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# Process Flow Assessment for Bar code Implementation

*Sample*

Presented To:

ABC Company

Presented By:



**DYNAMIC SYSTEMS INCORPORATED**

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# 1.0 EXECUTIVE SUMMARY

## Goals and Objectives

ABC Company desires to implement the use of a bar code methodology that will provide accurate and timely decision support for multiple functional organizations, data collection and dissemination of information for each of its facilities, and any future facilities. This implementation must streamline work processes, include thorough training for all users of the new technology, and improve the accessibility, timeliness, and accuracy of data. The system must support complete material tracking and also provide ABC Company with the ability to increase productivity and quality management.

## Business Needs

ABC Company desires to implement a bar code system that leverages the current Manufacturing Software, increases the efficiency of production, reduces duplication of effort, better monitors activities, and enhances customer service. To achieve these goals, a more technologically-advanced, flexible system must be implemented which will provide for the following:

- Provide real time visibility across the enterprise to production and distribution activities
- Reduce labor cost for production and administrative functions
- Automate inventory management
- Track revision levels and lot control of component parts
- Comply with customer requirements for out-bound shipping
- Automate order fulfillment process increasing product turns, customer service and shipping accuracy
- Provide managerial reporting and costing information for all distribution activity

## **Assessment Overview**

Over the last 4 weeks, Dynamic Systems has been interviewing ABC Company personnel and reviewing your internal production processes and systems. These interviews included people from cross-functional departments like manufacturing, accounting, purchasing and information technology.

During our interviews, there were two main areas that require immediate attention. The first area is the utilization of your Manufacturing Software application. There is a great deal of capability in this application that is not being utilized today. ABC Company personnel are performing a significant amount of unnecessary manual tasks. Many of these tasks can be automated by properly using your existing Manufacturing application. The second area that needs to be addressed quickly is the business processes. There is a heavy dependence on human and manual processes and as your business grows these manual processes will provide significant bottlenecks that will drive your costs higher and slow production.

## **Recommendation Overview**

In this assessment, Dynamic Systems is providing our recommendation of the steps ABC Company should take to automate certain processes, improve production flows and reduce production costs.

1. Better utilize Manufacturing software platform
2. Process improvements
3. Data Collection (Bar Coding) Recommendations
4. Phased implementation strategy

## **2.0 ASSESSMENT REVIEW**

### **Gathering Information**

To obtain an understanding of ABC Company business practices and process flows, meetings were scheduled with representatives from the following functional organizations: Accounting/Finance, IS, Manufacturing/ Production, Customer Service, Sales/Marketing, QC, Warehouse/Material, and Executive Management. The interview process also uncovered additional insight into process flow issues that fall outside the scope of a bar code solution.

### **Critical Success Factor Summary**

Using the definition that critical success factors are key for success in an organization, all Company representatives were asked to define critical success factors for their area or factors that affect their function. Accuracy was a prominent theme and viewed as a critical success factor in all areas including order accuracy, inventory accuracy, transaction accuracy, shipping accuracy, and labeling accuracy. Additional critical success factors noted were: inventory reduction, COGS reduction, improved production and labor tracking, minimizing finished goods inventory, lot/component traceability, and improved ability to support customer compliance issues.

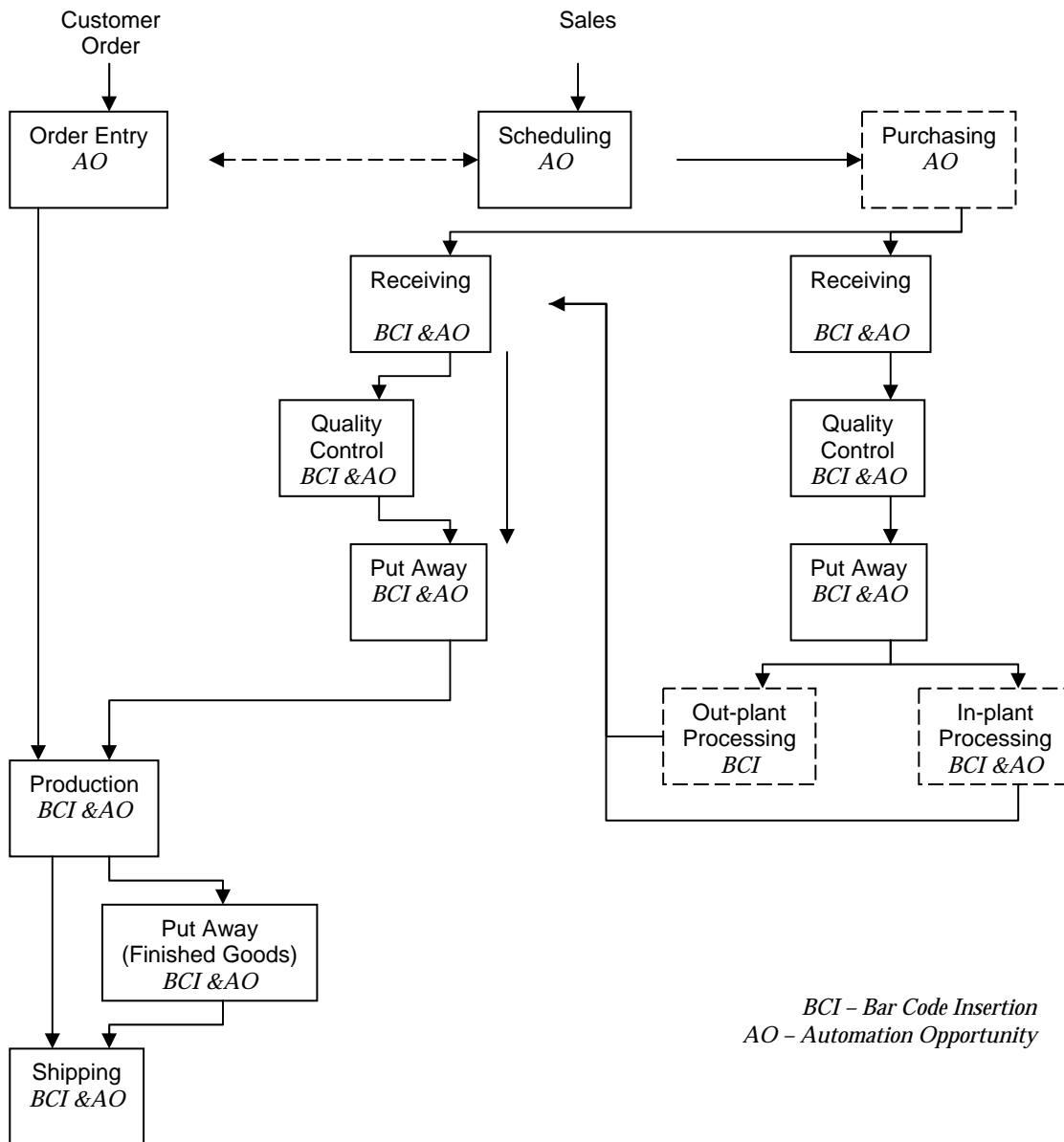
### **Defining a Bar Code Installation as a Success**

ABC Company personnel defined success for a bar code system as follows: Accuracy would be defined and measured. Every box would have a bar code label. Material flow would be automated, tracked, and controlled.

### 3.0 CURRENT STATE OVERVIEW

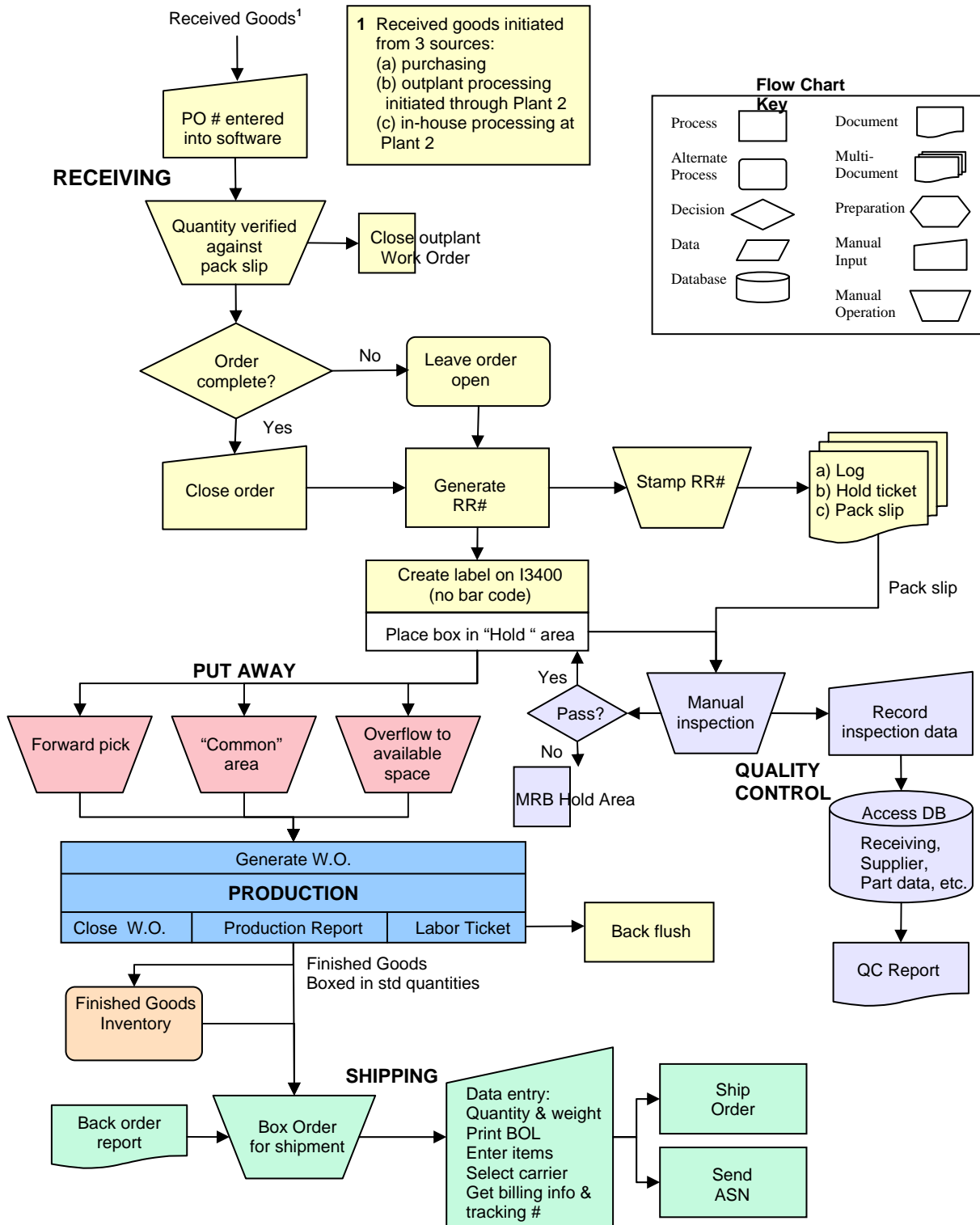
#### 3.1 Standard Process Flow Summary

This process flow diagram represents the movement of data and material through ABC Company. It provides a high level view, noting opportunities for automation and bar code insertion. Since the installation of a bar code system will have the greatest impact on the Material Flow, that process is described in detail in Section 3.2.



### 3.2 Material Flow Summary

The Material Flow has been expanded below to illustrate how material and data is currently processed. The current practice for each of the following areas: receiving, quality control, put away, production, finished goods, and shipping, is also described in this section.



## 4.0 RECOMMENDATIONS

Recommendations for meeting ABC Company's Business Needs and Goals are presented in the following four sections:

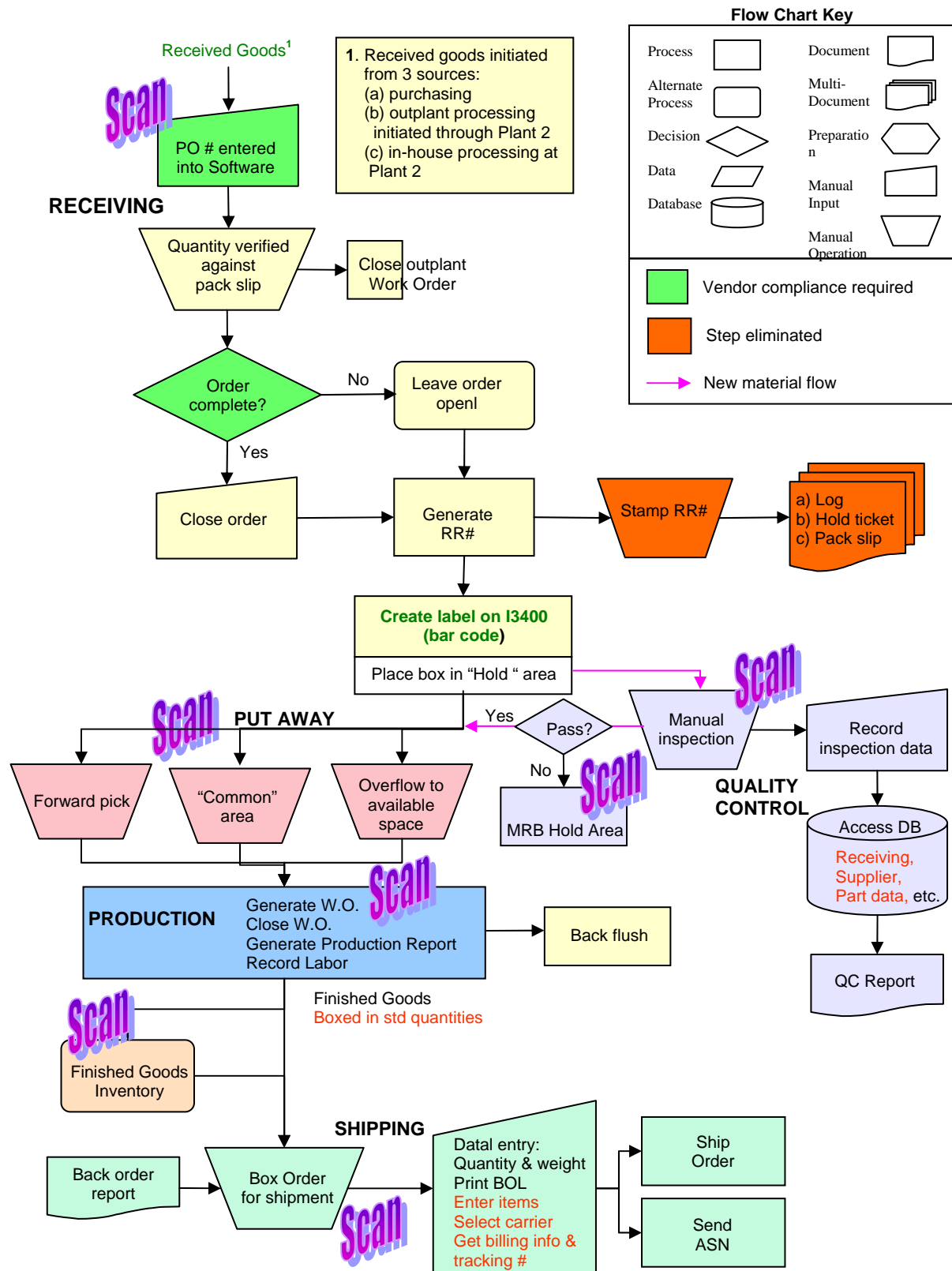
1. *Process improvements* ... to address problems uncovered in the evaluation of the material flow and to optimize the use of bar coding.
2. *Software recommendations* ... to leverage use of current installations and deliver online labor and material tracking capabilities.
3. *Hardware recommendations* ... to facilitate the automation process.
4. *Implementation plan*

### 4.1 Process Improvements

Recommended process improvements include changes to steps within the material flow at ABC Company. Some of these changes are not directly related to bar coding, but will facilitate the use of bar codes and increase productivity. Some process recommendations cannot be accomplished with the current Manufacturing software implementation.



# Material Flow with Process Change Recommendations



## **4.2 Software Recommendations**

## **4.3 Hardware Recommendations**

## **4.4 Implementation Plan**

## **5.0 RETURN ON INVESTMENT**

- Inventory reduction: 4 – 6% (industry standard)
- Increased productivity in cycle counting: 15% (industry standard)
- Reduced shipping errors: 20% (make sure to include the cost of fines for compliance issues – these should go down by at least 50%)
- Increased productivity in shipping: 15% (with addition of new shipping software this could go to 25% and reduction in fines could go to 60%)
- Increased productivity in receiving: 10 – 20%
- Elimination of purchasing time to verify backorders with vendors: 100%
- Reduction in data entry for inspection reporting: 20%
- Elimination of search time for issuing inventory to production: 50-60% (this might be balanced by the time to issue parts – TBD)
- Reduction in time to record work order data and labor data: 50%
- Elimination of customer service time to look up tracking numbers and shipping data for expedited orders: 90%