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Implementing TOGAF for Strategic Sustainability in the Food and Beverage Industry

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ABSTRACT

PT. Greenfields Indonesia is a prominent company in the food and beverage industry, specializing in the production and distribution of premium fresh milk products. The company is committed to delivering high-quality dairy offerings, including fresh milk, yogurt, and other dairy derivatives, while adhering to international standards. In alignment with its vision and mission, PT. Greenfields Indonesia actively promotes sustainable agriculture by partnering with local farmers, improving their welfare, and fostering environmentally responsible practices. To enhance its operational efficiency and strategic alignment, PT. Greenfields Indonesia leverages enterprise architecture frameworks, such as TOGAF (The Open Group Architecture Framework). The adoption of TOGAF supports the company in optimizing its business processes, technology integration, and resource allocation to achieve long-term sustainability goals. Furthermore, the company conducts impactful corporate social responsibility programs, focusing on environmental conservation, educational support, and community health initiatives. These efforts underscore PT. Greenfields Indonesia's dedication to creating value for society and the environment while ensuring sustainable business growth.

1. INTRODUCTION

Current advancements in Information System Technology can significantly influence human business activities. It is undeniable that information technology has become one of the main resources for companies or organizations to enhance their competitiveness against rivals. One crucial strategy in facing the development of information technology is the utilization and enhancement of support systems for enterprises. The implementation of this strategy emphasizes the mission of information systems, which requires alignment in planning, execution, and control in harmony with the enterprise's business strategy.

The true goal of integration is to reduce gaps that occur during system development processes. To bridge these gaps, a paradigm is needed in planning, designing, and managing information systems, called enterprise architecture (EA). (Sanny et al., 2019)

Various paradigms and methods can be used in designing enterprise architecture, including the Zachman Framework, TOGAF-ADM, EAP, and others. In this discussion, we will focus on the implementation of TOGAF (The Open Group Architecture Framework) ADM (Architecture Development Method) in designing enterprise architecture.

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The Open Group Architecture Framework (TOGAF) is a framework for enterprise architecture that provides a comprehensive approach to planning, designing, and implementing enterprise information architecture. TOGAF offers a detailed methodology for building, managing, and implementing frameworks and information systems used to develop enterprise architecture models. These models serve as recommendations for developing integrated and valuable systems. Additionally, the advantages of the TOGAF framework include its object-oriented basis, flexibility, and open-source nature, making it widely applicable in various fields such as banking, manufacturing industries, and education. (Setiawan, 2016)

One company that utilizes TOGAF in running its operations is PT. Greenfields Indonesia. PT Greenfields Indonesia is a manufacturing company in the dairy sector, producing fresh milk, cheese, and whipping cream.

2. METHODS

The implementation of TOGAF at PT. Greenfields Indonesia involves several methods that can be used to ensure the success of adopting this enterprise architecture framework. Below are some methods that can be applied in the TOGAF implementation at PT. Greenfields Indonesia:

a. Preliminary Phase:
   1) Understanding the Company Context: In this phase, PT. Greenfields Indonesia will identify and understand the company's business and technology contexts. This involves understanding the company's vision, mission, strategy, as well as needs and challenges.
   2) Determining Sponsor and Team: PT. Greenfields Indonesia will designate a sponsor responsible for TOGAF implementation. Additionally, the company will form an architecture team comprising internal and external members with relevant knowledge and skills.

b. Business Phase (Phase A):
   1) Identifying Business Needs: PT. Greenfields Indonesia will analyze and map the business needs that must be fulfilled by the IT architecture. This includes identifying business requirements, goals, and success criteria that the IT system to be developed should achieve.
   2) Developing Business Architecture: The company will design and develop a business architecture covering business processes, organizational structure, and business functions. This will help in understanding how IT components will support business needs.

c. Data Architecture Phase (Phase B):
   1) Identifying Data Needs: PT. Greenfields Indonesia will analyze data requirements and identify the data needed to support business processes and informational needs.
   2) Designing Data Architecture: The company will design a data architecture that includes data models, storage structures, and data flow between systems. The goal is to ensure data consistency, integrity, and accessibility as needed.

d. Application Architecture Phase (Phase C):
   1) Identifying Application Needs: PT. Greenfields Indonesia will identify application requirements that support business processes and data architecture. This involves mapping existing applications and identifying new development needs.
   2) Designing Application Architecture: The company will design an application architecture that includes necessary applications, interfaces, and interactions between applications. The aim is to ensure that the applications used can support business needs and integrate well with the existing IT infrastructure.

3. RESULTS AND DISCUSSION

3.1 Preliminary Phase

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The implementation of TOGAF at PT. Greenfields Indonesia through the Preliminary Phase (Initial Phase) will produce several significant impacts and benefits. Below are some discussions regarding the results of implementing TOGAF at this stage:

Table 1. Preliminary Phase

PRINSIP	HASIL
Business and Technology	➢ Through the Preliminary Phase, PT. Greenfields Indonesia will gain a deeper understanding of the company's business objectives, strategies, and technological needs. ➢ Management and stakeholders will have a clear picture of the company's vision and direction, as well as how technology can support the achievement of business goals.
Identification of Parties and Roles	➢ PT. Greenfields Indonesia will identify relevant stakeholders who need to be involved in the architecture design process, such as senior management, business users, the IT team, and other stakeholders. ➢ Each stakeholder will have clear roles and responsibilities in developing and implementing the enterprise architecture.
ADM (Architecture Development Method)	➢ PT. Greenfields Indonesia will gain a comprehensive understanding of TOGAF's ADM, the framework used for architecture development. ➢ The architecture team will be introduced to the necessary steps in developing the architecture, including processes, artifacts, and relevant guidelines.

3.2 Business Phase (Phase A)

The implementation phase of TOGAF involves understanding the company's business objectives, strategies, processes, and needs of Greenfields Indonesia. This includes identifying the business model, analyzing the external environment, and evaluating the company's competitive position within the industry.

Based on the gap analysis, the company designs a desired target business architecture. This target architecture depicts the envisioned future state of a more efficient, innovative business architecture that supports business objectives. It includes priorities, implementation sequence, and the time required to execute the planned business changes. This solution may involve developing or improving business processes, adopting new technologies, organizational restructuring, or other initiatives that support the target analysis.

3.3 Data Architecture Phase (Phase B)

The implementation of TOGAF at PT. Greenfields Indonesia in the context of data architecture involves a series of steps and activities designed to plan, design, implement, and manage the company's data architecture.

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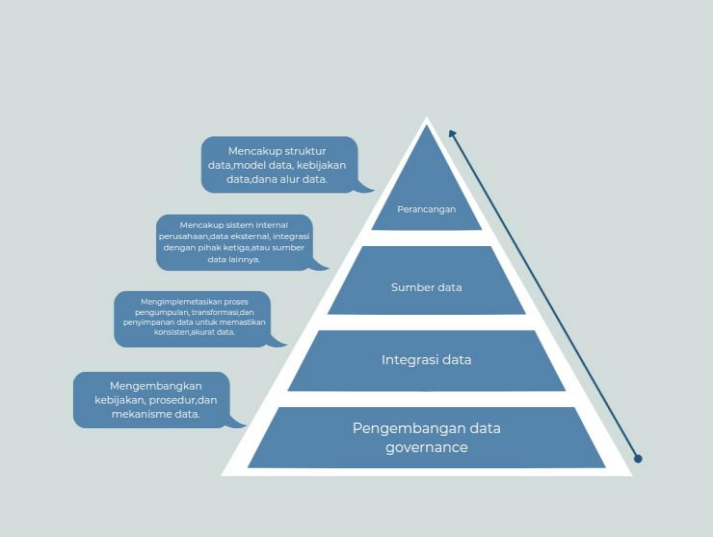

Figure 1. Data Architecture Stage

3.4 Application Architecture Phase (Phase C)

The application architecture at PT. Greenfields Indonesia is a framework designed to organize and manage the applications used to support the company's business processes and operations. The application architecture maps the dependencies between applications within PT. Greenfields Indonesia. This includes data flow between applications, integration among applications, and information exchange needed to run business processes.

A good understanding of application dependencies allows PT. Greenfields Indonesia to design effective integrations, optimize information flow, and avoid unnecessary data duplication. The company will design an effective application structure to meet business needs, including designing application components, user interfaces, business logic, and data modeling and management.

Furthermore, appropriate platform and technology choices will be made to support the designed applications, including selecting programming languages, databases, and relevant infrastructure. Effective integration solutions will also be implemented to connect different applications, utilizing technologies such as web services, application interfaces, or data exchange mechanisms to ensure smooth integration and accurate information flow

4. CONCLUSION

The implementation of TOGAF at PT. Greenfields Indonesia is a strategic step aimed at designing and managing the company's architecture in a holistic manner. The structured framework provided by TOGAF offers a comprehensive and organized approach to developing the enterprise architecture. By following the stages outlined in TOGAF, PT. Greenfields Indonesia can identify business needs, design appropriate solutions, and effectively manage architectural changes.

TOGAF provides a framework for in-depth analysis and evaluation to support decision-making related to enterprise architecture, utilizing structured information and relevant data. As a result, PT. Greenfields Indonesia can make better decisions, reduce risks, and optimize technology investments.

With the implementation of TOGAF, PT. Greenfields Indonesia can achieve benefits such as operational efficiency, adaptability to change, and competitive advantage through a structured and integrated architecture.

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