

Business Requirement Document

Project Name: Inventa – Intelligent Inventory Distribution System



Version 1.0

06nd July 2025

Statement of Confidentiality

The information contained in this document and related artifacts constitute confidential information of IDC and are intended for internal usage purposes only.

Document Control

Authors:

Date	Authors	Organization	Version	Change Description
01-07-2025	Ahmed Hassan	IDC Solutions	0.1	Document for business review.
15-07-2025	Youssef Mohamed	IDC Solutions	1.0	Published

Reviewers: (المراجع)

Date	Reviewers	Organization	Version	Change Description
01-07-2025	Mohammed Sanad	IDC Solutions	0.1	Draft Version. Document for business review.
15-07-2025	Mohammed Sanad	IDC Solutions	1.0	Published

Content:

1.0 Purpose..... 4

2.0 Overview..... 5

 2.1 Project Overview and Background 5

 2.2 Project Dependencies 6

 2.3 Stakeholders..... 6

3.0 Key Assumptions..... 6

4.0 Business Requirements:..... 10

 4.1 - High Level Procurement Process Flow..... 10

 4.2 - Business Terms and Definitions 11

 4.3 Defined Key Metrics and KPI’s 15

5.0 Approvals & Acknowledgements..... 27

How to read this document?

The document has been structured into the following sections

Purpose

This section will provide the purpose of this document in terms of IDC's Procurement reporting requirements.

1. Overview

This section will provide an overview and the background of the project. It also highlights the project goal, in-scope project activities, project dependencies and the stakeholders. The entire project cycle has been divided into activities.

2. Key Assumptions

This section will provide the list of project assumptions considered to deliver the project scope.

Business Requirements

This section will provide the list of business requirements, High level process flow with key business terms and definitions and Key Measures.

1.0 Purpose

The purpose of this document is to describe the IDC's business analytics. Various requirement gathering sessions were conducted and as a result the detailed business requirements has been captured in this document.

These business analytics are used for:

- Understanding High-level business process and data requirements gathered from Procurement business unit.
- Understanding different aspects of current reporting methodology like Data Gathering, Data Preparation, Business Logic, Frequency of Reporting and Schedule for Data Refresh if any.
- Identifying key KPI's/Metrics/Measures required to address the reporting requirements.

2.0 Overview

2.1 Project Overview and Background

The project focuses on building a smart distribution system between the central warehouse and the company's wholesale inventories across Egypt. Products are imported to the main warehouse and distributed in full packages using batch numbers. The system ensures efficient delivery, demand-based restocking, and reduced inventory waste in cosmetics, haircare, and topical products.

As part of requirement gatherings, following activities were covered:

- Understanding of high-level business processes.
- Process understanding and data requirements gathering.
- Understanding current reporting methodology like data gathering, data preparation, business logic, frequency of reporting and schedule for data refresh if any.
- Identification of key KPI's/Metrics /Measures required to address the reporting requirements.

Data Sources:

Below are the data sources identified.

- ERP Oracle

Benefits for Business:

Below are the benefits to business from this project:

- Provides at-a-glance visibility.
- Identify bottlenecks and increase productivity.
 - Identify up to date SLA breaches.
 - Quantify supplier performance.
 - Enable faster reporting for better data-driven decisions.

2.0 Project Dependencies

In the below section dependencies related to projects are listed:

#	Dependencies	Owner
1	Availability of business owner (spoc) to gather the requirements	Business Team
2	Inputs from IT team for the datasets to manage and to provide with Business	IDC IT Team Ministry IT Team

2.1 Stakeholders

2.2 This section provides details about the business & data owners, Project team members withrespective responsibilities.

Role	Responsibility	Business Requirement RACI
Warehouse Manager	Storage capacity and distribution rules	A
Inventory Managers	Sales data and demand insights	R
Sales Manager	Quarterly targets and strategy	A, R
Operations Manager	Delivery execution oversight	R, I, C

❖ RACI: Responsible, Accountable, Consult, Inform

3.0 Key Assumptions

This section will provide the list of project assumptions considered to deliver the project scope:

#	Assumptions
1.	Inventory managers are responsible for regularly providing accurate and timely data on stock levels, deliveries, and sales from both the central warehouse and wholesale outlets. They must ensure all data is consistent with ERP records, support batch-based tracking, and coordinate closely with the planning team to validate demand forecasts and improve distribution accuracy.
2.	All product information—including names, categories, batch numbers, expiry dates, and stock levels—must be consistently and accurately recorded in the ERP or Power BI-based systems. The data should reflect realtime updates from both the central warehouse and inventory to ensure precise tracking, enable demand forecasting, and support decision-making. Maintaining data integrity is critical for batch-level distribution and regulatory compliance
3.	Demand forecasting will rely on historical sales data from wholesale outlets (minimum 6 months), with manual adjustments to reflect seasonal demand patterns, regional consumption trends, and planned marketing or supplier-driven campaigns

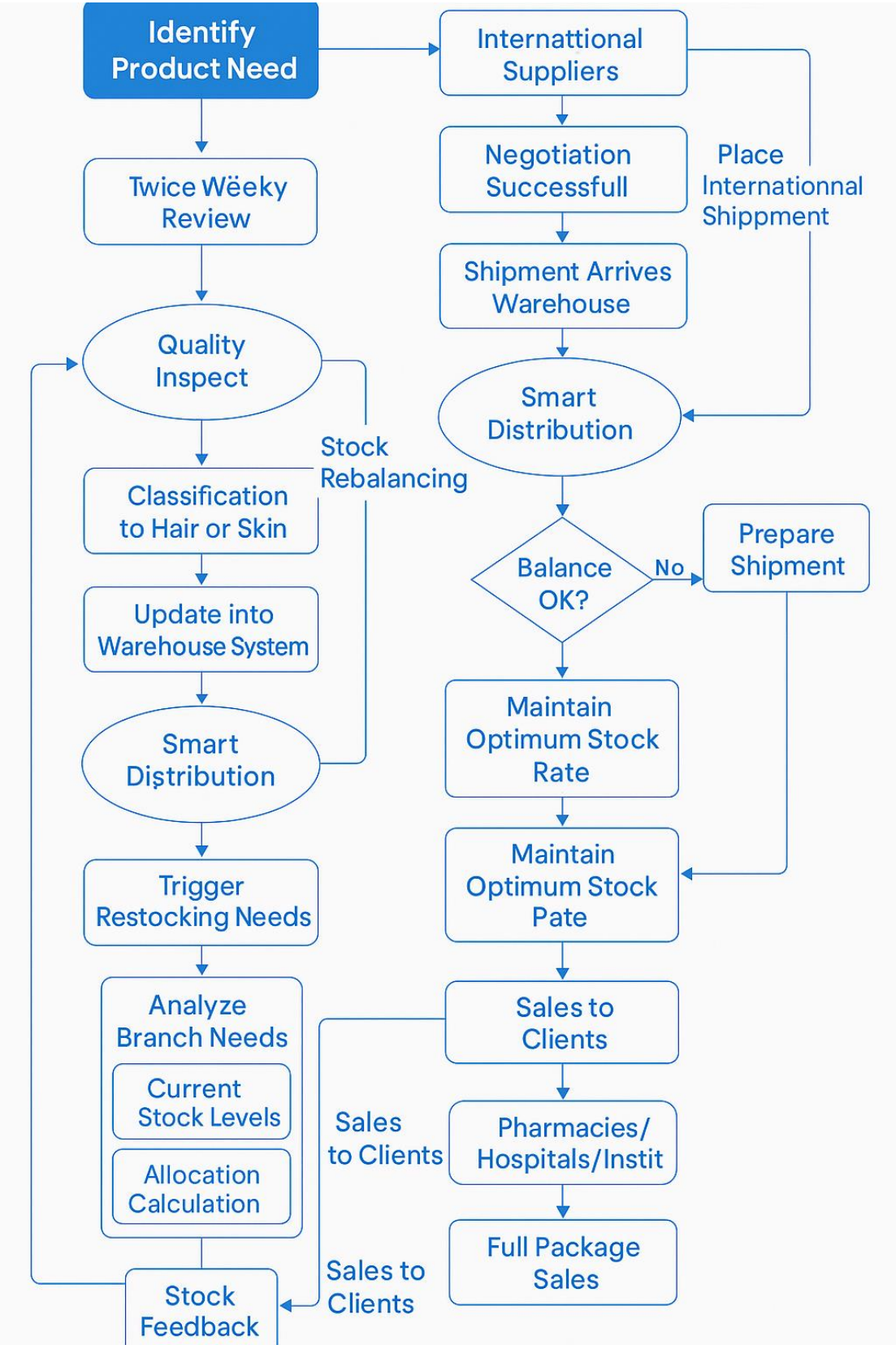
4.	The project covers the internal distribution process from the central warehouse—supplied by external vendors—to company-owned wholesale outlets across different regions. These inventories sell to pharmacies, hospitals, shops, or end customers. However, all distributions and sales must follow package-based selling only, using batch-number racking. Unit-based sales are strictly excluded.
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4.0 Business Requirements:

This section describes current process flow, key business definitions and metrics.

4.1 - High Level Procurement Process Flow:

Below are the steps in the process along with owners at each step:



4.2 - Business Terms and Definitions:

Below section would help you to understand key business terms with definitions

Business Terms	Business Definitions
Product Preparation	Central warehouse prepares product list
Data Analysis	Inventory sales history and stock levels analyzed
Demand Forecasting	Forecast engine predicts demand
Distribution Planning	Distribution plan generated twice per week
Product Code	Unique identifier for each item
Expiry Date	Final date by which the product must be used
Batch Number	Identification for groups of products manufactured together.
Stock Level	Quantity of product currently available at each inventory point.
Forecast Quantity	Projected demand per outlet based on historical data.
Allocated Quantity	Amount of stock designated for dispatch.
Distribution Plan	Scheduled allocation of products to outlets.
Inventory Type	Classification of inventory (urban, rural, hospital, etc.)
Client Type	Pharmacy, reseller, or B2B outlet classification.
Full Package	Inventory units sold/distributed in standard packaging (no splitting).
Inventory Compliance	Degree of alignment to distribution and expiry policies.

Demand Signal	Sales activity indicating product need.
Utilization Rate	Percentage of stock consumed relative to allocation
Safety Stock	Minimum inventory to prevent stockouts.
Lead Time	Time taken from stock dispatch to arrival at inventory.
Out-of-Stock Incident	Logged event when branch needed item not in stock.
Supplier site	Supplier site provides the origin/location of the supplier.
Supplier's Intend to participate	Supplier's Intend to participate determines whether supplier is interested in buyer's proposal for corresponding PO.
Supplier's Payment terms	Supplier's Payment terms denote the payment terms with the supplier in case of RFP – 60 days credit from invoice date, RFQ – 30 days credit from invoice date.
Supplier's Freight terms	Supplier's Freight terms denote the mode of shipment.
Project Quotation Number	Project Quotation number denotes the project number corresponding to PR.
Project Quotation Date	Project Quotation date denotes the date on which Quotation /Project was created.
Project Manager	Project manager is Point of contact for corresponding PR.
PO Number	PO denotes the Purchase order number created for corresponding PR.
PO Date	PO date denotes the date on which PO was created
PR Approval SLA cycle	PR approval SLA cycles calculate the dates difference between system date with PO creation date at each approval stage.

PO Proposal Amount from supplier	PO proposal amount denotes the proposal amount received by supplier for corresponding PO
Services by supplier	Services by vendor denotes list of services provided by individual suppliers
Invoice No	A number or combination of numbers and characters that uniquely identifies an invoice within system.
Invoice Date	The date that appears on a supplier invoice
Invoice Status	The status of invoice like (Approved – Canceled - Information Requested - Interface Error - Pending Approval – Rejected - Under Processing)
Payment No	A number or combination of numbers and characters that uniquely identifies a payment within system.
Payment Date	The date on which the status of an invoice is updated to 'Paid'
Check No	A number or combination of numbers and characters that uniquely identifies a cheque within system.
Check Date	The date on which the status of a check is generated
Payment Status	The status of payment like Paid, Unpaid, Partially Paid ...etc.
Payment Term	The due date and discount date for payment of an invoice. For example, the payment term 2% 10, Net 30

4.3 Defined Key KPI's/Metrics/Measures

Below section describes key KPI's/metrics/measures for the procurement department

Business Reference Number: INVDS0001		
Subject Area/Process: Purchasing overview dashboard		
Report Name: Main Dashboard Analysis		
Report Type: Analytical		
Business Benefits: The dashboard enables users to track and analyze distribution and inventory performance across wholesale outlets through indicators		
Business Priority: High		
Measures	Description	Condition
Number of Distribution Orders	Total number of distribution orders issued from the central warehouse to sales outlets.	Includes all orders: confirmed, ongoing, or canceled.
Total Distributed Packages	Total number of product packages distributed to wholesale branches, based on batch details.	Counted only after shipment is confirmed.
Total Sold Packages	Total number of packages sold from each outlet, tracked by batch number.	Must be sold in full package units (no unit sales allowed).
Forecast Accuracy %	Accuracy of predicting demand versus actual demand per product or region.	Requires historical demand and actual sales data for comparison.
Inventory Turnover Ratio	Frequency of inventory replacement due to sales over a given period.	Higher ratio indicates faster stock movement.
Stockout Rate %	Percentage of times a product was unavailable when requested by a customer.	Only calculated during working hours and official sales attempts.
Waste Rate per Inventory	Percentage of inventory wasted due to expiry, damage, or return.	Includes expired batches, returned from outlets, or written off.
Shipment Timeliness %	Percentage of distribution orders delivered on or before the planned delivery date.	Based on difference between actual and scheduled delivery dates.
Target Achievement %	Measures outlet performance against sales targets.	Sales target must be predefined and time-bound.
Inventory by Batch Status	Current batch condition at each outlet (e.g., available, expired, near expiry).	Current batch condition at each outlet (e.g., available, expired, near expiry).
Distribution by Region	Geographic view of package distribution across governorates.	Visualized only if outlet region data is complete.

Sales by Product Category	Total sales grouped by category (e.g., Haircare, Skincare).	Requires proper product categorization in the system.
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Business Reference Number: INVDS0002		
Subject Area/Process: Purchase Requisitions Overview Dashboard		
Report Name: Requisition Workflow & Efficiency Dashboard		
Report Type: Analytical		
Business Benefits: This dashboard allows procurement managers to monitor and enhance the requisition cycle from branch requests to order fulfillment, ensuring accuracy, timeliness, and compliance across all purchasing activities		
Business Priority: High		
Measures	Description	Condition
Number of Purchase Requisitions	Total number of purchase requisitions raised by branches within the selected period.	Includes all statuses: pending, approved, or rejected.
Average Requisition Approval Time	Average time taken to approve purchase requisitions from submission to final approval.	Calculated in working hours, excluding weekends/holidays.
Requisition-to-Order Conversion Rate %	Percentage of approved requisitions that resulted in actual purchase orders.	Only approved and finalized requisitions are included.
Top Requested Product Categories	Categories most frequently requested in purchase requisitions.	Based on item counts, not monetary value.
Urgent vs Normal Requisitions Ratio	Ratio between urgent and regular requisitions submitted.	Requires correct tagging of urgency level by branches.
Requisition Accuracy Rate %	Percentage of requisitions that matched inventory plan and required no manual correction.	Excludes requests sent back for quantity/type correction

Business Reference Number: INVDS0003		
Subject Area/Process: Supplier Analysis Dashboard		
Report Name: Supplier Performance & Risk Monitoring		
Report Type: Analytical		
Business Benefits: The dashboard provides procurement teams with comprehensive visibility into supplier performance, compliance, and risk. It helps in improving supplier relationships, ensuring delivery reliability, and mitigating procurement risks		
Business Priority: High		
Measures	Description	Condition
Number of Active Suppliers	Total count of suppliers who have transacted with the company in the current fiscal year.	Only includes suppliers with at least one PO or invoice in the period.
On-Time Delivery %	Percentage of Purchase Orders delivered on or before the scheduled delivery date.	Based on difference between actual and expected delivery dates.

PO Fulfillment Rate	Ratio of fully fulfilled POs to total issued POs.	Considered "fulfilled" only if quantity and delivery matched 100%.
Supplier Lead Time (Avg)	Average number of days between issuing a PO and receiving the order from the supplier.	Excludes canceled or partially fulfilled orders.
Invoice Accuracy %	Percentage of supplier invoices that match the agreed PO and received items without dispute.	Calculated based on 3-way match: PO, GRN, and invoice.
Supplier Risk Score	Risk assessment score per supplier based on delivery issues, financial status, and compliance violations.	Calculated using a weighted scoring system.
Top 5 Suppliers by Spend	List and spending amount of the top 5 suppliers by total procurement value.	Based on invoice value over selected period.
Supplier Spend by Category	Total procurement value grouped by product/service category (e.g., Logistics, Packaging, Raw Materials).	Requires accurate categorization in procurement system.
Late Deliveries Count	Total number of Purchase Orders delivered after the committed delivery date.	Used as part of risk evaluation.
Disputed Invoices Count	Number of supplier invoices flagged for errors, disputes, or corrections.	Captured from procurement and finance systems.
Supplier Concentration Index	Measures the dependency on top suppliers due to over-reliance on few vendors.	Calculated using Herfindahl-Hirschman Index (HHI). A high score indicates risk.
Supplier Lifecycle Status	Classification of suppliers as "New", "Preferred", "On Watch", or "Terminated".	Based on internal evaluation and business rules.

Business Reference Number: INVDS0004		
Subject Area/Process: Inventory Mangament		
Report Name: Stock Overview & Optimization		
Report Type: Analytical		
Business Benefits: Provides full visibility into stock levels, movement, expiry risks, and replenishment needs across all pharmacy branches, helping reduce stockouts, overstock, and expired product losses.		
Business Priority: High		
Measures	Description	Condition
Current Stock Level by Product and Branch	Real-time quantity on hand per item in each pharmacy branch.	Based on latest inventory transactions.
Stock Cover (Days of Inventory)	Number of days current stock will last based on average daily sales.	If < threshold (e.g., 7 days), alert for replenishment.

Stockout Count (by Branch / Product)	Number of SKUs with zero quantity on hand in each branch.	Critical for identifying demand gaps.
Overstock Alert Count	Number of SKUs exceeding max stock limit per branch.	Can indicate over-ordering or low sales.
Near-Expiry Stock Count	Products expiring within 30/60/90 days.	Useful for discounts / stock redistribution.
Dead Stock Value	Total value of items not sold/moved for > 90 days.	High values may indicate need for promotions or disposal.
How fast stock is consumed and replaced.	How fast stock is consumed and replaced.	= Total Sales / Avg Inventory
Top 10 Fast-Moving Products	SKUs with highest sales volume across branches.	Useful for priority stocking.
Top 10 Slow-Moving Products	Items with lowest sales over a period (e.g., last 60 days).	Flag for review / reduction.
Reorder Point Status	Count of SKUs at or below reorder point (ROP).	Used to automate replenishment signals.

Note: Details related to data columns specifications, formulae, source systems are captured in “Data requirements document”

Details related the Visuals, business formulas, logics, Visuals are captured In Visual requirement document

5.0 Approvals & Acknowledgements

Approval Sign-Off			
Role	Name	Responsibility	Date
Business Analyst- Procurement	Ahmed Hassan Ali	Requirement & project coordination	01-07-2025
Data engineer– Procurement	Ahmed Salah , Haidy Hossam	Data Integration	01-07-2025
Data Modeler	Badr Ahmed	Data schema & ERD	01-07-2025
Semantic & Power BI	Hazem Mostafa , Mohamed Atef	Visualization	01-07-2025
Tableau	Ahmed Khaled	Dashboards and reports	01-07-2025
Power center	Ali Mohamed	Designing, developing	01-07-2025