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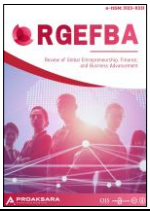

Development of Variable Costing-Based Cost Control Guidelines as an Efficiency Strategy in the Automotive Manufacturing Industry

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ABSTRACT

PT XYZ, a global automotive compressor manufacturer, faces significant challenges in cost control, marked by a budget deviation of Rp42.6 billion in the 2024 financial year. A reactive reporting system, sub-optimal variable costing methods, and the absence of standard guidelines have resulted in inaccurate cost information and hindered strategic decision-making. This study aims to develop systematic, structured, and applicable cost control guidelines based on variable costing to improve the accuracy of cost information and support cost efficiency at PT XYZ. The study employs a Research and Development (R&D) methodology using the ADDIE model (Analyze, Design, Develop, Implement, Evaluate). Qualitative data collection was conducted through semi-structured interviews with management and relevant staff, observation of reporting workflows, and a review of the company's budget documents and Standard Operating Procedures (SOPs). The study produced integrated cost control guidelines covering role clarity, the control cycle, report formats, and evaluation mechanisms. Implementation results indicate that these guidelines are highly feasible (score 93.3%) and highly practical (score 89.9%). Their effectiveness is demonstrated by a significant reduction in cost deviation from 15.8% (FY2024) to 2% (FY2025), as well as increased accountability through the requirement for monthly cost analysis in every work unit. The variable costing-based cost control guidelines developed have proven effective in enhancing transparency, accountability, and the accuracy of cost information, thereby significantly reducing budget variances. These guidelines have the potential to serve as a model for other manufacturing companies facing similar challenges.

Keywords: Accountability, Budget Deviations, Cost Efficiency, Cost Control Guidelines, Variable Costing

1. INTRODUCTION

Effective financial management is key to a company's success and sustainability. In a competitive business environment, the effectiveness of cost control is a crucial factor for the competitiveness of manufacturing companies, particularly amidst the pressures of globalisation. Manufacturing companies must be adaptable by allocating costs appropriately and eliminating waste to remain sustainable. One of the key tools is cost accounting, which provides relevant and accurate information for both control and managerial decision-making. The implementation of modern cost accounting systems improves the accuracy of cost information, thereby supporting more precise decision-making (Komariyah, 2024). However, its effectiveness is highly dependent on the completeness of the information generated. Traditional cost accounting methods often result in biased overhead allocation, and it is also asserted that traditional systems are inadequate for identifying activity costs in detail. This situation is exacerbated in the manufacturing sector, which has high cost complexity, where actual costs exceeding the budget are categorized as unfavourable variances (Horngren et al., 2006) and can have a direct impact on profitability (Atkinson et al., 2004). Similar deviations also occur in investment management due to inaccurate initial cost estimates, making a continuous evaluation system necessary to minimize the risk of cost overruns. Without a structured cost control system, companies risk a decline in efficiency and competitiveness (Drury & Tayles, 2021).

PT XYZ, a global automotive compressor manufacturer, faces significant budgetary control challenges. In the 2024 financial year, the company recorded a budget overrun, with expenses rising by Rp 41.9 billion and investments amounting to Rp 701.4 million. Since actual budget figures are only known after month-end account finalization, strategic decision-making is often delayed. Accountability reports are produced quarterly by the Business Planning Division, making cost control reactive. The Cost Per Piece (CPP) reports cover only labor and operational costs, omitting key drivers such as material, energy, and overheads (Kaplan & Cooper, 1998). Although PT XYZ targets 3% annual cost efficiency, financial statements show no significant cost reduction, revealing weaknesses in the efficiency performance measurement system (Atkinson et al., 2004). The average cost approach in CPP calculations causes cost distortion by ignoring behavioral differences across divisions (Susanto et al., 2024). Thus, variable costing, which distinguishes fixed and variable costs (Garrison et al., 2021), offers a relevant solution to improve cost accuracy and identify inefficiencies more effectively.

This situation underscores PT XYZ's need for standard cost control guidelines based on variable costing that can serve as a reference across divisions. Atkinson et al. (2004) emphasizes that cost control systems are only effective if supported by formal guidelines, whilst others demonstrates that internal guidelines enhance transparency and reduce the risk of cost misallocation. It is also confirmed that companies which develop digitalized cost control modules achieve greater efficiency.

2. LITERATURE REVIEW

2.1. Cost Accounting

Cost accounting is a branch of accounting that focuses on the recording, measurement, classification, analysis and reporting of a company's production or operational costs. Its main components include direct raw material costs, direct labour costs, factory overheads, cost collection systems, allocation methods, and reporting systems. The objectives of cost accounting include determining the cost of goods sold, cost control, providing information for decision-making, budgeting, assessing efficiency, and supporting cost-reduction strategies. According to Garrison et al. (2021), the primary roles of cost accounting encompass three functions: product costing, cost planning and control, and decision-making. A key distinction is between fixed and variable costs, which underpins cost behavior analysis. However, as will be argued, PT XYZ's current average cost approach ignores this distinction, leading to cost distortion and reactive decision-making.

2.2. Efficiency and Cost Improvement

Efficiency in cost management is defined as the optimal balance between output and input, whereby a company seeks to achieve a given production volume at the lowest possible cost without compromising on quality. Kaplan and Cooper (1998) emphasizes the importance of activity-based cost control by identifying value-adding activities and eliminating non-value-adding activities. The theory of continuous improvement (Imai, 1986) emphasizes that cost improvement is an ongoing process, not a one-off exercise. While PT XYZ targets 3% annual cost efficiency, its financial statements show no significant cost reduction. This gap suggests that the existing cost improvement program lacks a robust reporting system to link efficiency initiatives with actual costs, which is a problem this study addresses by proposing variable costing guidelines.

2.3. Management Control

Management control is a comprehensive process that ensures an organization's resources are used effectively and efficiently through a continuous cycle: planning (setting standards and budgets), control (monitoring and measuring performance), evaluation (analysing the causes of deviations), and corrective action (rectifying deviations). Hansen et al. (2007) emphasizes that this cycle enables organizations to improve the efficiency and quality of their decision-making over time. Behavioural aspects of management control, such as the motivation and perceptions of budget implementers, influence the effectiveness of controls (Sitanggang et al., 2023). Digitalization speeds up the detection of deviations (Fähndrich, 2023), which is important for manufacturing companies in responding to cost fluctuations at an early stage. At PT XYZ, the absence of real-time monitoring and quarterly accountability reports makes cost control reactive. Therefore, this study focuses on how variable costing-based guidelines can accelerate the control cycle and enable timely corrective action.

2.4. Accounting Information System

An Accounting Information System (AIS) is a structured framework for collecting, recording, storing and processing accounting data in order to produce reliable, relevant and timely financial information (Romney et al., 2020). The quality of SIA information is determined by its relevance, timeliness, reliability and inter-system integration (Gelinas et al., 2018). In the context of cost accounting, real-time information enables management to detect cost variances quickly. The concept of real-time accounting (Merchant & Van der Stede, 2007) reinforces the argument that IT-based systems can enhance transparency and speed up control cycles. PT XYZ lacks an integrated system for real-time budget monitoring; actual figures are only known after month-end finalization. This study argues that variable costing guidelines, as part of an AIS design, can provide daily cost variance detection which is a critical improvement over the current reactive approach.

2.5. Accountability

Accountability is a fundamental principle that ensures every use of an organization's resources can be accounted for transparently. Agency theory (Jensen & Meckling, 1976) explains the need for accountability mechanisms to reduce information asymmetry between principal and agent. Stewardship theory (Donaldson & Davis, 1991) views managers as leaders who are focused on the organization's interests. The concept of public accountability emphasizes ethical responsibility and transparency in the use of resources. Resource-based accountability (Prabowo et al., 2024) links accountability to the optimisation of resources for value creation. The development of cost control guidelines based on variable costing is an accountability tool that ensures transparency in the management of fixed and variable costs. At PT XYZ, information asymmetry arises because CPP reports omit material, energy, and overhead costs. Developing cost control guidelines based on variable costing serves as an accountability tool, ensuring transparency in managing fixed and variable costs across divisions.

2.6. Cost Control

Cost control is the process of planning, measuring and evaluating costs to ensure the efficient use of resources (Horngren et al., 2006). The objectives include ensuring that costs remain within budget, improving efficiency, providing a basis for performance evaluation, and reducing financial risk. The components of cost control comprise cost planning (setting standards), measuring actual costs, variance analysis (price, usage and efficiency variances), and corrective action. Hansen et al. (2007) states that the benefits of cost control include coordination between departments, improved accountability, and a culture of efficiency. As a recurring cycle, cost control requires a system capable of detecting deviations at an early stage and providing accurate information for corrective action, particularly in manufacturing companies with high cost complexity. As a recurring cycle, cost control requires early deviation detection and accurate information. PT XYZ's current CPP reports use an average cost approach that ignores cost behavior differences between divisions, causing cost distortion (Susanto et al., 2024). This study posits that variable costing, by distinguishing fixed and variable costs, directly addresses this distortion.

2.7. Cost Management Strategy

Cost management strategies encompass three main approaches: cost control (ensuring that actual costs do not exceed the budget), cost reduction (permanently reducing the cost structure without compromising quality), and cost avoidance (preventing unnecessary costs from arising in the future). Shank and Govindarajan (1993) introducing strategic cost management, which emphasizes costs as an integral part of business strategy. Research shows that activity-based cost management strategies enhance competitive advantage in the manufacturing industry. The implementation of cost control guidelines based on variable costing forms part of a long-term cost management strategy to maintain efficiency and global competitiveness. For PT XYZ, implementing variable costing-based guidelines is not merely a tactical fix but part of a long-term strategy to maintain global competitiveness and achieve the 3% annual efficiency target which is a goal currently unmet due to measurement system weaknesses.

2.8. The Role of Guidelines in the Cost Control System

Cost control guidelines are standard documents that serve as an official reference for the planning, recording and evaluation of costs (Atkinson et al., 2004). Guidelines play a role in standardisation, transparency, accountability and the effectiveness of cost evaluation. The internal guidelines is evidenced that it could improve the quality of cost information, accelerate decision-making and reduce allocation errors.

Manufacturing industries with high cost complexity require standard guidelines to prevent information distortion. The companies that develop digital-based cost control guidelines are proven to achieve higher efficiency than those relying on periodic reports. Evidence shows that internal guidelines improve cost information quality, accelerate decision-making, and reduce allocation errors. Companies with digital-based guidelines achieve higher efficiency than those relying on periodic reports. PT XYZ lacks such guidelines; hence, this research proposes a variable costing-based guideline to standardize cost control across divisions.

2.9. Guidelines on Variable Costing for Manufacturing Companies

Variable costing is a method of determining production costs that includes only variable costs (direct materials, direct labour, variable overheads) in the cost of goods sold, whilst fixed costs are treated as period expenses. The advantage of this method lies in the presentation of the contribution margin for short-term decision-making (Garrison et al., 2021). In the automotive sector, variable costing has been shown to enhance detection of cost waste. For PT XYZ, formal variable costing guidelines would identify variable cost components, prepare activity-based budgets, conduct variance analysis, and establish follow-up mechanisms. This directly addresses the research gap: the absence of an integrated, real-time, behavior-based costing system that enables proactive rather than reactive cost control.

3. RESEARCH METHODS

3.1. Research Design

This study employs a research and development approach using the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate). The ADDIE model was chosen because it is systematic and flexible, and allows for evaluation at every stage of development, thereby helping to ensure that the final product (a cost control guideline based on variable costing) can be tested, refined, and effectively implemented within the organizational environment. During the analyze phase, the specific focus is on identifying PT XYZ's current cost control weaknesses such as delayed budget information and incomplete CPP reports through semi-structured interviews with the Cost Accounting Manager and Business Planning Division staff. During the analyze phase, qualitative data was collected in the form of semi-structured interviews regarding cost control needs in the automotive manufacturing sector. Once the data had been analyzed and organised according to requirements, the guidelines were designed with a structure that classifies fixed versus variable costs and includes daily variance reporting templates, followed by the development of a prototype, phased implementation within the company starting with one production line before company-wide rollout, and evaluation to measure improvements in variance detection speed and cost information accuracy. This systematic linkage between each ADDIE stage and the expected outcome which are a proactive, real-time cost control system ensures that the final guidelines directly address PT XYZ's budget overrun problems.

3.2. Research Sample

The research sample was selected using purposive sampling, taking into account the respondents' roles and involvement in the cost control system at PT XYZ. The main respondents included the Vice President of PT XYZ, the Manager of the Business Planning Division (as the cost control division), the Managers of the Production, Maintenance, and Facilities Divisions (as the largest budget users at PT XYZ), the Manager of the Finance and Accounting Division, and operational staff in each division. The selection of respondents was based on the consideration that they are directly involved in the processes of planning, implementation, control, and reporting of costs, and are therefore able to provide in-depth information regarding the actual state of the cost control system, the obstacles encountered, and the need for new guidelines.

3.3. Data Collection Techniques and Procedures

Data collection in this study was carried out using three main techniques: document analysis, observation and interviews. Document analysis was carried out to obtain factual data on the current cost control system, including an analysis of PT XYZ's cost reports for 2021-2024 to assess deviations between actual costs and the budget, a review of existing cost control standard operating procedures (SOPs), and the collection of cost report formats from each division. The main data collected included budget data for each division, monthly cost realisation data from the accounting system, detailed data on cost components distinguishing variable

and fixed costs, cost improvement report data, old CPP reports, organizational structure, and internal policies related to cost control.

Cost reporting observations were conducted to systematically observe the processes of recording, collecting, and submitting cost data from each work unit until it was compiled into the company's cost report. The observation activities aimed to understand the flow of cost reporting between departments, the mechanisms for budget approval and recording of actual costs, as well as the obstacles frequently encountered in the cost monitoring and reporting process. Semi-structured interviews were used to gather in-depth information regarding the perceptions, experiences, and challenges faced by those involved in the cost control system, with topics including the effectiveness of the current reporting system, obstacles to implementing cost control, unmet cost information needs, expectations regarding the new guidelines, and the level of readiness among users to implement the new system.

3.4. Data Analysis Techniques

Data analysis in this study was conducted using both qualitative and quantitative methods in accordance with the stages of the ADDIE model. During the analysis phase, data from interviews, observations and document reviews were analyzed using qualitative descriptive methods to understand the current state of cost control, identify key issues and determine the requirements for an ideal system. During the development stage, the content of the guidelines was validated by PT XYZ's management to assess feasibility, clarity of format, and consistency across sections. During the implementation stage, monitoring and support were provided to help users understand the new reporting process. During the evaluation phase, the research outcomes were measured using an evaluation method covering three main aspects.

The feasibility aspect was assessed by PT XYZ management using an evaluation instrument that included the alignment of the guideline's content with cost-efficiency objectives, the clarity of the reporting format and responsibility structure, and the integration of the system with company policies and practices, using a 1-5 Likert scale. The practicality aspect was assessed via a questionnaire for guideline users during the implementation trial, with indicators including ease of use and understanding of the CPP report format, the applicability of the guidelines in daily work processes, and the level of user acceptance of the new system. The effectiveness aspect was measured through a comparative analysis of conditions before and after implementation, using indicators such as the reduction in the variance between budgeted and actual costs, increased reporting speed, improved accuracy of activity-based cost data, and an increase in divisional compliance with reporting schedules. The success criteria used were as follows:

Table 1. Final Success Criteria

Evaluation Aspects	Success Criteria	Minimum Target
Validity (Content & Design)	Guidelines tailored to requirements, with a logical and comprehensive structure	61%-80% (Suitable)
Practicality	Guidelines that are user-friendly and well-received by users	61%-80% (Practical)
(User Acceptance)	Reduction in cost variances, improved accuracy and accountability	10%-15% (Efficiency Improvement)

Source: Data compiled by the author, 2025

4. RESULTS AND DISCUSSION

4.1. Implementation of the Research Stages

The research was conducted systematically using the ADDIE model, which comprises five main stages: Analyze, Design, Develop, Implement and Evaluate. A description of each stage is provided below:

4.1.1. Analyze

1) Analysis of internal documents

Budget trend data for the 2021-2024 period reveals significant fluctuations between budget execution and cost improvement achievements (Tables 2 and 3). PT XYZ's cost control performance for the 2021-2023 period was classified as good, supported by energy contract negotiations and the optimisation of parts repairs. In

2024, effectiveness declined to a low category due to the implementation of a centralized project that is still in transition, resulting in complexities and unforeseen additional costs.

Table 2. Trends in Budget Implementation and Cost Improvement Achievements

Description	2021	2022	2023	2024
Total Budget	326 billion	329 billion	377 billion	411 billion
Total Expenditure	317 billion	326 billion	362 billion	476 billion
Variance	9 billion	4 billion	15 billion	65 billion
Cost Improvement	20 billion	13 billion	14 billion	15 billion

Source: Company budget report, 2025

Table 3. Evaluation of Cost Control Performance

Year	Effectiveness	Efficiency	Efficiency General Conclusions
2021	Good	Very good	Optimizing cost savings through the review and negotiation of energy contracts
2022	Good	Good	The review and negotiation of energy contracts only has a one-year impact
2023	Very good	Good	Optimizing the use of spare parts
2024	Low	Good	The impact of the centralized project is not yet stable

Source: Cost Control Performance Report, 2025

The discrepancy between cost improvement achievements and budget deviations was identified as a critical finding. In 2024, although the cost improvement team reported efficiency savings of Rp15 billion, budget deviations actually reached Rp65 billion. This situation indicates a risk of overstating efficiency; targets are declared achieved but are not reflected in a reduction in aggregate budget deviations. Performance indicators need to be aligned so that cost improvement achievements genuinely contribute to the company's cost control. SOPs cover only budget preparation and expenditure mechanisms, lacking provisions on reporting standards, frequency, cost indicators, or responsibility allocation for budget evaluation. Thus, cost control remains administrative and reliant on individual divisional initiative (Table 4).

Table 4. Matrix of Findings on Cost Control Standard Operating Procedures

Aspect	Current Situation	Key Gap	Impact
Budgeting & Expenditure	This is already set out in the SOP	No significant gaps	Administrative processes are under control
Division Reporting & Evaluation	There are currently no standards or evaluation schedules	The monitoring system is not yet structured	Controls are not sufficiently robust
Accountability	There is currently no division of responsibilities	Accountability is not yet formalised	Depends on departmental initiative

Source: Data compiled by the author, 2025

An analysis of the Cost per Piece (CPP) indicator also reveals similar limitations. CPP merely reflects variable costs divided by total final output, thus serving as an aggregate company indicator rather than a tool for operational control at the divisional level. The use of a single common divisor ignores the variations in actual cost drivers across each division, potentially leading to cost distortions and making it difficult to identify sources of inefficiency (Table 5).

Table 5. CPP Findings Matrix

Aspect	Current Situation	Key Gap	Impact
Cost Coverage	Variable costs only	Does not reflect total costs	Cost information per unit is incomplete
Basis of Calculation	Divided by total final output	Not division/activity-based	Potential for cost distortion
Managerial Functions	Aggregate company indicator	Does not support evaluation by division	Difficult to identify the source of inefficiencies

Source: Data compiled by the author, 2025

2) Cost Reporting Observations

Field observations identified four main issues (Table 6). Firstly, the reporting process is situational and reactive, with Business Planning only confirming with specific divisions when cost overruns are identified, rather than conducting ongoing monitoring. Secondly, accountability is low because monitoring is centralized within Business Planning, meaning that control responsibilities are not distributed to budget owners. Third, actual cost reports are only available seven days after the closing, making the information a lagging indicator that limits the scope for corrective action. Fourth, formal evaluation through the DEPOL forum is only conducted quarterly, meaning that deviations at the start of a new period are only discussed once their impact has accumulated. It should be noted that the budget approval mechanism and the recording of actual costs by the Accounting Division have been functioning well procedurally; however, the timeliness of information delivery still needs to be improved.

Table 6. Observation Gap Matrix

Aspect	Current Situation	Key Gap	Impact
Reporting Process	Reporting is situational;	The reporting system is not yet structured;	Cost information is inconsistent and incomplete;
Accountability	Monitoring focuses on business planning;	The budget owner's responsibilities are not yet clearly defined;	Low cost awareness and control within the division;
Timeliness	Actual reports are available seven days after the event, with formal evaluations conducted quarterly;	Information is lagging and not provided on a regular basis;	Corrective actions are delayed;
Monitoring Function	Clarification is provided in the event of cost overruns	It is not yet based on monthly monitoring	Controls remain reactive

Source: Data compiled by the author, 2025

3) Interview

Interviews were conducted with nine informants comprising the Board of Directors, the Business Planning Manager, the Finance and Accounting Manager, as well as managers and staff from the Production, Maintenance and Facilities divisions. From a management perspective, the CPP report was deemed unable to provide a comprehensive picture of costs per product as it did not include material and depreciation components, meaning that cost improvement achievements did not always align with the realisation of the aggregate budget. Business Planning and Finance Accounting revealed that monitoring remained reactive and based on historical reports, limiting the ability to implement preventive controls.

More significant issues were found at the budget user level. The majority of users struggle to understand the accounting terminology in expense reports, including the concepts of object accounts, volume adjustments, and budget status, meaning the reports are only read at the level of total figures. One informant stated: *"The expense reports are indeed distributed, but there are many terms we do not understand, so in the end we only look at the total figures without further analysis"* (NCH). The lack of clarity regarding cost classification, particularly the allocation of spare parts, increases the risk of misclassification. Furthermore, the lack of written guidelines means that the quality of reporting depends on informal handover between PICs, as one informant explained: *"If there is a change of PIC, there are no guidelines to follow. Usually, it is based solely on explanations from the previous PIC, so the reports can vary"* (CHF). Overall, the results of the needs analysis confirm the need for standardised cost control guidelines that are easy for non-accounting users to understand and are oriented towards operational needs.

4.1.2. Design

Based on the results of the needs analysis, the cost control guidelines have been designed as an operational reference document that integrates the aspects of cost planning, reporting and evaluation. The guidelines are structured around four key characteristics: they are based on clear roles and responsibilities among stakeholders (management, PIC, Business Planning, Finance and Accounting); they are integrated with the new CPP model, which includes the breakdown of total cost components including expenses, utilities,

labour, materials, and overheads per unit; they promote standardisation of cost formats and classifications across divisions; and they use language that is easily understood by non-accounting users.

The structure of the guidelines consists of six sections: (I) introduction and objectives, (II) roles and responsibilities of work units, (III) the cost control cycle covering planning, implementation, and monitoring of the budget along with classification of budget status, (IV) cost reporting formats and mechanisms by division, (V) the cost accountability system and procedures for handling budget overruns, and (VI) evaluation and follow-up procedures (Figure 1).

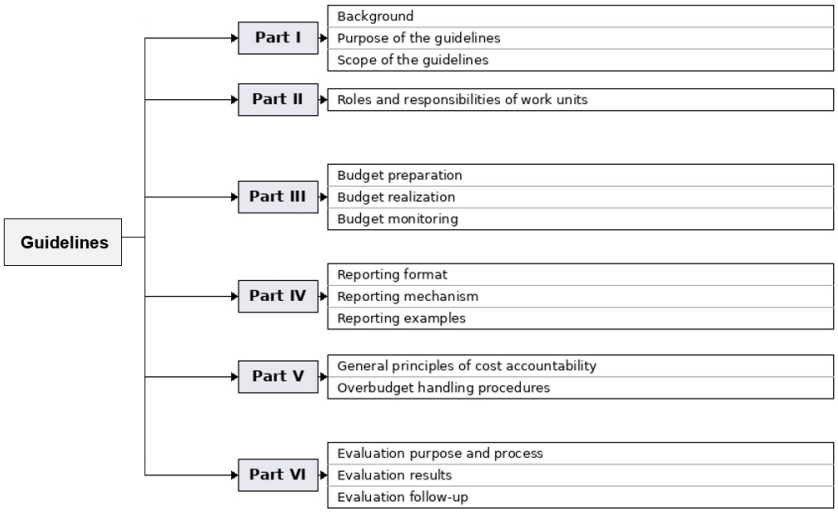

Figure 1. Outline of the Guidelines

4.1.3. Develop

The guidelines were prepared using Microsoft Word for the content and Canva for the visual layout. The guidelines consist of an introductory section and a main body. The introductory section includes the cover page, foreword, table of contents and introduction, as shown in Figure 2.

Figure 2. Cover Page, Foreword, Table of Contents

The main body comprises five modules corresponding to the cost control cycle. The first module outlines the roles and responsibilities of work units (Figure 3), the second module discusses the budget control cycle from planning to monitoring (Figure 4), the third module details the format and mechanisms for cost reporting, accompanied by examples (Figure 5), the fourth module covers the cost accountability system and procedures for handling budget overruns (Figure 6), and the fifth module discusses evaluation and follow-up procedures (Figure 7).

BAB II
PERAN DAN TANGGUNGJAWAB UNIT KERJA

Pengendalian biaya membutuhkan koordinasi lintas divisi. Oleh karena itu, tanggung jawab dalam implementasi pedoman ini dibagi sebagai berikut :

NO	JABATAN/DIVISI	TANGGUNGJAWAB UTAMA
1	BOD	Menetapkan arah kebijakan serta target efisiensi biaya perusahaan secara keseluruhan dan memberikan persetujuan terhadap anggaran tahunan.
2	Business Planning	Bertanggung jawab sebagai koordinator utama dalam perencanaan, pemantauan, dan analisis realisasi biaya. Menyusun laporan pengendalian biaya bulanan, melakukan analisis selisih biaya, serta mengusulkan langkah perbaikan kepada manajemen.
3	Finance Accounting	Melakukan pencatatan transaksi biaya sesuai standar akuntansi dan memastikan keakuratan data laporan biaya. Menyediakan data pendukung bagi analisis selisih biaya dan laporan keuangan.
4	Procurement	Mengendalikan biaya pembelian material dan jasa dengan prinsip efisiensi dan kualitas. Memastikan proses pengadaan sesuai anggaran dan prosedur perusahaan, serta mendukung evaluasi efisiensi pemasok.
5	General Manager	Mengawasi pelaksanaan kebijakan pengendalian biaya di seluruh departemen. Memberikan arahan strategis dan memastikan tindak lanjut terhadap hasil evaluasi biaya dilakukan tepat waktu.
6	Departement Manager	Mengontrol dan mengkoordinasikan pengeluaran biaya di tingkat departemen. Bertanggung jawab menyetujui pengeluaran dalam batas kewenangan serta meninjau laporan biaya bulanan dari masing-masing manajer.

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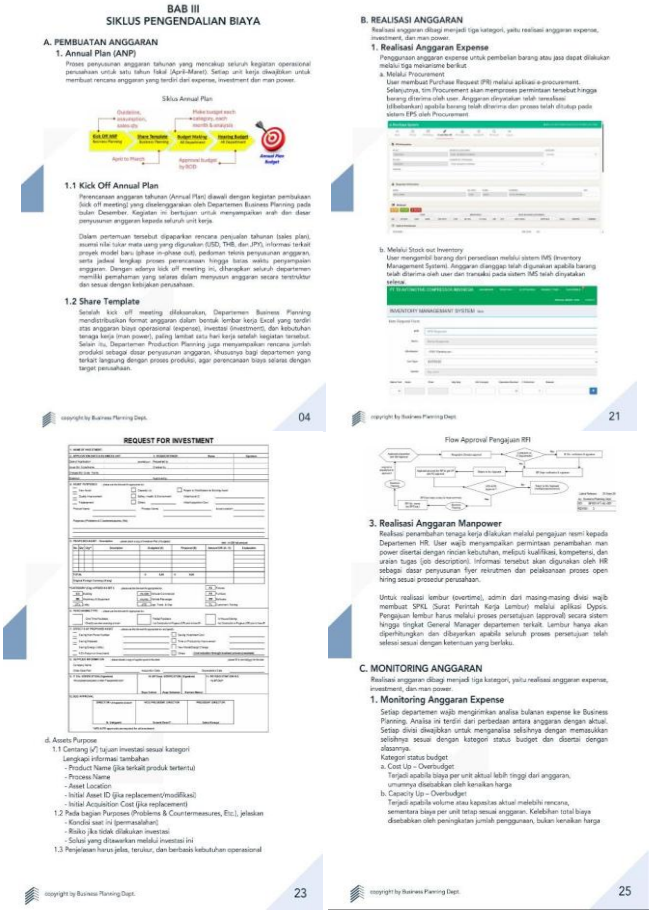
Figure 3. Roles and Responsibilities of Work Units



BAB III
SIKLUS PENGENDALIAN BIAYA

A. PEMBUATAN ANGGARAN
1. Annual Plan (ANP)

Proses penyusunan anggaran tahunan yang mencakup seluruh kegiatan operasional perusahaan untuk satu tahun fiskal (April-Maret). Setiap unit kerja diwajibkan untuk membuat rencana anggaran yang terdiri dari expense, investment dan man power.

Siklus Annual Plan

1.1 Kick Off Annual Plan

Perencanaan anggaran tahunan (Annual Plan) diawali dengan kegiatan pembukaan (kick off meeting) yang diselenggarakan oleh Departemen Business Planning pada bulan Desember. Kegiatan ini bertujuan untuk menyampaikan arah dan dasar penyusunan anggaran kepada seluruh unit kerja.

Dalam pertemuan tersebut dipaparkan rencana penjualan tahunan (sales plan), asumsi nilai tukar mata uang yang digunakan (USD, THB, dan JPY), informasi terkait proyek model baru (phase in-phase out), pedoman teknis penyusunan anggaran, serta jadwal lengkap proses perencanaan hingga batas waktu pengampaian anggaran. Dengan adanya kick off meeting ini, diharapkan seluruh departemen memiliki pemahaman yang selaras dalam menyusun anggaran secara terstruktur dan sesuai dengan kebijakan perusahaan.

1.2 Share Template

Setelah kick off meeting dilaksanakan, Departemen Business Planning mendistribusikan format anggaran dalam bentuk lembar kerja Excel yang terdiri atas anggaran biaya operasional (expense), investasi (investment), dan kebutuhan tenaga kerja (man power), paling lambat satu hari kerja setelah kegiatan tersebut. Selain itu, Departemen Production Planning juga menyampaikan rencana jumlah produksi sebagai dasar penyusunan anggaran. Khususnya bagi departemen yang terkait langsung dengan proses produksi, agar perencanaan biaya selaras dengan target perusahaan.

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B. REALISASI ANGGARAN

Realisasi anggaran dibagi menjadi tiga kategori, yaitu realisasi anggaran expense, investment, dan man power.

1. Realisasi Anggaran Expense

Penggunaan anggaran expense untuk pembelian barang atau jasa dapat dilakukan melalui tiga mekanisme berikut :

a. Melalui Procurement

User membuat Purchase Request (PR) melalui aplikasi e-procurement. Selanjutnya, tim Procurement akan memproses permintaan tersebut hingga barang diterima oleh user. Anggaran dinyatakan telah terealisasi (dibelanjakan) apabila barang telah diterima dan proses telah ditutup pada sistem EPS oleh Procurement

b. Melalui Stock out Inventory

User mengambil barang dari persediaan melalui sistem IMS (Inventory Management System). Anggaran dianggap telah digunakan apabila barang telah diterima oleh user dan transaksi pada sistem IMS telah dinyatakan selesai.

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REQUEST FOR INVESTMENT

d. Assets Purpose

1.1 Centang (√) tujuan investasi sesuai kategori
Lengkapi informasi tambahan :
- Product Name (jika terkait produk tertentu)
- Process Name
- Asset Location
- Initial Asset ID (jika replacement/modifikasi)
- Initial Acquisition Cost (jika replacement)

1.2 Pada bagian Purposes (Problems & Countermeasures, Etc.), jelaskan
- Kondisi saat ini (permasalahan)
- Risiko jika tidak dilakukan investasi
- Solusi yang ditawarkan melalui investasi ini

1.3 Penjelasan harus jelas, terukur, dan berbasis kebutuhan operasional

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Flow Approval Pengajuan RFI

3. Realisasi Anggaran Manpower

Realisasi penambahan tenaga kerja dilakukan melalui pengajuan resmi kepada Departemen HR. User wajib menyampaikan permintaan penambahan man power disertai dengan rincian kebutuhan, meliputi kualifikasi, kompetensi, dan uraian tugas (job description). Informasi tersebut akan digunakan oleh HR sebagai dasar penyusunan flyer rekrutmen dan pelaksanaan proses open hiring sesuai prosedur perusahaan.

Untuk realisasi lembur (overtime), admin dari masing-masing divisi wajib membuat SPKL (Surat Perintah Kerja Lembur) melalui aplikasi Dypsis. Pengajuan lembur harus melalui proses persetujuan (approval) secara sistem hingga tingkat General Manager departemen terkait. Lembur hanya akan diperhitungkan dan dibayarkan apabila seluruh proses persetujuan telah selesai sesuai dengan ketentuan yang berlaku.

C. MONITORING ANGGARAN

Realisasi anggaran dibagi menjadi tiga kategori, yaitu realisasi anggaran expense, investment, dan man power.

1. Monitoring Anggaran Expense

Setiap departemen wajib mengirimkan analisa bulanan expense ke Business Planning. Analisa ini terdiri dari perbedaan antara anggaran dengan aktual. Setiap divisi diwajibkan untuk menganalisa selisihnya dengan memasukkan selisihnya sesuai dengan kategori status budget dan disertai dengan alasannya.

Kategori status budget
a. Cost Up – Overbudget
Terjadi apabila biaya per unit aktual lebih tinggi dari anggaran, umumnya disebabkan oleh kenaikan harga
b. Capacity Up – Overbudget
Terjadi apabila volume atau kapasitas aktual melebihi rencana, sementara biaya per unit tetap sesuai anggaran. Kelebihan total biaya disebabkan oleh peningkatan jumlah penggunaan, bukan kenaikan harga

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Figure 4. Cost Control Cycle

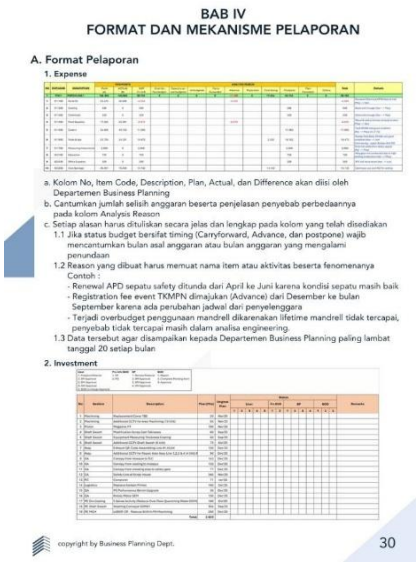

Figure 5. Reporting Format and Mechanism

Figure 6. Cost Accounting System

Figure 7. Procedure for Evaluating and Reporting Results

Formative evaluations conducted by the Business Planning Manager, the Accounting Manager and a representative of the Board of Directors resulted in revisions to: examples of budget variance analysis and associated phenomena; monthly monitoring requirements; detailed explanations of object accounts with examples; a description of the differences between variable and fixed costs; the addition of a comparative analysis of the CPP against the previous year's actual figures; and the development of cost performance trend analysis as a basis for strategic decision-making at board level.

4.1.4. Implementation

Implementation was carried out through educational sessions for the designated contact persons (PICs) across all work units, covering an introduction to the new CPP model and a comprehensive understanding of the guidelines' structure. The results of the implementation revealed varying levels of compliance across departments. Departments with a history of high-cost deviations or those under intensive management supervision demonstrated better compliance, whilst departments with small budgets tended to be less responsive. The educational background of the PICs also influenced the speed of adaptation. These findings indicate that the effectiveness of implementation is determined not only by the quality of the guideline design, but also by organizational culture, readiness for change, and human resource competencies.

Figure 8. Implementation Documentation

4.1.5. Evaluate

The evaluation was carried out using the BSKAP method, which comprises three assessment criteria: suitability, practicality and effectiveness.

1) Feasibility

The management review yielded an average score of 93.3% (highly feasible). The aspect of needs alignment received the highest score (95.5%), reflecting the guidelines' relevance to the company's operational context, or strong contextual validity. The aspect of structure and organization scored 88.8%, indicating a need to refine the document's presentation flow.

Table 7. Results of the Management Validation at PT XYZ

Aspect	Item	Average Percentage	Criteria
Relevance to Needs	1, 2, 3	95.5%	Highly recommended
Structure and Organization	4, 5, 6	88.8%	Highly recommended
Comprehensiveness	7, 8, 9, 10	95.0%	Highly recommended

Source: Data compiled by the author, 2025

2) Practicality

Testing by 21 PICs yielded an average score of 89.9% (highly practical). Ease of understanding received the highest score (91.4%), reflecting the success of the simple and practical language approach. The usability of the guidelines received the lowest score (89.3%), primarily because real-time monitoring of cost realisation has not yet been possible due to reliance on the accounting closing process. This indicates the need for support for digital reporting systems in the future.

Table 8. Results of the PIC Validation at PT XYZ

Aspects	Item Number	Average Percentage	Criteria
Ease of understanding	1, 2	91.4%	Very practical
Clarity of implementation	3, 4, 5	89.8%	Very practical
Practicality of the guidelines	6, 7, 8, 9, 10	89.3%	Very practical

Source: Data compiled by the author, 2025

3) Effectiveness

A comparative analysis shows a reduction in cost variance from 15.8% (FY2024) to 2% (FY2025), a decrease of 13.8 percentage points (Table 9). In terms of accuracy, the new CPP model expands the scope of analysis to include total CPP, variable costs per division, utilities, labour, as well as parts and materials, using a calculation method based on each division's output, supplemented by Plan vs Actual analysis, variance analysis, and budget status classification. In terms of accountability, the evaluation mechanism has shifted from quarterly reporting by Business Planning to the Board of Directors to a requirement for monthly cost analysis by all work units, discussed in CPP meetings, thereby making cost monitoring more structured and sustainable.

Table 9. Reduction in Cost Deviation

Condition	Financial Year	Deviation
Before the Guidelines	FY2024 (Apr'24 - Mar'25)	15.8%
After the Guidelines	FY2025 (Apr'25 - Jan'26)	2.0%
Amount of Decrease		13.8%

Source: Data compiled by the author, 2025

Table 10. Comparison of Accountability Mechanisms

Aspects	Before the Guidelines	Following the Guidelines
Cost Accountability Mechanism	There is currently no clear cost accountability mechanism in place within each department;	The guidelines set out the cost accountability mechanisms for each unit/division;
Frequency of Cost Reviews	Business Planning conducts an evaluation for the Board of Directors every three months;	Evaluations are carried out on a monthly basis;
Involvement of Work Units	Departments have not yet actively carried out cost analysis;	Each work unit is required to prepare and submit a monthly cost analysis;
Cost Review Forum	There is no regular inter-departmental evaluation forum;	A CPP forum meeting is held at the start of each month;
Role of Business Planning	Prepare a cost evaluation report for the Board of Directors;	Leading the cost evaluation forum and coordinating the CPP analysis;
Impact on Cost Control	Cost monitoring is not sufficiently rigorous	More regular cost monitoring and improved accountability of work units

Source: Data compiled by the author, 2025

4.2. Research Outputs

The research output consists of cost control guidelines containing a control framework, monitoring and evaluation mechanisms, variance analysis, and recommendations for improvements that can be systematically implemented at PT XYZ. The guidelines have been registered as Intellectual Property Rights (IPR) and designated as the official reference for the company's cost control practices. As part of the sustainability initiative, the researcher acts as an internal trainer in the field of cost management to ensure the guidelines are implemented consistently across all levels of the organization.

5. CONCLUSIONS

This research has had a tangible impact on both the researcher and PT XYZ as the partner company. For the researcher, the process of developing the guidelines provided empirical experience in integrating theory with manufacturing industry practice, whilst strengthening professional competencies in the field of cost management through the role of internal trainer. For the company, the development of systematic and structured cost control guidelines provided clarity regarding budget planning, monitoring of cost realisation, variance analysis, and evaluation of Cost per Piece (CPP), thereby making managerial decision-making more data-driven and objective. The results of implementation show a significant reduction in the cost deviation rate from 15.8% to approximately 2%, or a decrease of 13.8%, demonstrating that the guidelines are capable of providing a more structured control mechanism through improvements in the processes of planning,

reporting, and evaluating costs within each work unit. Strategically, these guidelines imply enhanced transparency, inter-departmental accountability, strengthened internal control systems, and improved corporate competitiveness in facing the challenges of the competitive automotive industry, thereby potentially serving as a model for other companies facing similar issues.

Nevertheless, this study has several limitations that require consideration. The scope of the research, which focuses on a single partner organization, means that generalisation of the results must be undertaken with caution, given that differences in operational characteristics, organizational structure, and work culture between companies may influence the success of implementation. Furthermore, the guidelines developed are more relevant for companies still using manual or semi-digital recording systems; consequently, for companies that have comprehensively implemented an ERP system, these guidelines require further adaptation. Therefore, further research is recommended to test the application of the model in other companies within the same industry to determine its level of generalisability, to integrate the guidelines with digital systems so that cost control can operate in real-time and be automated, and to develop additional variables such as organizational culture, readiness for change, and human resource competencies as factors influencing the success of the model's implementation.

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