

Proposal for Implementing an Integrated Information System for AKPerog Ltd.

Name: Angela Mihai
Student ID: 2330315
Module: LCLM5004

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1. Introduction

In today's fast-paced, fiercely competitive retail businesses, long-term performance is determined by information accuracy, smooth process integration, and effective use of digital technologies. With 30 physical locations and a rising online presence, AKPerog Ltd. is a fast-growing retailer of consumer electronics that is currently having difficulty keeping up with its operational complexity. Strong market demand is demonstrated by recent sales growth, but the company's capacity to maintain this momentum is threatened by serious system inefficiencies.

A number of fundamental issues are identified in this business case. First, AKPerog uses manual inventory tracking techniques, which frequently result in differences between online and real product availability. Customers frequently place orders only to learn that the product is unavailable as a result, which can result in refunds, unhappiness, and reputational risk. Second, the company's customer relationship management procedures are disjointed, and client information is scattered over several unrelated platforms. This hinders the efficacy of customer service, restricts targeted marketing, and precludes a cohesive understanding of client behaviour.

Third, the company makes a lot of use of spreadsheet-based reporting for sales analysis, which raises the possibility of mistakes and delays strategic decision-making. Fourth, flaws in data governance and access controls make it difficult for AKPerog to comply with GDPR. Lastly, there are significant inefficiencies caused by the absence of system integration between sales, finance, marketing, and inventory. Employees must manually re-enter data, which wastes time and increases their vulnerability to operational errors.

The deployment of an integrated Enterprise Resource Planning (ERP) system backed by a cloud-based Customer Relationship Management (CRM) module is suggested in this proposal, which also assesses the organization's current systems and finds important gaps. Modernising AKPerog's digital infrastructure, increasing operational effectiveness, boosting customer happiness, and guaranteeing regulatory compliance are the objectives of the suggested solution.

2. Evaluation of Existing Systems

2.1 Manual Inventory Tracking

At the moment, AKPerog uses a manual inventory tracking system that depends on periodic counts and human entry. The accuracy of stock information is diminished by these methods' extreme susceptibility to mistakes, omissions, and delays. The real-time data accuracy needed for contemporary retail operations is not supported by manual methods, according to Stair and Reynolds (2020). Customer discontent and missed sales opportunities are directly caused by stock inconsistencies between stores and the online platform. The inventory process lacks standardisation, automation, and performance monitoring, all of which are necessary for

effective process design from the standpoint of business process management (BPM) (Dumas et al., 2018).

2.2 Fragmented Customer Data and CRM Limitations

POS terminals, email marketing tools, and customer support software are just a few of the heterogeneous systems that keep client data. "Information silos" are isolated pockets of data that are unable to be efficiently communicated throughout the company as a result of this fragmentation (Laudon & Laudon, 2022). Information silos reduce the quality of consumer contacts, hinder data-driven decision-making, and limit organisational responsiveness, according to research (O'Brien & Marakas, 2019). AKPerog cannot efficiently segment clients, customise promotions, or monitor purchase histories without an integrated CRM system. Revenue potential is limited by the marketing team's incapacity to provide tailored offers, and customer service is unable to effectively handle complaints in the absence of a consolidated customer database.

2.3 Spreadsheet-Based Reporting and Data Quality Issues

There are various hazards associated with AKPerog's use of spreadsheets for reporting. Despite its flexibility, spreadsheets have limited scalability, version control problems, and data entry errors (Redman, 2018). Because there are no automated data streams, employees must spend a lot of time gathering and verifying data, which delays management's capacity to examine performance trends. According to Turban et al. (2021), in order for organisations to stay competitive, they need real-time analytics and decision support tools. These needs are not met by AKPerog's current reporting environment, which leads to sluggish forecasting procedures and reactive rather than proactive decision-making.

2.4 Data Protection and GDPR Non-Compliance

There are serious GDPR compliance issues because of the company's distributed data storage and absence of secure access controls. Strict data governance, such as role-based access, audit trails, and minimising duplicate records, is required by GDPR (Voigt & Von dem Bussche, 2017). Due to its present architecture, AKPerog is more vulnerable to data breaches and unauthorised access, which could result in fines and damage to its reputation. It becomes challenging to control data access and uphold uniform privacy rules in the absence of a centralised mechanism.

2.5 Lack of Integration Across Departments

Sales, finance, marketing, and inventory management are all handled by separate systems within the company. Inefficiencies, redundant work, and inconsistent data are the results of this fragmentation. Monk and Wagner (2013) assert that integrated information systems increase decision-making, decrease redundancy, and improve organisational coordination. Employees at AKPerog must manually move data across systems due to a lack of integration, which raises labour costs and mistake rates while lowering process efficiency.

3. Recommended Solution

3.1 Adoption of an Integrated ERP System with CRM Module

This proposal suggests implementing an integrated Enterprise Resource Planning (ERP) system with a cloud-based CRM module to address the issues noted. ERP systems provide real-time data sharing throughout the company by combining important business operations like inventory, finance, sales, and procurement onto a single platform (Laudon & Laudon, 2022). AKPerog may obtain thorough visibility into customer behaviour and operational performance when paired with a sophisticated CRM system.

3.2 Comparison of ERP Options

Several ERP systems are applicable to the retail sector:

- Microsoft Dynamics 365: provides smooth connection with Microsoft products and robust retail and omnichannel features.
- SAP Business One: renowned for having a strong supply chain and inventories, making it ideal for shops with multiple locations.
- Oracle NetSuite: a completely cloud-based solution with robust CRM connectivity and scalability.

Microsoft Dynamics 365 or Oracle NetSuite are especially suitable given AKPerog's requirements for scalability, cloud deployment, and comprehensive retail functionality. Both platforms include comprehensive analytics, centralised consumer data, and real-time inventory tracking.

3.3 Justification for the Recommended System

3.3.1 Improvements to Inventory Management

ERP systems facilitate barcode or RFID scanning, automate stock updates, and synchronise online and offline inventory. These capabilities immediately solve AKPerog's largest operational problem by lowering human error and providing real-time stock accuracy.

3.3.2 Enhanced Customer Relationship Management

Customer interactions, purchase histories, and communication preferences are all combined in a cloud-based CRM system. This facilitates customised marketing campaigns, client segmentation, and quicker problem solving. According to Payne and Frow (2017), integrated CRM systems improve customer lifetime value and retention, which are crucial in the retail electronics industry.

3.3.3 Business Intelligence and Decision Support

Dashboards, reporting tools, and analytics are all integrated into contemporary ERP and CRM systems. AKPerog's BI features allow it to:

- forecast demand more accurately

- analyse regional sales patterns
- monitor store performance
- identify emerging product trends

According to Turban et al. (2021), BI is a crucial part of the suggested system since decision support systems enhance organisational responsiveness and strategic planning.

3.3.4 Security and GDPR Compliance

Cloud ERP systems are more secure than AKPerog's existing setup because they use encryption, multi-factor authentication, and role-based access. By enhancing accountability and transparency, audit trails and centralised data storage contribute to GDPR compliance (Voigt & Von dem Bussche, 2017).

3.3.5 Scalability and Cost Efficiency

Cloud solutions decrease maintenance needs, lower the cost of IT infrastructure, and facilitate future growth. As a company expands, subscription pricing methods provide flexibility (Stair & Reynolds, 2020).

3.3.6 Advanced Analytics and Predictive Insights

Modern ERP and CRM systems not only improve operations but also provide sophisticated analytics and predictive modelling features that improve decision-making even more. By analysing past sales trends, seasonal variations, and local patterns, these systems may produce precise demand projections that minimise stockouts and surplus inventory. Managers can identify weak categories and modify tactics by using visual dashboards, which offer real-time information about store performance, customer behaviour, and product profitability (Turban et al., 2021). Additionally, some platforms use machine learning algorithms that improve forecasts over time, facilitating proactive planning and better strategic choices.

3.4 Alternative Solutions Considered

A number of different systems were assessed for appropriateness prior to the integrated ERP and CRM solution being recommended. One alternative was to upgrade each of AKPerog's current stand-alone apps separately, like putting in place a cutting-edge inventory management system while keeping distinct tools for marketing, sales, and finance. However, this strategy might limit long-term efficacy by maintaining data silos and necessitating more integration work (Laudon & Laudon, 2022). Another option was to solve marketing and customer service issues by implementing a CRM system alone. Although this may help increase consumer interaction, it would not address the serious issues brought on by manual reporting and incorrect inventory data. Creating a custom system internally was a third option. In contrast to well-known ERP platforms, custom systems are frequently expensive, challenging to operate, and have scalability problems even though they are customised to organisational needs (Monk & Wagner, 2013). As a result, implementing an integrated ERP-CRM solution was considered more practical than these options.

4. Implementation Plan

To guarantee successful acceptance, a methodical implementation strategy is required.

4.1 Phase 1: Requirements Analysis

System requirements should be defined through process mapping and stakeholder interviews. Implementation risk is decreased by clearly documenting procedures, data requirements, and reporting structures (Sommerville, 2016).

4.2 Phase 2: Vendor Selection and System Design

AKPerog should evaluate support services, user-friendliness, integration features, and vendor capabilities. After that, the system needs to be modified to take into account store structures, pricing guidelines, and organisational procedures.

4.3 Phase 3: Data Migration

To increase accuracy, data from spreadsheets and legacy systems needs to be cleaned and standardised. Effective migration planning guarantees that the new system is populated with high-quality data (O'Brien & Marakas, 2019).

4.4 Phase 4: Integration with Existing Systems

The ERP must be integrated with:

- e-commerce platform
- POS systems
- supplier ordering systems
- financial tools

4.5 Phase 5: Testing

User acceptance testing (UAT), system integration testing, and unit testing should all be part of the testing process. Extensive testing lowers the possibility of post-deployment system failure (Sommerville, 2016).

4.6 Phase 6: Training and Change Management

One of the most frequent obstacles in IT initiatives is resistance to change. Kotter's (2012) change management strategy should be implemented by AKPerog by:

- creating urgency
- building a guiding coalition
- empowering employees through training
- generating short-term wins

Thorough training guarantees that staff members comprehend new procedures, minimising annoyance and increasing acceptance.

4.7 Phase 7: Deployment and Post-Implementation Review

Starting with one or two pilot stores, the system should be implemented progressively. Reviews conducted after implementation should track results and pinpoint opportunities for improvement.

4.8 Risks and Mitigation

Common risks include:

- **cost overruns:** mitigated through phased deployment
- **poor user adoption:** addressed with training and communication
- **data migration errors:** reduced through pre-migration cleansing
- **cybersecurity threats:** mitigated via strong access controls and encryption

Early risk recognition increases project success rates, according to McManus & Wood-Harper (2007).

4.9 Success Metrics

KPIs like these should be used to assess performance:

- order accuracy
- system adoption rates
- customer satisfaction scores
- reduction in reporting time
- inventory turnover rates

These measures show that operations have improved.

5. Conclusion

The organization's expansion and operational complexity cannot be supported by AKPerog Ltd.'s current information systems. Spreadsheet-based reporting, fragmented customer data, manual inventory monitoring, and inadequate system integration all lead to inefficiencies, unhappy customers, and compliance problems. To solve these problems, this solution suggests putting in place an integrated cloud-based ERP system with a sophisticated CRM module.

The suggested system would guarantee GDPR compliance, boost consumer interaction, increase real-time data accuracy, expedite corporate procedures, and facilitate data-driven decision-making using advanced analytics. Successful adoption will be ensured by an

organised implementation strategy that includes risk mitigation, data migration, change management, and system integration. AKPerog Ltd. may greatly improve operational performance, bolster its competitive position, and facilitate long-term business growth by investing in cutting-edge information technologies.

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