Simpana

WAREHOUSE MANAGEMENT SYSTEM

ABOUT US

- Simpana Technologies is all about excellence, passion and flexibility. We have offered world class services in IT consulting, offshore software development, testing and user interface design.

- We work on diverse projects ranging from simple information systems and websites to complex enterprise type architectures, desktop or web-enabled applications, traditional n-tier and service oriented architectures. We follow three main rules to get to our goals: do it on-time, do it within scope and offer the best services.

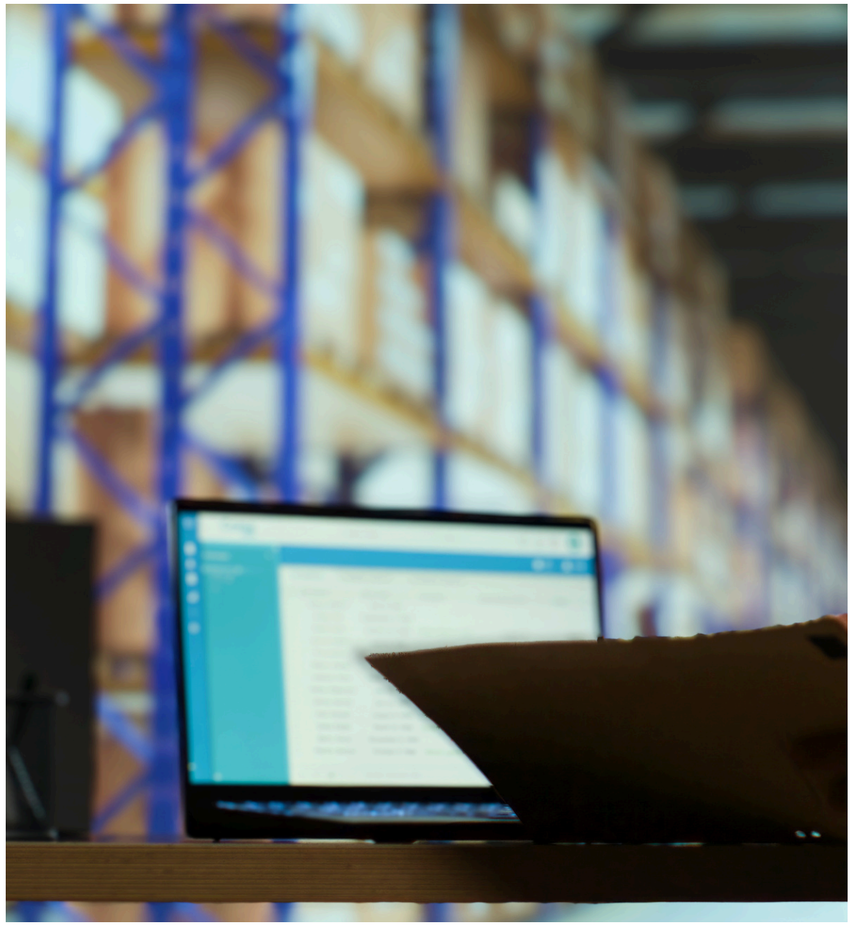
OUR MISSION

Our mission combines work and talent. We seek to achieve extraordinary results by helping our clients make distinctive improvements. How do we do it? By leveraging best-of-breed technology and building a great company that is profitable and appeals to, helps develop and retains exceptional people.

OUR VISION

Our passion for what we do led us here. Our vision guides our business every day to provide one of the best IT consulting and software development services while taking care of our people and honoring our values.

Introduction

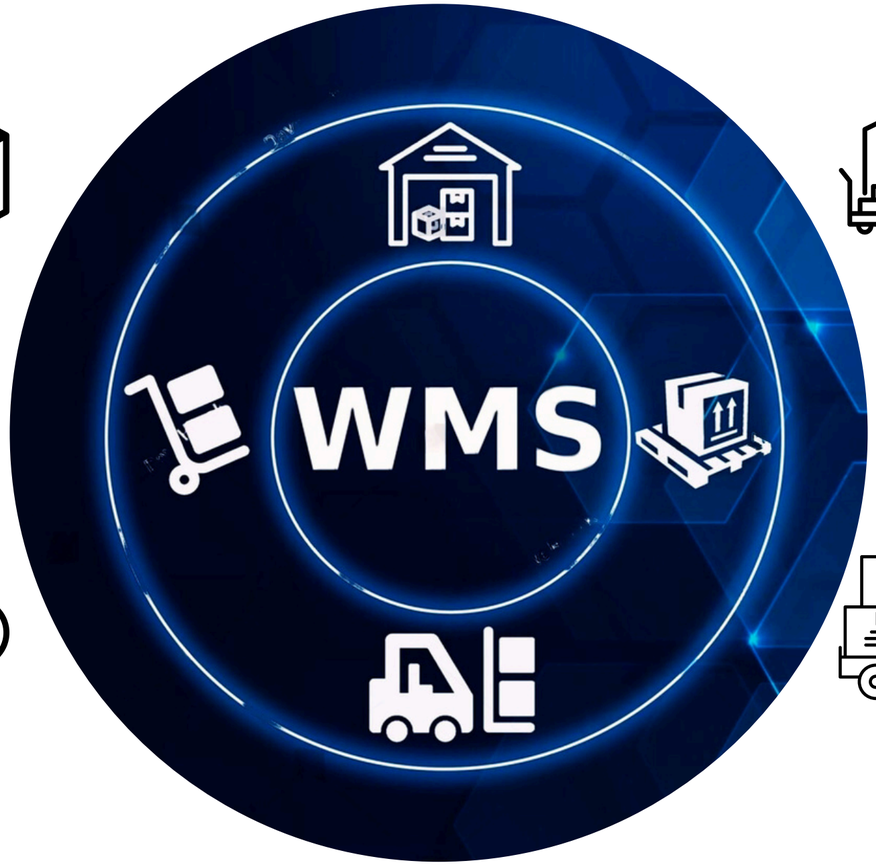


- Optimizes warehouse operations
- Manages storage, movement, and tracking of goods
- Crucial for business competitiveness
- Enhances operational efficiency
- Boosts overall business success

Scope

Goods Receipt

Streamlining goods receipt with intuitive interfaces and accurate, real-time data entry.



Put-Away

Improving the accuracy and efficiency of the put-away process an intuitive interface.

Quality Inspection

Enhancing the efficiency and accuracy of quality inspections.

Goods-Out (Outbound Process):

Ensuring accurate and timely order fulfillment through streamlined outbound processes.

Material Return

Facilitating efficient processing of material returns.

WMS

- Manages warehouse operations.
- Enhanced and optimized warehouse processes
- Ensure efficient handling of goods movement
- Enhances inventory accuracy and visibility
- Streamlines warehouse processes

Features

- Process all transactions carried in the warehouse, including the goods receipts, issues, and stock transfers.
- Make use of barcode scanners hence making the entire process of inventory much easier.
- Manages inventory at the storage bin level making it less hectic and more manageable.
- Allows for easy management of potentially hazardous material.
- Manage the structures of the warehouse no matter how complex they are.
- Monitor the movement of stock and process their differences.

WMS Business Process

About WMS

Improved User Experience

Modern, Consumer-Grade UX that Boosts User Satisfaction And Engagement.

Role-based

Applications Are Designed To Meet The Needs Of Specific Roles Within An Organization, Ensuring Relevant Information And Tasks Are Easily Accessible.

Simple And Intuitive

User-friendly Interfaces With A Focus On Ease Of Use, Reducing Training Time And Improving Efficiency.

Enhanced Productivity

simplified And Streamlined Workflows Reduce The Time Needed To Complete Tasks.

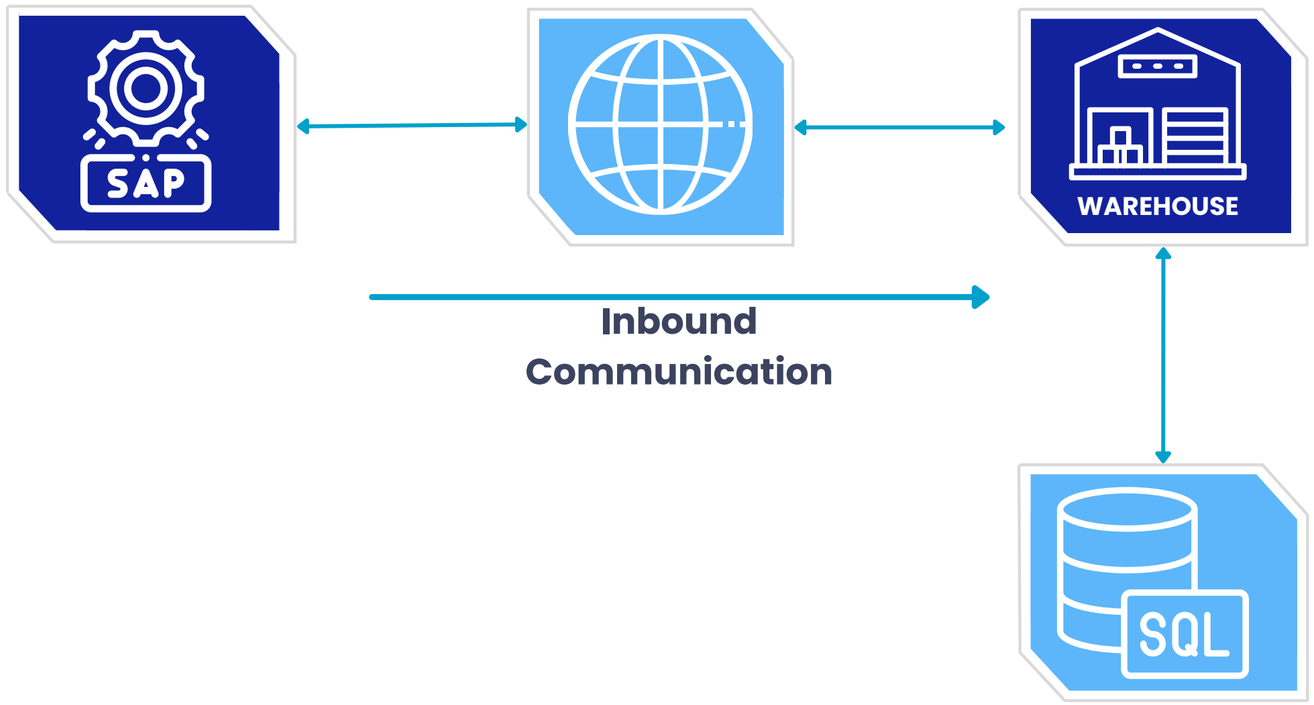
Real-time Data

Instant Updates To Inventory And Process Statuses, Enhancing Accuracy And Decision-making.

User-friendly Interfaces

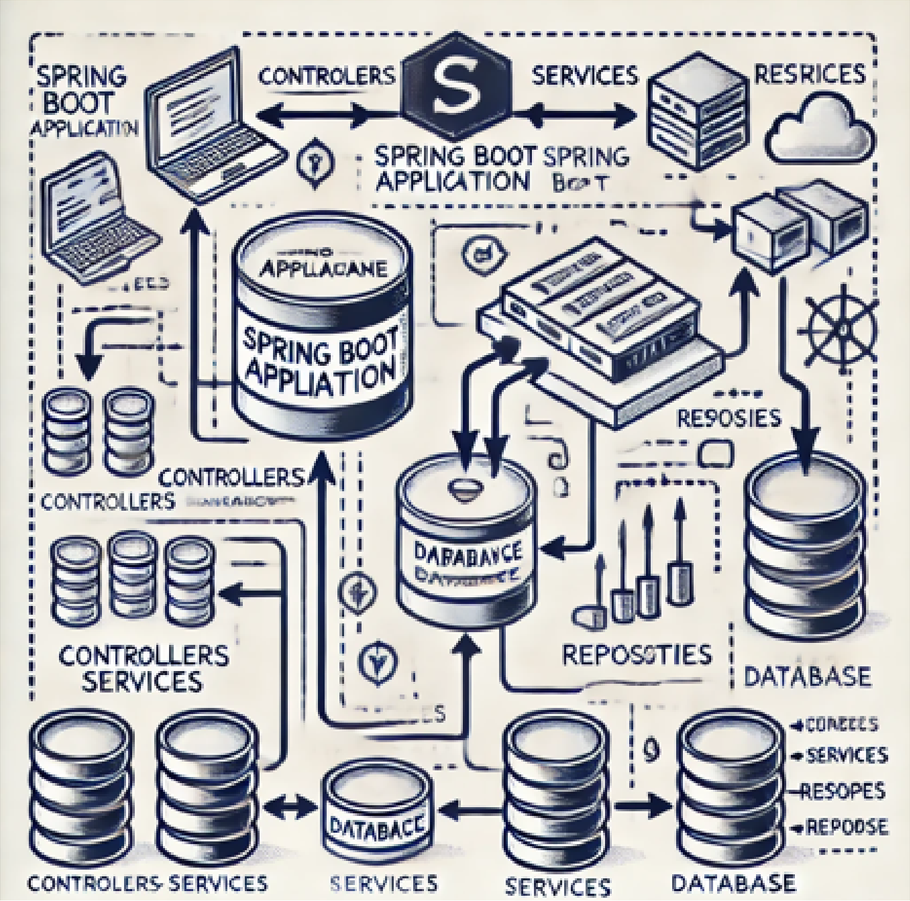
Simplified Operations For Warehouse Tasks Such As Goods Receipt, Quality Inspection, Put-away, Goods-out, And Material Return

Design and Architecture
(External Interface with ERP Application)



1. **SAP:**
   ERP system managing inventory, orders, and supply chain
2. **Middleware:**
   Facilitates communication between SAP, WMS, and Database
3. **Warehouse:**
   Handles inventory tracking, order fulfillment, and logistics
4. **Database (SQL):**
   Stores data on inventory, orders, and transactions

Java Spring Boot Connectivity with Database



1 **Controller Layer:**
Handles HTTP requests and forwards them to the service layer.

2 **Service Layer:**
IHandles business logic and interacts with the database.

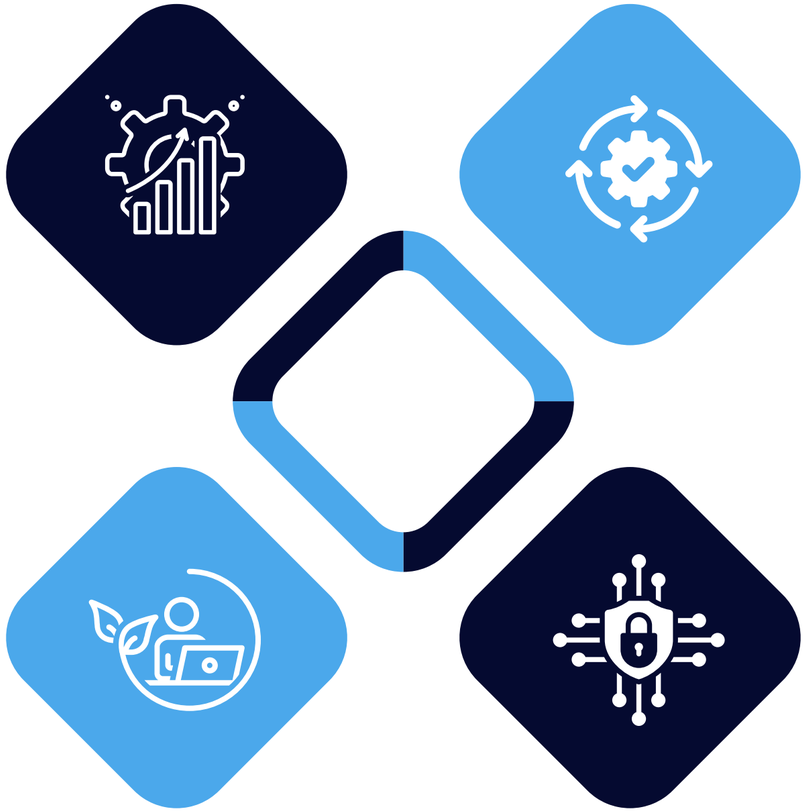
3 **Repository Layer (DAO)**
Performs CRUD operations through JPA/Hibernate.

4 **Database (MSSQL):**
The database Spring Boot accesses via JDBC or JPA.

Advantages

1. **Improved User Experience**
   Modern, consumer-grade UX that boosts user satisfaction and engagement.
2. **Enhanced Productivity**
   Simplified and streamlined workflows reduce the time needed to complete tasks.
3. **Accessibility**
   Applications anytime, anywhere, on any device, increasing flexibility and mobility.
4. **Responsive Design**
   Automatically Adjusts To Different Screen Sizes And Orientations, Providing A Seamless Experience Across Desktops, Tablets, And Smartphones.
5. **Instant Updates**
   Real-time data synchronization ensures that users always have access to the most current information.
6. **Unified Platform**
   Reduces the need for multiple interfaces

Benefits of WMS Integration



Efficiency
Speeds up warehouse processes by enabling quick and accurate data entry.

Effectiveness
Reduces errors and ensures real-time inventory updates.

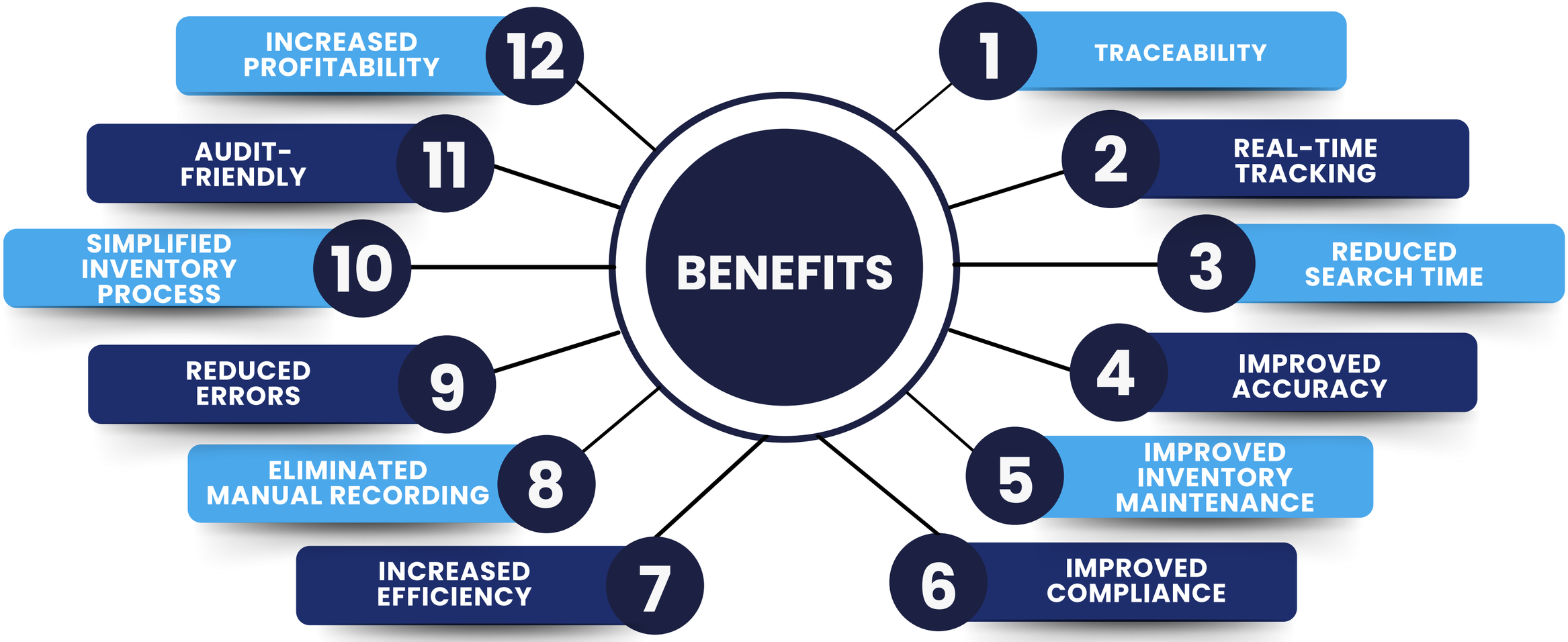
User-Friendly Interface
Simplifies operations for warehouse staff, reducing training time and improving productivity.

Data Security
Protects sensitive information through secure data transmission and access controls.

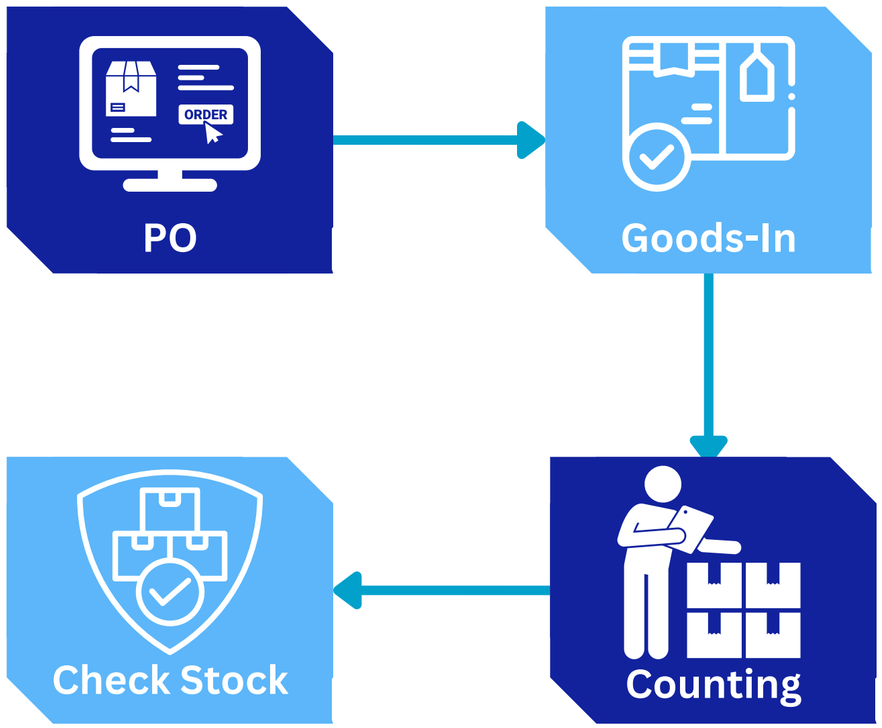
Overall process

	Physical Processes	Backend Processes
1	Goods unload at loading dock and processed at goods receipt area	Materials Movement, Goods receipt, Goods issue
2	Storage of goods on shelf storage	Transfer posting & assignments to storage bins, equipment returns/ send/ repair
3	Quantity Check	Confirm stock/ storage, Maintain physical inventory/ cycle count
4	Pick, Pack Ship	Print lists and labels

Benefits of Barcode



Flow of WMS



1 Purchase Order (PO)

- **Creation:** Generate PO to procure goods.
- **Approval:** Review and approve the PO.

2 Goods-In

- **Receiving Notification:** Notify warehouse of incoming shipment.
- **Unloading:** Unload goods upon arrival.
- **Verification:** Check received goods against PO and delivery note.

3 Counting

- **Cycle Counting:** Perform periodic counts to verify records.
- **Physical Counting:** Conduct full inventory counts at intervals.
- **Adjustment:** Adjust records based on count results.

4 Check Stocks

- **Inventory Levels:** Regularly monitor stock levels.
- **Reporting:** Generate reports on stock levels, movement, and trends.

Project Phases

1 Phase 1: Planning

- Define scope, goals, requirements
- Develop project plan and secure resources

2 Phase 2: Design

- Design system architecture and workflows
- Create technical specifications and UI designs

3 Phase 3: Implementation

- Procure and install hardware/software
- Configure and integrate systems

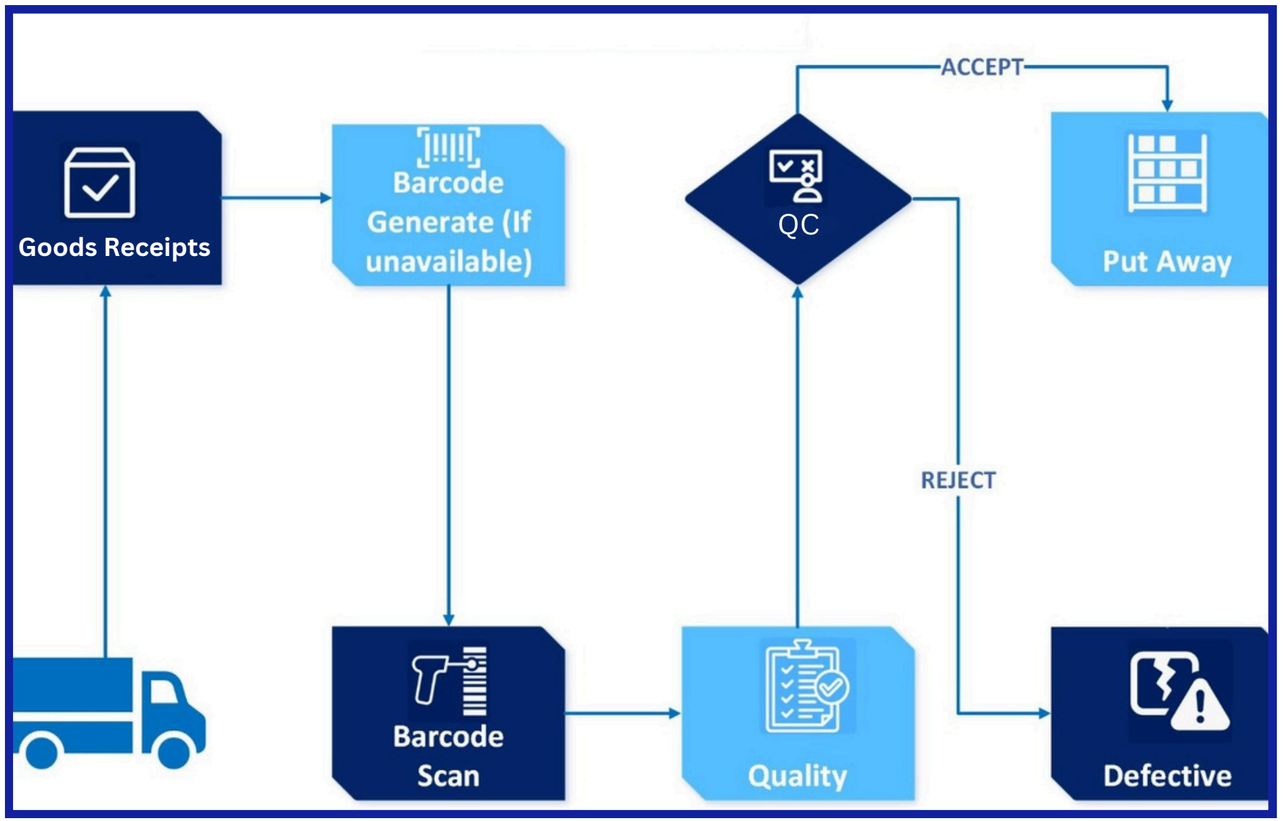
4 Phase 4: Testing

- Conduct unit, integration, and user acceptance testing
- Finalize documentation

5 Phase 5: Go-Live

- Execute go-live strategy
- Provide training and support

Goods Receipt Process Flow



Goods Receipt:

- Verify items and confirm receipt for inventory updates.

QR Code Generation:

- Create and print QR codes for tracking.

QR Code Scanning:

- Scan codes with RF guns for identification and info access.

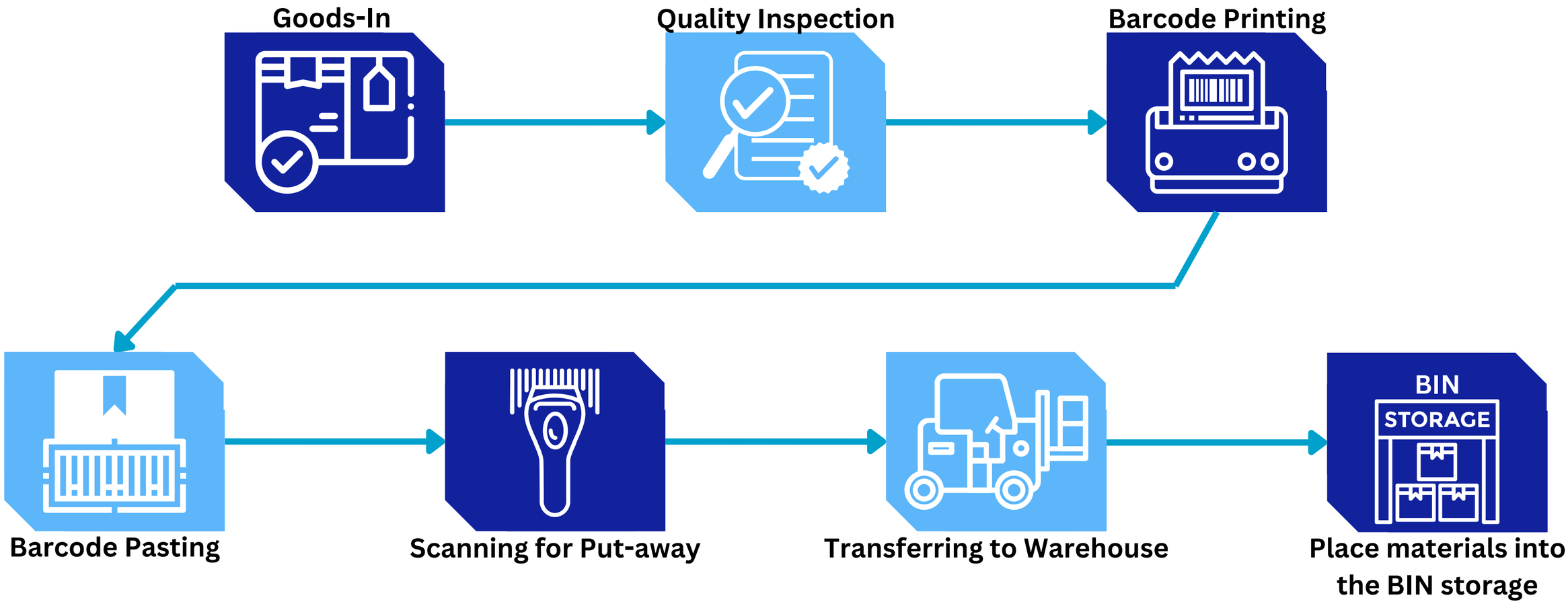
Quality Inspection:

- Scan codes for inspection and record results.

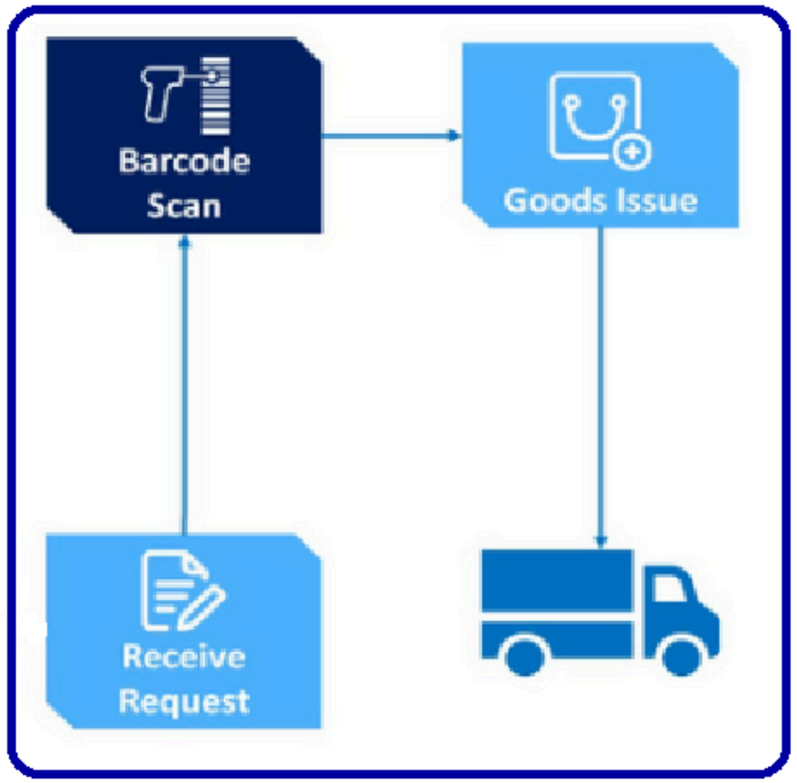
Put Away:

- Scan codes to confirm storage placement.

Goods Receipt to BIN Process Flow



Goods Out Process Flow



Receive Request:

- Process reservation requests

Barcode Scanning:

- Scan QR codes with RF gun
- Update WMS app in real-time

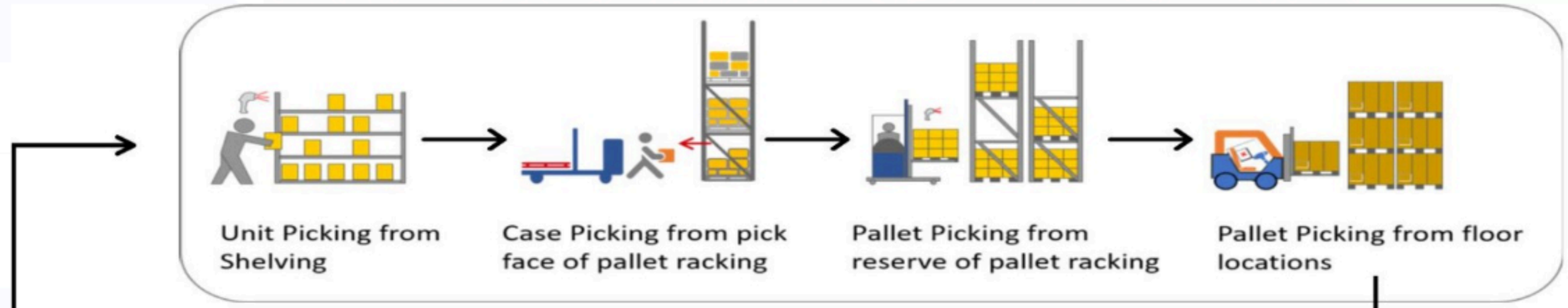
Goods Issue:

- Check items against order details on WMS

Complete Goods Issue:

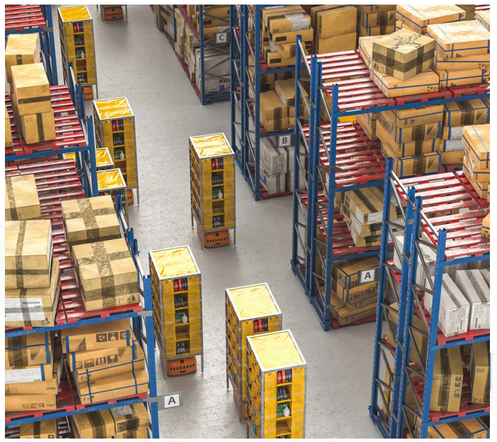
- Confirm in WMS app
- Update inventory and generate shipping documentation

Goods Out Process Flow



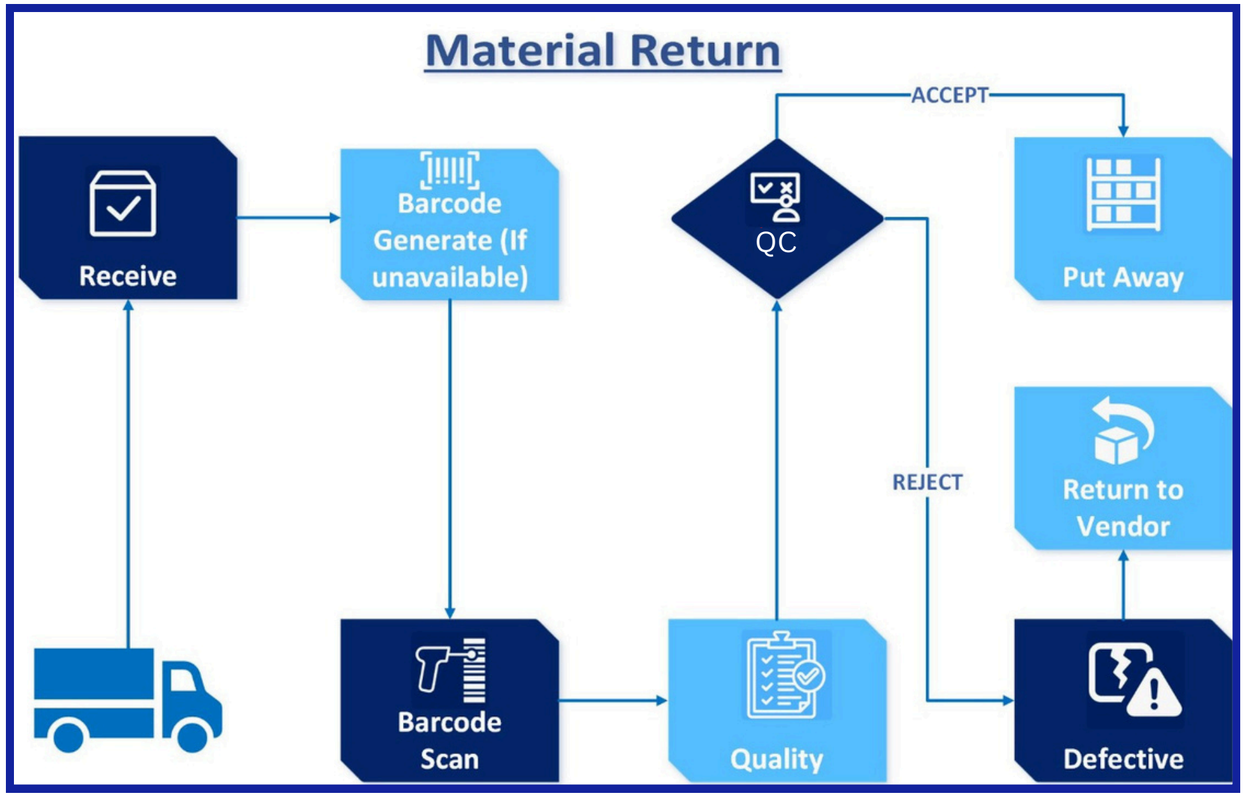
Pick Material as per reservation

Transfer Material



Place Martial at Required Location

Material Return Process Flow



Goods Receipt:

- Verify item details in the app and confirm receipt for live inventory updates.

QR Code Generation:

- Generate and print codes for tracking as needed.

QR Code Scanning:

- Use RF guns to scan codes, update status, and capture return details.

Quality Inspection:

- Scan QR codes to record inspection results and document item condition.

Initiate Return:

- Scan returned items in the WMS app using RF guns.

Project Implementation Methodology

ASAP Methodology

Provide initial planning and preparation	Document the business process requirement	Implement business and process requirement	Complete the preparation for go-live	Cutover to live productive operation & continuous support	Operate your WMS solution

Roles and Responsibilities

Project Manager

- Oversee project and ensure adherence to timeline and budget.

Business Analyst

- Gather and document requirements.
- Facilitate communication between stakeholders and technical team.

System Architect

- Design system architecture and ensure integration.

Technical Lead

- Coordinate technical implementation and testing.

Software Developers

- Develop custom software and assist with configuration.

Roles and Responsibilities

QA Team

- Conduct testing and document issues.

IT Support

- Provide technical support during and post-implementation.

Training Coordinator

- Develop and conduct training sessions.

End Users

- Participate in testing and provide feedback.

Training Program for Warehouse Staff

Initial Training: Comprehensive program covering all aspects of RF gun/scanner usage.

Components:

- Introduction to the system
- Step-by-step usage instructions
- Common troubleshooting

Hands-On Sessions and User Manuals

Hands-On Sessions:

- Practical training sessions to reinforce learning.
- Real-world scenarios and problem-solving exercises.

User Manuals:

- Detailed documentation for reference.
- Available in both digital and printed formats.

Support and Maintenance

Regular Check-Ins:

- Scheduled follow-ups to address any issues
- Continuous performance monitoring

System Updates:

- Regular software updates and maintenance

Technical Support:

- On-site technical support for complex issues
- Remote assistance for quick resolutions

Detailed Guides and FAQs

Guides:

- Step-by-step instructions for common tasks
- Visual aids and diagrams for better understanding

FAQs:

- Common questions and their answers
- Easily accessible in user manuals and online

Simpana

Thank you!

Do you have any questions?

Email

contact@simpanatech.com