

Organizational Structure Settlement Research for Healthy Drink Company To Reduce High Turnover Research and Development Team Case of Asa Cerra Company

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Abstract

Asa Cerra, a small-medium business (SME) in Indonesia, manufactures healthy probiotic drinks using whey, a by-product of mozzarella cheese production. These drinks offer digestive health benefits and align with the growing consumer trend towards functional foods. Developing Asa Cerra's products involves comprehensive research stages, necessitating collaboration with experts in the field; however, Asa Cerra faced challenges in finding and retaining a qualified research and development (R&D) team, hindering new product development and overall sales growth. A 5-Whys analysis identified an inefficient organizational structure as the primary cause of these issues. This study utilizes a cyclical problem-driven action research approach to address Asa Cerra's high R&D employee turnover. The research iteratively gathers data and implements changes based on the findings. SWOT (Strengths, Weaknesses, Opportunities, Threats) and TOWS (Threats, Opportunities, Weaknesses, Strengths) analyses are employed to identify internal and external factors influencing employee turnover. The relative impact of these factors is then measured using a combination of the ratio method and the Analytical Hierarchy Process (AHP). This combined approach helps determine the most appropriate organizational structure for Asa Cerra's R&D team. By implementing the findings of this research, Asa Cerra can establish an optimal organizational structure and a more effective R&D team structure. This will ultimately reduce employee turnover, ensuring Asa Cerra's business continuity and significantly enhancing product development. This organizational restructuring directly contributes to stabilizing operations, fostering innovation, and driving growth, ultimately strengthening Asa Cerra's market position and long-term viability.

Keywords: Micro-Small and Medium Enterprises; Organizational Structure; Strategic Analysis; Analytical Hierarchy Process

A. INTRODUCTION

Asa Cerra, a small-medium enterprise, is dedicated to producing and marketing health products by transforming mozzarella cheese whey into probiotic-rich beverages that enhance digestive health. This mission aligns with the growing emphasis on sustainable food production practices, addressing environmental and health objectives. Asa Cerra envisions a world where superfoods are accessible to everyone, promoting overall health and well-being. The company strives to be a trusted provider of high-quality, ethically sourced, and sustainably produced superfoods. Despite its essential role in providing food products, the dairy industry significantly contributes to global food waste. Spillage on farms, animal culling, testing and analysis procedures, transportation mishaps, and quality control failures result in wasted dairy products (Tostivint et al., 2017).

Additionally, by-products generated during dairy processing, such as cheese whey, spilt milk, and curd chunks, present environmental challenges. Cheese production, in particular, is a major contributor, generating 9 litres of whey for every kilogram of cheese produced (Sar et al., 2022). This vast amount of underutilized whey demands innovative solutions to prevent environmental pollution. Whey, rich in nutrients but often discarded, poses environmental concerns. Transforming whey into a probiotic drink aligns with sustainable food production, addressing environmental and health objectives (Ritchie & Roser, 2018). Probiotics are crucial in maintaining gut health, influencing digestion, immune response, and mental health (Hill et al., 2014). Using sustainability technology, Asa Cerra ensures the preservation of beneficial bacteria in whey, enhancing the product's efficacy and shelf life. This approach reduces waste and contributes to the development of functional foods with added health benefits.

Developing Asa Cerra's products involves comprehensive research stages, necessitating collaboration with food science, nutrition, and sustainability experts. A strategic partnership with the students and faculties of Institut

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Teknologi Bandung (ITB), known for their research excellence. This collaboration will enhance Asa Cerra's product development process by leveraging academic knowledge and research capabilities. However, Asa Cerra has faced challenges securing an effective R&D team, impacting product development and sales. The company struggles with maintaining consistency in daily operations, affecting product quality and credibility. This inconsistency hampers opportunities for investment and funding, threatening Asa Cerra's business continuity.

Maintaining consistent quality in the products is crucial. Inconsistent implementation of processes due to high R&D team turnover can lead to variations in product quality, potentially damaging Asa Cerra's credibility and hindering opportunities for investment and growth. Recognizing the severity of this problem, Asa Cerra conducted a 5-Whys analysis to identify the root cause and develop solutions. The research discovered an inefficient organizational structure as the primary cause behind the difficulties in building a stable R&D team. The lack of structure led to unclear job descriptions and specifications, making it challenging to attract and retain qualified R&D personnel. The research utilized a cyclical, problem-driven action research approach to address this. SWOT and TOWS analyses identified internal and external factors influencing employee turnover. The ratio method and Analytic Hierarchy Process (AHP) measured the relative impact of these factors, guiding the selection of an optimal organizational structure. This paper explores how Asa Cerra can optimize its organizational design to reduce R&D team turnover and ensure the consistent development of innovative, high-quality probiotic drinks.

B. RESEARCH METHODS

This project aims to reduce Asa Cerra's research and development (R&D) employee turnover rate by identifying the most suitable organizational structure. To achieve this, the researcher will employ a cyclical, problem-driven action research approach, which involves iteratively gathering data and implementing changes based on the findings. This approach ensures continuous improvement and adaptability to new insights. The initial step involves identifying the primary business issues affecting R&D employee turnover. Using the 5 Whys technique, the researcher delved into the root causes of these identified issues. Subsequently, the researcher will conduct semi-structured interviews with the four co-founders of Asa Cerra, who are key stakeholders with deep insights into the organizational challenges and processes. These interviews will gather qualitative data on internal and external factors influencing the organization. This qualitative data will be meticulously quantified to facilitate further in-depth exploration.

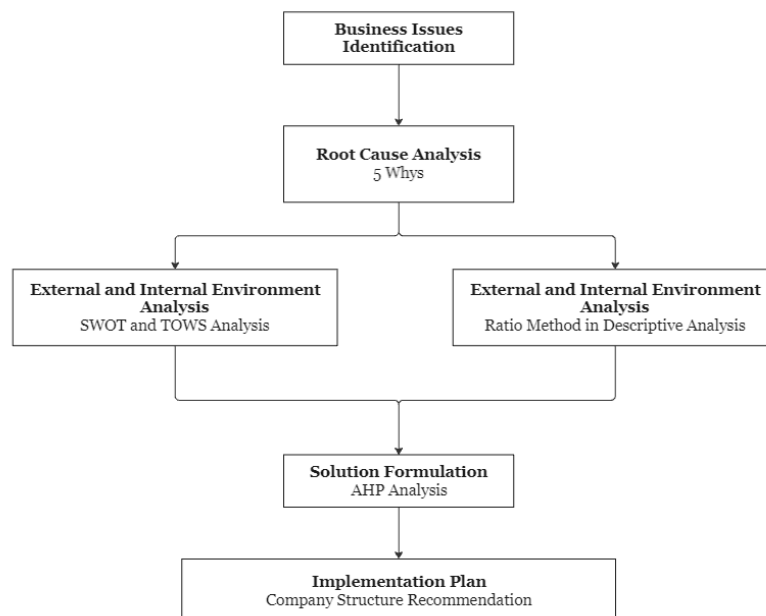


Figure 1. Research Method

The interview result generated a SWOT analysis to identify internal strengths and weaknesses and external opportunities and threats. Based on insights from interviews and SWOT analysis, the ratio method in descriptive analysis will be used to measure results. This will involve ranking and weighting each element in the SWOT analysis based on input from the founders. This step is important for calculating the final score for each element

to determine which internal and external factors need to be considered in the company's strategy. In contrast, TOWS analysis determines what SWOT analysis elements will be considered in selecting a company's strategy to reduce employee turnover.

Furthermore, the Analytic Hierarchy Process (AHP) will be used to quantify the relative importance of SWOT analysis criteria and organizational structure criteria, providing a structured decision-making framework. This approach involves pairwise comparisons and helps prioritize factors influencing turnover. The results from AHP will guide the selection of the most suitable organizational structure, ensuring it aligns with the identified priorities and has the potential to reduce R&D employee turnover effectively.

The final phase involves developing recommendations for an optimal organizational structure based on the analyses and implementing the recommended structure with information regarding the appropriate criteria for each role in the Asa Cerra organizational structure. This methodical and iterative approach allows Asa Cerra to continuously refine its organizational structure, ensuring sustained improvement in R&D employee retention and overall business performance.

C. RESULTS AND DISCUSSION

This study's Analytical Hierarchy Process (AHP) analysis determines the most suitable organizational structure for Asa Cerra by evaluating and prioritizing SWOT and several organizational structure criteria. This comprehensive approach ensures the proposed structure aligns with the company's strategic needs and objectives. AHP analysis bridges the gap between Asa Cerra's internal and external capabilities (identified through SWOT analysis) and the most suitable organizational structure by integrating the assessments from two pairwise comparison processes of SWOT analysis and organizational structure criteria.

Initially, the AHP analysis assessed the importance of SWOT criteria, which helped identify the most critical internal and external factors impacting Asa Cerra. This involved a pairwise comparison of SWOT elements to determine their significance. Subsequently, another pairwise comparison evaluated different organizational structures against these prioritized criteria. The final part combines these evaluations by factoring the importance of each SWOT criteria with each organization structure criteria. The integration of these evaluations provided a final score for each organizational structure, indicating the best fit for Asa Cerra's needs.

Table 1. Final Score Analysis

Organizational Structure Alternatives Criteria FINAL Score					
Criteria	Initial	Sub Criteria	Initial	Variable	Accumulation Score
Functional Organization Structure	F	Emphasis on functional expertise	F1	C1	4.30
		Stable and predictable environment	F2	C2	
		Manufacturing company with standardized products	F3	C3	
Divisional Organization Structure	D	Diverse products or markets	D1	C4	0.23
		Dynamic and competitive environment	D2	C5	
		Retail company with multiple brands	D3	C6	
Matrix Organization Structure	M	Both market focus and functional expertise	M1	C7	3.70
		Technology company with rapid innovation	M2	C8	
		Dynamic and innovative environment	M3	C9	
Maximum	4.30				
Most Suitable Organizational Structure For Asa Cerra Based on SWOT and AHP Analysis is					
Functional Organization Structure					

Source: Research data, 2024

As a result, the AHP analysis recommends a functional organizational structure that aligns with Asa Cerra's specific needs and strategic goals, promoting a high level of functional efficiency. The following key features characterize Functional Organizational Structure:

Addressing Weaknesses:

- 1) Inconsistent Team Make-up: A functional structure groups employees by expertise. This can lead to more consistent teams with complementary skill sets, potentially reducing conflict and improving team dynamics.
- 2) Unclear Goals: A functional structure can make team goals more transparent and achievable by defining clear functional roles and responsibilities within the R&D department.
- 3) Lack of Agreements: Functional structures often have well-defined job descriptions that outline expected tasks and deliverables. This clarity can help manage expectations and minimize conflict regarding roles and responsibilities.

Leveraging Opportunities

Collaboration with External Partners: A functional structure allows for dedicated teams focused on specific tasks within R&D (e.g., prototyping, quality control). This can streamline integration with external partners who handle other aspects of development or production (makloon services).

Mitigating Threats

Product Sales Hampered by R&D Delays: Functional structures can improve efficiency by streamlining processes and communication within the R&D department. This could lead to faster development cycles and reduce the risk of delays impacting product sales.

Functional structure applied with some modifications to address its contextual dimensions and achieve its strategic goals. Below is our breakdown considering both contextual and structural dimensions and the specific teams purposed with the functional organizational structure:

Contextual Dimensions:

- 1) Size: Asa Cerra is in the growth stage with 11 employees. The functional structure is simple and scalable, suitable for a growing company like Asa Cerra.
- 2) Organizational Strategy: The SWOT analysis emphasizes improved efficiency, collaboration, and market focus. A functional structure supports team-based work, aligning well with these goals.
- 3) Environment: The external environment presents opportunities for collaboration and potential threats regarding securing makloon services. A functional structure allows dedicated teams to address external opportunities and threats, ensuring responsive and proactive management.

Structural Dimensions:

- 1) Formalization: Define roles and responsibilities within each functional team through job descriptions and clear reporting lines.
- 2) Specialization: Create dedicated teams like marketing/research, production, partnership/makloon, and potentially cost management.
- 3) Standardization: Develop standardized processes for key activities within each functional area to ensure consistency and quality.
- 4) Hierarchy of Authority: Maintain a flat hierarchy with a central management team overseeing functional teams, fostering collaboration while providing clear direction.
- 5) Complexity: Keep the structure simple to avoid bureaucracy, especially in the initial stages.
- 6) Centralization: The CEO, as the central manager, sets strategic direction, while functional teams have some autonomy in day-to-day operations.
- 7) Professionalism: Ensure professionalism by having production supervisors with relevant production degrees, marketing staff experienced or educated in marketing, and finance staff with a financial education background.
- 8) Personnel Ratio: Based on the chosen organizational structure, the personnel ratio in the marketing team is five people, the production team is two people, the partnership/makloon team is two people, and the cost analysis function is one person.

Specific Teams:

- 1) Marketing/Research Team: Improve target market understanding by gathering and analyzing market data. Asa Cerra's analysis before this research identified a weakness in understanding their target market or a missed opportunity related to market trends. This team addresses that by focusing on customer needs, preferences, competitor activity, and market segmentation. Strong market insights are crucial for developing successful products and marketing strategies. The Research and Development Team placed in the Marketing Team considering effective R&D requires a deep understanding of market trends and customer preferences, which the Marketing Team possesses through their market research activities. Close collaboration between these functions ensures that R&D efforts are aligned with market demands. By integrating R&D within the Marketing team, Asa Cerra can foster a more market-driven approach to product development and ensure their R&D efforts are well-aligned with customer needs and market trends.
- 2) Production Team: Focus on streamlining workflows, implementing lean manufacturing, or exploring automation to improve efficiency. The previous research analysis has revealed inefficiencies in production processes or a need to improve quality control. This team tackles those issues by streamlining workflows, implementing lean manufacturing, and ensuring consistent quality throughout production. Optimized production enhances efficiency, reduces costs, and improves product quality.
- 3) Partnership/Makloon Team: Manage collaborations with external partners and leverage makloon services effectively. The analysis has pointed to a need to leverage external partnerships or improve the effectiveness

of maklon services. This team focuses on finding and managing these partnerships, ensuring smooth communication and collaboration, and overseeing logistics for timely delivery. Effective partnerships allow Asa Cerra to access specialized expertise, optimize production capacity, and potentially reduce costs.

4) Cost Analysis Team: Analyze costs and develop pricing strategies for maklon production. The AHP analysis has identified a weakness in cost management or an opportunity to optimize pricing based on maklon production. This team analyzes cost structures for both internal and maklon production, allowing for informed pricing strategies that consider production costs, market factors, and profit margins. Cost analysis helps Asa Cerra make informed decisions regarding production methods, pricing, and profitability.

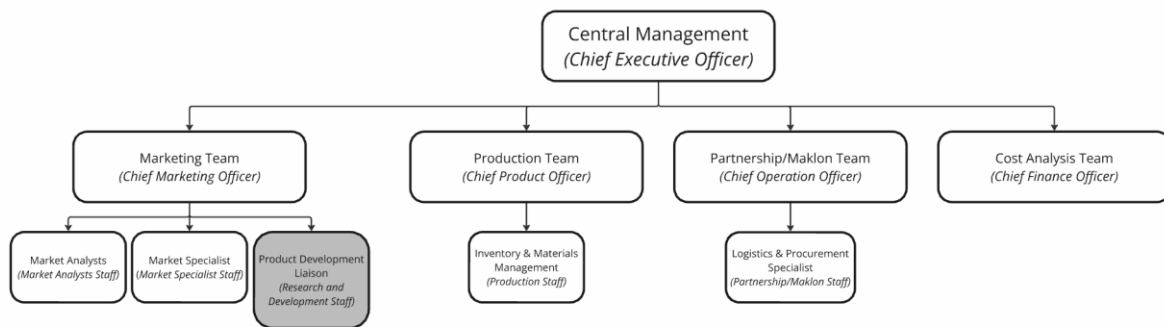


Fig 2. Proposed Organization Structure

Table 2. Organization Structure Job Explanation

CEO (Chief Executive Officer) (I)

Role: Overall leadership and strategic decision-making.

Responsibilities:

- Set organizational goals and objectives aligned with Asa Cerra's vision.
- Oversee the performance of all functional teams (Marketing, Production, Partnership & Maklon, Cost Analysis).
- Allocate resources and budget across functional teams.
- Make strategic decisions regarding partnerships, product development, market expansion, and

Communication Flow:

- Communicate vertically, receiving reports and providing directives to all team heads.

CMO (Chief Marketing Officer) (I)

Role: Improve target market understanding and support marketing strategies.

Responsibilities:

- Conduct market research to identify customer needs and market opportunities.
- Develop and implement marketing strategies to enhance market presence.
- Lead the marketing team to achieve marketing goals.

Communication Flow:

- Communicate vertically with the CEO to provide updates and receive strategic guidance.
- Communicate vertically with market specialists, market analysts, and product development liaisons to receive work reports and make decisions related to market insights.
- Communicate horizontally with other functional teams for integrated marketing efforts.

Market Analysts (I)

Role: Conduct in-depth market research and analysis.

Responsibilities:

- Design and execute market research studies (surveys, focus groups, etc.).
- Analyze market trends and customer behavior.
- Provide insights and recommendations based on research findings.

Communication Flow:

- Communicate vertically with the CMO to provide research findings and receive direction.
- Collaborate with other marketing team members to align research with marketing strategies.

Market Specialist (1)

Role: Develop and implement marketing strategies.

Responsibilities:

- Develop marketing campaigns to promote Asa Cerra's products and services.
- Monitor and evaluate the effectiveness of marketing initiatives.
- Adjust strategies based on performance data and market feedback.

Communication Flow:

- Communicate vertically with the CMO to provide updates on marketing activities and receive guidance.
 - Communicate horizontally with market analysts and product development liaisons to provide marketing strategy plans.
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Product Development Liaison – Research and Development team (2)

Role: Bridge the gap between marketing, research, and product development.

Responsibilities:

- Gather and communicate market insights and customer needs to Product Development for R&D.
- Translate market needs into specific product features and functionalities.
- Gather insights on the feasibility and technical aspects of incorporating feedback.

Communication Flow:

- Communicate vertically with the CMO to provide reports and receive direction.
 - Communicate horizontally with market analysts and specialists to provide product development prototype designs adapted to market insights.
-

CPO (Chief Product Officer) (1)

Role: Enhance production efficiency and ensure product quality.

Responsibilities:

- Streamline production workflows and processes to improve efficiency.
- Implement lean manufacturing principles or explore automation opportunities.
- Develop and enforce quality control procedures.
- Manage inventory and materials.
- Schedule production activities.

Communication Flow:

- Communicate vertically with the CEO to provide reports and receive direction.
 - Communicate vertically with the Inventory & Materials Management section to receive work reports and provide decisions on product quality and production needs.
 - Communicate horizontally with the marketing team, partnership/maklon team, and cost analysis regarding product-related matters
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Inventory & Materials Management (1)

Role: Managing inventory levels and ensuring timely procurement of materials.

Responsibilities:

- Forecast production needs and manage inventory levels to avoid stockouts or overstocking.
- Source and procure materials from reliable vendors at competitive prices.
- Maintain accurate inventory records.

Communication Flow:

- Communicate vertically with the CPO to provide reports regarding product storage situations and logistics needs and receive direction from the CPO for production process strategies.
-

COO (Chief Operation Officer) (1)

Role: Manage collaborations with external partners and leverage maklon services effectively.

Responsibilities:

- Identify and evaluate potential maklon partners.
- Negotiate and establish contracts with chosen maklon providers.
- Manage communication and collaboration with maklon partners.
- Monitor production quality.
- Oversee logistics.

Communication Flow:

- Communicate vertically with the CEO to provide reports and receive direction.
 - Communicate vertically with the logistics and procurement specialist to receive reports and make decisions related to production in Maklon.
 - Communicate horizontally with marketing, production, and cost analysis teams.
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Logistics & Procurement Specialist (1)

Role: Oversee logistics and procurement activities related to maklon production.

Responsibilities:

- Manage logistics arrangements for transporting materials and finished goods.
- Ensure timely delivery of materials to maklon partners.
- Manage procurement of additional materials or services.
- Track and manage logistics costs.

Communication Flow:

- Communicate vertically with the COO to provide reports regarding production material needs to be carried out at the maklon and receive direction from the CPO.
-

CFO (Chief Finance Officer) (I)

Role: Analyze costs and develop pricing strategies.

Responsibilities:

- Assess cost structures for internal and maklon production.
- Develop pricing strategies based on cost analysis and market factors.
- Provide financial insights to support strategic decision-making.

Communication Flow:

- Communicate vertically with the CEO to present cost analysis and pricing recommendations.
 - Communicate horizontally with the marketing, production, and partnership/maklon teams to align cost management with operational activities.
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Source: Research data, 2024

CONCLUSION

Asa Cerra can grow significantly by adopting a functional structure with specialized marketing, production, and partnership teams. This targeted approach addresses weaknesses, leverages opportunities, and reduces costs through remote/hybrid work models. Further research on performance metrics and employee satisfaction, along with exploring sustainable practices, will refine this approach. The study emphasizes ethical business practices like transparency and fair labour to build trust and ensure long-term success. Asa Cerra might consider a hybrid structure in the future; as Asa Cerra grows and develops distinct product lines, a hybrid structure combining functional and divisional elements could be implemented, which is a matrix organizational structure as the second most suitable organizational structure for Asa Cerra. This would allow for maintaining functional teams for core operations while creating product-based divisions for better focus and control as the product lines mature.

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