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1.0 Introduction

1.1 Background of the Business Case

AKPerog Ltd. is a rapidly growing consumer electronics retailer operating both physical stores and an online sales platform. While the company has successfully increased its sales volume, its internal information systems have not evolved at the same pace as the business itself. Systems that were previously sufficient for a smaller-scale operation are now under pressure due to higher transaction volumes, increased operational complexity, and rising customer expectations.

Existing research on management information systems highlights that rapid organisational growth often exposes weaknesses in manual or legacy systems, particularly within retail environments where real-time data accuracy and system integration are essential for daily operations and customer satisfaction (Rahman et al., 2025; Thompson, 2025).

1.2 Key challenges faced by AKPerog Ltd

One of the most significant challenges facing AKPerog Ltd. is its dependence on a largely manual inventory management process. This approach frequently results in mismatches between stock held in physical stores and products advertised as available online. Consequently, customers may place orders for unavailable items, leading to increased refunds, delivery delays, and dissatisfaction. Existing research indicates that manual inventory systems in retail organisations commonly cause stock inaccuracies, overstocking, and stock shortages, all of which negatively affect operational efficiency and customer trust (Purwasih and Candana, 2024).

A further issue relates to customer relationship management. AKPerog Ltd. does not currently use a centralised CRM system, meaning customer data is spread across several disconnected platforms. This fragmented approach prevents staff from accessing complete customer histories, reducing the organisation's ability to deliver personalised services and resolve complaints effectively. Studies have shown that the absence of an integrated CRM system often results in lower customer satisfaction and reduced retention levels (Prajapati, 2024).

Decision-making within the organisation is also constrained by ineffective reporting practices. Sales and performance reports are manually produced using spreadsheets, which can contain errors and quickly become outdated. This limits management's ability to respond promptly to market trends or make accurate forecasts. Business intelligence research highlights that organisations relying on manual reporting tools tend to experience slower and less informed decision-making compared to those using automated analytics systems (Alzghoul et al., 2024).

Data security and regulatory compliance represent additional areas of concern. AKPerog Ltd.'s current systems lack robust access controls and comprehensive data protection measures, increasing the risk of unauthorised access to sensitive customer information. From a regulatory perspective, this creates potential non-compliance with data protection requirements. Academic literature emphasises that organisations adopting cloud-based and integrated management information systems are better positioned to support regulatory compliance and reduce legal and reputational risks (Thompson, 2025).

Finally, the organisation suffers from poor system integration across departments. Sales, finance, and inventory teams rely on separate software solutions that do not communicate effectively with one another. This has created information silos, requiring staff to manually transfer data between systems. Such practices are inefficient, increase the likelihood of errors, and reduce overall organisational performance. Literature on enterprise systems consistently identifies system integration as a key factor in improving data consistency, collaboration, and operational efficiency (Thompson, 2025; Rahman et al., 2025).

2.0 Evaluation of existing systems

2.1 Overview of Current Information Systems

At present, AKPerog Ltd. uses a fragmented set of information systems consisting of manual inventory records, basic sales tools, and isolated customer data systems. While these solutions may have been adequate during earlier stages of the company's development, they are no longer suitable for supporting a multi-channel retail operation. The lack of automation and integration limits the organisation's ability to manage data efficiently and respond to operational demands in a timely manner.

2.2 Identification of Inefficiencies and Gaps

2.2.1 Inventory Management Limitations

The current inventory management approach does not provide real-time visibility of stock levels across physical stores and the online platform. As a result, inventory data is often inaccurate or outdated, making effective demand planning difficult. Research on retail inventory information systems demonstrates that the absence of real-time inventory data contributes to higher operational costs, reduced service quality, and lower customer confidence (Purwasih and Candana, 2024).

2.2.2 CRM and Customer Data Fragmentation

AKPerog Ltd.'s customer data is dispersed across multiple systems, preventing the organisation from maintaining a unified and accurate view of its customers. This fragmented data environment limits opportunities for personalised marketing and slows the resolution of customer issues. Empirical studies confirm that organisations without integrated CRM systems struggle to improve customer satisfaction and long-term retention (Prajapati, 2024).

2.2.3 Reporting and Decision-Making Issues

The organisation's reliance on spreadsheet-based reporting tools restricts its ability to analyse performance data efficiently. Manual reporting processes are time-consuming and susceptible to human error, which reduces the quality and timeliness of information available to managers. Research into business intelligence capabilities indicates that the lack of integrated analytics systems can significantly hinder decision-making speed and strategic effectiveness (Alzghoul et al., 2024).

2.2.4 Lack of System Integration and Information Silos

The absence of integration between departmental systems has resulted in the formation of information silos within AKPerog Ltd. These silos obstruct data sharing and collaboration, leading to duplicated efforts and inconsistent information across departments. Academic literature on enterprise system integration highlights that such silos negatively impact organisational efficiency and increase operational complexity (Thompson, 2025).

2.2.5 Data Security and Compliance Risks

AKPerog Ltd.'s existing systems provide limited protection for sensitive customer data. Inadequate access controls and security mechanisms increase the organisation's exposure to cybersecurity threats and regulatory breaches. Research suggests that organisations adopting integrated and cloud-based management information systems are better equipped

to embed access control, data protection, and compliance measures into their operational processes (Thompson, 2025).

3.0 Recommended Solution

3.1 Overview of the Proposed Information System

To address the operational challenges identified at AKPerog Ltd., it is recommended that the organisation adopts an integrated, cloud-based information system. The proposed solution consists of a central Enterprise Resource Planning (ERP) system supported by dedicated modules for Inventory Management, Customer Relationship Management (CRM), and Business Intelligence (BI). This integrated approach will replace the current fragmented systems and manual processes, enabling real-time data sharing across departments and improving overall business performance.

A cloud-based solution is particularly suitable for AKPerog Ltd. due to its scalability, cost-effectiveness, and ability to support both physical stores and the e-commerce platform. As the organisation continues to expand, the system can be scaled without significant infrastructure investment, ensuring long-term sustainability.

3.2 Inventory Management System

An integrated Inventory Management System should be implemented as part of the ERP platform to provide real-time visibility of stock levels across all stores and online channels. This system would automatically update inventory data as sales occur, reducing discrepancies between physical and online stock records. By improving inventory accuracy, AKPerog Ltd. can minimise stockouts, avoid overstocking, and improve order fulfilment efficiency.

Research indicates that retail organisations adopting real-time inventory information systems experience improved demand forecasting, lower operational costs, and higher customer satisfaction. For AKPerog Ltd., this system would directly address the issues of cancelled orders, delayed deliveries, and customer complaints linked to inaccurate stock information.

3.3 Customer Relationship Management (CRM) System

The introduction of a centralised CRM system is recommended to consolidate customer data currently stored across multiple platforms. The CRM system would maintain a single, comprehensive view of each customer, including purchase history, preferences, and past interactions. This would enable customer support teams to resolve issues more efficiently and allow the marketing team to design targeted and personalised promotional campaigns.

An effective CRM system supports improved customer satisfaction and retention by enabling faster complaint resolution and more personalised engagement. For AKPerog Ltd., this

represents an opportunity to strengthen customer relationships and improve brand loyalty in a highly competitive retail market.

3.4 Business Intelligence and Reporting Tools

To overcome current reporting limitations, it is recommended that Business Intelligence tools be integrated into the proposed ERP system. These tools would replace spreadsheet-based reporting with automated dashboards and real-time analytics. Managers would gain immediate access to accurate sales data, inventory trends, and performance indicators, supporting faster and more informed decision-making.

Business Intelligence systems are widely recognised for their ability to enhance decision-making speed and strategic planning. By adopting BI tools, AKPerog Ltd. can improve demand forecasting, identify sales trends earlier, and respond more effectively to market changes.

3.5 Data Security, Compliance, and System Integration

The proposed cloud-based ERP system should incorporate strong security controls and compliance features to address GDPR requirements. This includes role-based access control, data encryption, audit logs, and secure data storage practices. Implementing these controls will reduce the risk of unauthorised access to customer data and ensure regulatory compliance.

In addition, system integration is a key benefit of the recommended solution. By unifying inventory, sales, finance, and customer data within a single platform, the organisation can eliminate information silos and reduce the need for manual data transfer. This integration will improve data consistency, operational efficiency, and cross-departmental collaboration.

4.0 Implementation Plan

4.1 Implementation Steps

The implementation of the proposed information system at AKPerog Ltd. should follow a structured and phased approach to minimise operational disruption. The first step involves selecting a suitable cloud-based ERP provider that offers integrated Inventory Management, CRM, and Business Intelligence modules aligned with the organisation's business needs. Once selected, system requirements should be clearly defined, including data fields, reporting needs, and user roles.

The second step is data migration. Existing inventory records, customer data, and sales information must be cleansed and transferred into the new system. This process should be carefully planned to ensure data accuracy and continuity of operations. Testing should be

conducted after migration to confirm that data has been transferred correctly and that system functionality meets business requirements.

Following data migration, the system should be configured and integrated with existing infrastructure, including point-of-sale systems in physical stores and the e-commerce platform. This integration will ensure real-time data updates across all channels. A pilot implementation in a small number of stores is recommended before full deployment, allowing potential issues to be identified and resolved early.

4.2 Training and Change Management

Effective training is critical to the successful adoption of the new information system. Employees across all departments should receive role-specific training to ensure they understand how to use the system effectively. Training sessions should focus on day-to-day tasks such as inventory updates, customer data management, and report generation.

In addition to technical training, change management strategies should be implemented to address potential resistance to the new system. Clear communication regarding the benefits of the new system, such as reduced manual workload and improved efficiency, can help increase user acceptance. Ongoing support should be provided during and after implementation to address user concerns and reinforce best practices.

4.3 Potential Challenges and Risk Mitigation

Several challenges may arise during the implementation process. These include data migration errors, temporary disruption to business operations, and resistance from employees unfamiliar with new technologies. To mitigate these risks, AKPerog Ltd. should establish a dedicated project team responsible for overseeing implementation activities and addressing issues as they arise.

Regular system testing, clear timelines, and effective communication can further reduce implementation risks. In addition, engaging system vendors for technical support and guidance can help ensure a smoother transition.

4.4 Post-Implementation Review and Continuous Improvement

After full deployment, a post-implementation review should be conducted to evaluate system performance and user satisfaction. Key performance indicators such as inventory accuracy, order fulfillment times, customer complaint resolution rates, and decision-making speed should be monitored to assess the effectiveness of the new system.

Continuous improvement should be encouraged by gathering feedback from users and making necessary system adjustments. As AKPerog Ltd. continues to grow, the flexibility of

the cloud-based system will allow further enhancements and scalability without significant additional investment.

5.0 Conclusion

This report analysed the operational challenges faced by AKPerog Ltd. as a result of outdated and fragmented information systems. The evaluation highlighted key issues related to manual inventory management, disconnected customer data, slow and unreliable reporting processes, limited system integration, and data protection risks. These challenges have negatively impacted operational efficiency, customer satisfaction, and managerial decision-making, particularly as the organisation continues to grow.

To address these issues, the report recommended the adoption of an integrated, cloud-based information system centred on an ERP platform with Inventory Management, CRM, and Business Intelligence capabilities. This solution is designed to provide real-time data visibility, improve cross-departmental integration, and support more accurate and timely decision-making. By consolidating core business functions into a single system, AKPerog Ltd. can reduce operational errors, improve inventory accuracy, enhance customer engagement, and strengthen regulatory compliance.

The proposed implementation plan outlined a structured and phased approach to system deployment, emphasising data migration, staff training, change management, and risk mitigation. By following this approach, AKPerog Ltd. can minimise disruption to daily operations while maximising user adoption and long-term system effectiveness.

Overall, the recommended information system offers a scalable and sustainable solution that aligns with AKPerog Ltd.'s strategic growth objectives. Its successful implementation is expected to improve operational performance, increase customer satisfaction, and support informed managerial decision-making, positioning the organisation for continued success in an increasingly competitive retail environment.

6.0 References

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