VIETNAM GENERAL CONFEDERATION OF LABOUR

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**FACULTY OF INFORMATION TECHNOLOGY**



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**ANALYZING AND DEVELOPING A MANAGEMENT INFORMATION SYSTEM FOR A RETAIL CLOTHING BUSINESS**

**FINAL REPORT**

**MANAGEMENT OF**

**INFORMATION SYSTEMS**

**HO CHI MINH CITY, YEAR 2024**

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Advised by

**MsC. HO THI THANH TUYEN**

**HO CHI MINH CITY, YEAR 2024**

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*Ho Chi Minh City, November 21, 2024*

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**DECLARATION OF AUTHORSHIP**

We hereby declare that this thesis was carried out by ourselves under the guidance and supervision of MsC. Ho Thi Thanh Tuyen; and that the work and the results contained in it are original and have not been submitted anywhere for any previous purposes. The data and figures presented in this thesis are for analysis, comments, and evaluations from various resources by our own work and have been duly acknowledged in the reference part.

In addition, other comments, reviews and data used by other authors, and organizations have been acknowledged, and explicitly cited.

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*Ho Chi Minh City, November 21, 2024*

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**ANALYZING AND DEVELOPING A MANAGEMENT INFORMATION SYSTEM FOR A RETAIL CLOTHING BUSINESS**

**ABSTRACT**

Fashion Forward Retail (FFR) is a mid-to-high-end retail fashion organization dedicated to delivering high-quality fashion products and personalized services through advanced technology. This report analyzes FFR's current operations, identifying challenges such as manual processes, limited customer engagement, and scalability issues. Leveraging a new information system encompassing Transaction Processing Systems (TPS), Decision Support Systems (DSS), and Management Information Systems (MIS), the proposed solution aims to enhance efficiency, customer experience, and data-driven decision-making. By transitioning to cloud infrastructure and integrating personalization, order management, and loyalty features, FFR seeks to improve its competitive advantage and operational capabilities. Although implementation involves high initial costs and training challenges, the system aligns with FFR’s mission and positions it for sustained growth and market leadership.

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# ABBREVIATIONS

|  |  |
| --- | --- |
| FFR | Fashion Forward Retail |
| TPS | Transaction Processing System |
| DSS | Decision Support System |
| MIS | Management Information System |
| ERP | Enterprise Resource Planning |
| CRM | Customer Relationship Management |
| POS | Point of Sale |
| WMS | Warehouse Management System |
| AR | Augmented Reality |
| GDPR | General Data Protection Regulation |

# CHAPTER 1. INTRODUCTION TO THE ORGANIZATION

1.1 Objectives and Mission

* **Organization Name:** Fashion Forward Retail (FFR)
* **Objective:** Provide high-quality fashion products at affordable prices, helping customers personalize their style through advanced services and technology.
* **Mission:**“Bringing fashion into daily life with convenience, style, and social responsibility.”

1.2 Industry and History

* **Industry: Retail Fashion, focusing on the mid-to-high-end market segment.**
* **History: Established in 2010, FFR started with a single store and has since expanded into a chain with over 50 locations nationwide. In 2020, FFR began digitizing its supply chain management and e-commerce operations.**

1.3 Scale and Organizational Structure

* **Scale:**
  + 50 physical stores, 1 central logistics hub, and an e-commerce platform.
  + Workforce: 1,200 employees, including store staff, office personnel, and technical teams.
* **Organizational Structure:**
  + CEO
    1. Sales Department
    2. Marketing Department
    3. IT Department
    4. Logistics and Supply Chain Department
    5. Customer Service Department

1.4 Business Areas/Functions

**Key Operational Areas:** Major cities in Vietnam.

**Business Functions:**

* ***Retail:* Offers clothing and accessories through online and offline channels.**
* ***Value-Added Services:* Style consultancy and customized order services.**
* ***After-Sales Support:* Quick return and customer care policies.**

# CHAPTER 2. ANALYSIS OF THE CURRENT INFORMATION SYSTEM

2.1 Industry Structure and Target Market Analysis

* **Industry Structure:**
  + Using Porter's Five Forces Model:
    1. *Industry Rivalry:* High due to numerous competitors (e.g., Zara, H&M, and local brands).
    2. *Supplier Power:* Moderate, depending on fabric materials and outsourcing manufacturers.
    3. *Buyer Power:* High, as customers have many options and are price and quality sensitive.
    4. *Threat of Substitutes:* High, including second-hand and budget fashion options.
    5. *Barriers to Entry:* Moderate, requiring significant capital and strong branding strategies.
* **Target Market:**
  + Mid-to-high-end segment: Customers aged 18-45, concentrated in urban areas.

2.2 Competitive Strategy

* **Current (2024-2026): Differentiation through personalized services and superior customer support.**
* **Five-Year Vision (2026-2030):** Integrating e-commerce with augmented reality (AR) for immersive shopping experiences.
* **Ten-Year Vision (2030-2034):** Sustainability, leveraging recycled materials and green supply chains.

2.3 Value Chain

* **Primary Activities:**
  + 1. ***Supply Chain Management****:* Long-term partnerships with international manufacturers.
    2. ***Operations****:* Automated warehouse management systems (WMS).
    3. ***Marketing & Sales****:* Multichannel campaigns, leveraging customer data for personalization.
    4. ***Service****:* Customer support and product warranty services.
* **Support Activities:**

1. ***Technology Development:* Integrated ERP systems and mobile apps.**
2. ***Human Resources:* Digital skills training for employees.**

2.4 Analysis of the Organizational Structure of the Information System

* **Hardware:**
  + Centralized servers at headquarters.
  + POS (Point of Sale) devices in stores.
  + Cloud-based data storage.
* **Software:**
  + ERP systems (e.g., SAP or Oracle).
  + CRM tools (e.g., Salesforce) for customer management.
  + AI-integrated e-commerce platforms.
* **People:**
  + Professional IT teams (10% of the total workforce).
  + Digital marketing personnel.
* **Processes:**
  + Order processing: Automated from customers to suppliers.
  + Customer feedback handling: Optimized using AI chatbots.
* **Data:**
  + Customer data: Personal profiles, purchase history.
  + Operational data: Revenue reports, inventory levels

# CHAPTER 3: PROBLEMS AND GOALS

3.1 Existing Problems of the Old System

* **Manual Processes:**
  + Inventory tracking and order processing are slow and error-prone.
* **Limited Customer Interaction:**
  + No personalized recommendations; weak engagement and retention.
* **Inefficient Reporting:**
  + Managers lack real-time insights for decision-making.
* **Scalability Issues:**
  + Cannot handle high traffic or large order volumes.
* **Security Concerns:**
  + Weak protection for sensitive customer data.

3.2 Expected Goals of the New System

* **Efficiency:** Automate inventory management and order handling using TPS.
* **Customer Experience:** Enhance personalization with DSS.
* **Data-Driven Insights:** Generate real-time MIS reports for better decision-making.
* **Scalability:** Transition to cloud-based infrastructure.
* **Security** Strengthen encryption and comply with GDPR.
* **Processes:**
  + *Issue*: Lack of automation.
  + *Solution*: Automate inventory updates and order lifecycle via TPS.
* **Data:**
  + *Issue:* Fragmented sales and customer data.
  + *Solution:* Centralize data for consistent MIS reporting.
* **Hardware:**
  + *Issue:* Limited server capacity.
  + *Solution:* Upgrade to scalable cloud infrastructure.
* **Software:** 
  + *Issue:* Outdated and non-responsive platforms.
  + *Solution:* Build modern, mobile-friendly systems with advanced security protocols.
* **Human Resources:** 
  + *Issue:* Skill gaps and resistance to change.
  + *Solution:* Training and incentives to adopt new systems.

# CHAPTER 4: PROPOSED SYSTEM

4.1 sdf

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4.2 Changed/Improved Processes

* **Basic Personalization Features:**
  + Filter products by preferences.
  + Save purchase history for recommendations.
  + Wishlist for saving desired items.
* **Order Management Features:**
  + Order tracking for real-time updates.
  + Delivery address management for convenience.
* **Loyalty Customer Features:**
  + Points-based rewards program.

4.3 Analysis and Impact on Competitive Strategy

* **Personalization Features:**
  + *Competitive Advantage:* Improves user experience and customer loyalty.
  + *Impact:* Increases conversion rates and positions the brand as customer-centric.
* **Order Management:**
  + *Competitive Advantage:* Enhances transparency and trust.
  + *Impact:* Reduces support calls and improves retention.
* **Loyalty Features:**
  + *Competitive Advantage:* Drives repeat purchases and emotional engagement.
  + *Impact:* Strengthens long-term customer relationships.

# CHAPTER 5: EVALUATION AND CONCLUSION

5.1 Evaluation of the Proposed System

* **Advantages:**
  + *Enhanced Efficiency:* Automation through TPS reduces manual effort, minimizes errors, and speeds up inventory and order processing.
  + *Improved Customer Experience:* DSS-driven personalization and loyalty programs foster engagement, boosting customer satisfaction and retention.
  + *Data-Driven Decision-Making:* Real-time MIS reports provide actionable insights for managers, enhancing strategic planning.
  + *Scalability:* Cloud-based infrastructure ensures seamless handling of increasing data and traffic.
  + *Security:* Compliance with modern encryption standards ensures customer trust and data protection.
* **Disadvantages:**
  + *High Implementation Costs:* Initial costs for cloud migration, software development, and training programs.
  + *Training and Adaptation:* Staff may require time to adapt to new systems, and training efforts may face resistance.

5.2 Conclusion

The new system aligns with the organization's competitive strategy by integrating TPS, MIS, and DSS to deliver a seamless, personalized, and scalable shopping experience. It enhances operational efficiency, provides data-driven insights, and fosters long-term customer loyalty. Despite initial implementation challenges, the system positions the organization for sustained growth and market leadership.

5.3 Lessons Learned

* **The Importance of Integration:** Combining automation, analytics, and scalability ensures a robust and efficient retail supply chain.
* **Customer-Centric Design:** Focusing on personalization and loyalty features builds stronger brand relationships.
* **Sustainability and Adaptability**: Leveraging modern technologies prepares businesses to adapt to changing markets and consumer expectations.

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