nAVERTICA sa cc | 16 Berkeley Ave, Bryanston, Sandton, 2191

Case Study

bUSINESS mANAGEMENT eXTENSION CASE STUDY DEMO.

**INTRODUCTION  
  
Client Background**

**Company:** XYZ Distributors  
**Industry:** Wholesale & Retail Distribution  
**ERP System:** Microsoft Dynamics 365 Business Central

XYZ Distributors specializes in wholesale distribution of consumer goods across multiple locations. They rely on **Microsoft Dynamics 365 Business Central** for inventory management, sales processing, and customer relationships. However, the company faces operational inefficiencies due to **limited customization options** in their ERP system.  
  
**Challenges**XYZ Distributors identified several pain points in their current system:

1. **Limited Customer Insights**
   * Business Central lacks built-in **customer loyalty tracking** to reward repeat buyers.
   * No easy way to analyse **customer purchase trends** within the system.
2. **Inefficient Order Processing & Stock Management**
   * Sales teams struggle with **real-time stock visibility**, leading to order delays.
   * Backorders frequently occur due to a **lack of automated stock level alerts**.
3. **Manual Data Handling**
   * Customer and sales data are manually imported/exported via spreadsheets, increasing errors.
   * Integration with third-party **shipping and invoicing systems is not automated**.
4. **Lack of Role-Based Security**
   * Certain employees have **unnecessary access** to critical financial records.
   * Managers need **custom permission sets** to approve discounts above a threshold.

REQUIREMENT BREAKDOWN

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| --- | --- |
| **Functional** | **Non-Functional** |
| * Creation of the new Loyalty program by adding the loyalty points field to the customer table aswell as displaying this field. | * Must be compatible with Microsoft Dynamics Business Central v22 and future versions. |
| * Addition of a loyalty points calculation module. | * Web service responses should be **fetched within 2 seconds** for optimal user experience. |
| * Addition of a query that displays the top customers with loyalty points. | * The system should handle **at least 100 concurrent users** without performance degradation. |
| * Extension of the Sales Order page to show real time stock levels. | * Security should comply with **Business Central's standard authentication model**. |
| * Implement an **automated backorder alert** when stock falls below a threshold. | * The extension should be **modular and easy to upgrade** for future enhancements. |
| * Ensure sales teams can **check stock availability before confirming orders**. |  |
| * Addition of a XMLPort module to import / export customer & sales data. |  |
| * Create a **SOAP/OData web service** to share customer data with external systems. |  |
| * Enable real-time **integration with third-party shipping and invoicing providers**. |  |
| * Implement **custom permission sets** restricting financial data access. |  |
| * Enforce an **approval workflow** for sales discounts above a defined limit. |  |
| * Restrict access to **sales reports and customer financial data** based on user roles. |  |

**Work Breakdown Structure (WBS)**

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| --- | --- |
| **Phase** | **Description** |
| 1. Planning & Design. | Define project setup parameters in the planning stage – Identify table extensions, queries and reports.  Designing the permissions sets and how they will work.  Define how the XMLport & web services will work. |
| 1. Core Module Development. | Core Module Development  Development of the Setup wizard -Setup table for configuration properties. -Setup Page for navigation and process.  Development of the customer loyalty program.  -Extend the customer table -Implement calculation work unit. -Develop the top customer loyalty query  Sales & Inventory Management  -Extend the Sales Order page to show real time stock levels.  -Implement calculation codeunit  -Develop query to track stock usage |
| 1. User Interface & Reporting. | UI Enhancements - Extend Customer Card page to display **Loyalty Points**. - Extend Sales Order page for **stock alerts**.  Reports & Queries - Implement a **Customer Loyalty Report**. - Implement a **Sales & Inventory Overview Report**. |
| 1. Data Exchange & Integration. | XMLPort for Data Import/Export - Develop XMLPort to **import/export** customer & sales data.  Web Services (SOAP/OData) (Optional) - Implement Codeunit for **customer data retrieval (OData API)**.  - Implement Codeunit for **order processing via external API (SOAP Web Service)**. |
| 1. Security & Workflow Automation. | Role-Based Permissions - Create Permission Sets for sales & management teams.  Discount Approval Workflow - Develop Codeunit for **approval logic** on discounts. |
| 1. Testing | Unit & Integration Testing - Write Test Codeunits for loyalty logic, stock tracking, and workflows. - Test XMLPort & Web Services integration. |