proposed to improve campus waste management performance.

No	Recommendations	Key Action
1	Institutional Policy Strengthening	• Issue a Rector's Decree (SK Rektor) mandating segregation (organic, inorganic, residue) for all campus units, tenants, and event. • Establish a single-use-plastic reduction target for tenants, events, and campus activities. • Implement a compliance monitoring mechanism through waste management audits with periodic evaluation.
2	Waste Recording and Food Waste Tracking System	• Record daily/weekly waste generation (kg) by category and by building. • Implement specific food waste tracking in canteen and event areas. • Develop a digital dashboard for monitoring trends and setting reduction targets.
3	Education and Behavioral Change Program	• Conduct segmented education programs for students, staff, and tenants. • Implement continuous awareness campaigns (posters, social media, signage). • Integrate sustainability themes into academic and extracurricular activities.
4	Infrastructure Improvement (Segregated TPS & Supporting Facilities)	• Install standardized segregated bins across all campus buildings. • Provide composting units for organic waste from canteen areas. • Improve TPS facilities with clear labeling and accessible design.
5	Establishment of Campus Waste Bank (BSUP)	• Establish Universitas Pertamina Waste Bank (BSUP) with a structured waste collection and weighing system. • Introduce incentive-based savings or reward schemes to encourage participants. • Partner with recycling industries to ensure sustainable material recovery.

No	Recommendations	Key Action
6	Optimization of Waste Collection and Transportation	• Conduct an analysis of waste generation patterns to determine optimal collection schedules. • Optimize collection routes and frequency based on building activity levels. • Monitor fuel use and emissions from waste transportation operations.
7	Development of Waste Management Roadmap (2026–2030)	• Establish baseline data and annual waste reduction targets. • Define measurable KPIs (recycling rate, diversion rate, waste reduction rate). • Integrate monitoring and reporting into institutional sustainability reporting.

Appendix A : Community Preference Analysis

1. Questionnaire Questions for Importance Performance Analysis Method Assessment Indicators

No	Indicator	Questions	
		Attitude	Behavior
1	Sorted Trash Cans	Do you support the existence of sorted garbage cans at Universitas Pertamina?	I dispose of garbage according to the type of garbage.
2	Internal Waste Treatment Facility	Do you realize that the problem of waste accumulation at Universitas Pertamina can be solved with an internal waste treatment facility?	I take advantage of the waste management facilities at Universitas Pertamina.
3	Waste Transportation Lines and Fleets	Do you think that the frequency of garbage transportation more often can overcome the accumulation of garbage in the campus area?	Have you ever reported problems related to garbage transport lines, such as difficult access for transport fleets?
4	Hazardous Waste Storage	Do you agree that hazardous waste should be managed safely and procedurally?	How often do you use items that will generate hazardous waste?
5	Waste Reporting and Monitoring System	Do you believe that the existence of a waste reporting and monitoring system can effectively overcome waste management problems?	Have you ever reported a problem related to waste management through an existing system?
6	Educational Facilities	Do you agree that information related to waste management should be easily accessible to all campus communities?	I participated in a seminar or workshop on waste management held at Universitas Pertamina.

2. Questionnaire Questions for the Attitude, Behavior, and Sociodemographic Influence Approach

No	Indicator	Questions	
		Attitude	Behavior
1	Campus Food Waste Tracking	Are you willing to sort out food waste before throwing it away?	Do you often leave leftovers and throw them away in the campus cafeteria?

No	Indicator	Questions	
		Attitude	Behavior
2	Waste Tracking	Do you agree that measuring the generation (amount) of waste generated and recycled at universities is an important step towards protecting the environment?	Do you separate recyclable trash from regular trash when you dispose of it in campus trash?
3	Policy Waste Disposal (Hazardous Material)	Do you feel that hazardous waste should be managed specifically in accordance with existing regulations?	Do you know the hazardous waste disposal and management policy at Universitas Pertamina?
4	Policy Waste Disposal (Landfill Policy)	Do you believe that measuring the generation (quantity) of waste sent to Final Processing Sites (TPAs)/landfills and recycled can improve the effectiveness of waste management?	Are you aware of the procedures set by the university regarding the disposal of waste into landfills?
5	Policy for Minimisation of Plastic Use	Do you feel that the excessive use of plastic has a negative impact on the environment?	Do you bring your own drinking containers or bottles to reduce the use of single-use plastics?
6	Policy for Minimisation of Disposable Items	Do you support university policies that seek to reduce the use of single-use items?	Do you often use single-use items in your daily life?
7	Disposable Policy: Extensions to Services	Do you agree that the policy of minimizing single-use goods needs to be expanded to existing services at Universitas Pertamina?	Do you ensure the use of eco-friendly goods in your chosen services or products on campus?
8	Minimisation Policies Extended to Suppliers	Do you think the implementation of a waste minimisation policy in the supply chain of equipment, stationery, can help improve sustainability in universities?	Do you often buy or use items from university suppliers (e.g. buying meals in the cafeteria, buying stationery in the university environment)?