

White Paper

Warehouse Management System

The First Steps To Successfully Selecting a System



SAGEDATA ...the BAR CODE Experts


www.sagedata.com

"One of the reasons warehouses are larger is because they are doing more."

"They are not only performing traditional warehousing functions, but many of our clients are bringing in functions that are traditionally located at corporate headquarters into the warehouse"

Objective

The purpose of this document is to outline the various components that companies should look for in a Warehouse Management System (WMS) and some of the challenges facing businesses in the Internet age. This document will be of particular interest to warehouse managers and third party logistics (3PL) providers.

Introduction

In today's global marketplace, customer expectations and markets are evolving at rapid speeds, and companies are striving to keep pace. Increased competitive pressures are demanding that companies keep pace with increased volumes, faster customer responsiveness and thinner margins - these are the new rules of day-to-day business operations.

The frantic pace of the continuous evolution of the Internet has created a whole new way of doing business. It's what Forrester Research calls a "dynamic trade" which is the "ability to leverage technology to satisfy current demand with customized response." In other words, the Internet is enabling businesses to respond to customers demands faster, easier and more efficiently, while reducing operating costs. To further combat the growing demand of the e-commerce world, businesses can either improve their own in-house Information Technology (IT) infrastructure or outsource fulfillment to a 3PL provider. In any case, the requirements of speed and accuracy are the key components of the solution.

Traditionally, warehouses managed their own inventory with a clipboard and pen and manually entered the data into the system. In more recent years, warehouses have moved towards automating their paper-based systems with bar codes and handheld computers. However, today, rapid adoption of new Internet-based efficiency technologies is dominating technology investments worldwide. This provides the 3PL warehouse industry with the opportunity to differentiate themselves and use the Internet as a competitive advantage.

"Back-end operations are critical to ensuring customer satisfaction."

"When the customer clicks, the warehouse should work."

Importance of a WMS

In order to gain a competitive advantage over competitors, 3PL warehouses must focus their energies on improving the flow of inventory and information within their warehouse(s). Customers are demanding efficient and accurate flow of inventory and data. A WMS will benefit the overall operations by improved data accuracy, increased order efficiency, and reduced operating costs.

What kind of savings can a business expect from a warehouse management system? Consider the following:

- How many lost hours of productivity can be attributed to manual and duplicated data entry?
- How much money can be saved from reduced clerical work?
- How much time is lost by customer service trying to determine the stock level of a particular inventory item?
- What losses in productivity are you experiencing due to "lost or missing" items?
- How many hours or days does it take to do a physical inventory?
- Do you have to rely on outdated stock reports that misrepresent the true inventory levels?

Businesses have recognized the importance of implementing a WMS over the last few years, but many are reluctant to implement a system because it's a new territory that can be viewed as being difficult, time consuming, and very expensive. Therefore, many organizations have relied on annual physical inventories that have taken days to perform to get basic inventory information they required. As a result, fundamental information of the inventory often remains unknown until the year-end inventory. And since inventory gets moved, changed and replaced on a regular basis, the year-end inventory becomes obsolete almost immediately.

Now that real-time warehouse management technology is available, organizations have begun to actively evaluate warehouse management technology to find a system that

"Back-end operations are critical to ensuring on-line customer satisfaction. After all, your warehouse is the core of your business."

Benefits

● **Inventory Visibility**

Inventory visibility will allow warehouses to have real-time access to the inventory database, easily locate items, view up-to-date stock levels, generate electronic pick lists and generate up-to-date reports.

● **Data Entry**

Data only has to be handled once when the item is received. In addition, the data is entered accurately the first time and flows directly into the system for real-time information access by others.

● **Soft Savings**

1. Increase employee moral by enriching job opportunities and by automating monotonous tasks such as data entry and physical inventory counts.
2. Increase the number of satisfied customers due to faster response and improved accuracy of shipments.

● **Scanning Bar Codes**

Bar code scanners reduce errors associated with manual data entry.

● **Radio Frequency (RF)**

RF ensures real-time delivery of information increasing accuracy and productivity.

● **Optimized Picking**

With verification of each item scanned as it is picked, a WMS will increase service levels, reduce returns due to inaccurate shipments and eliminate double handling of pick lists.

● **Inventory Cycle Counts**

Cycle counts can be performed during regular business hours using wireless RF handheld computers. The handhelds allow users to verify counts immediately, instead of hours or days because the data is accessing the main inventory database in real time.

● **Location Control**

Location control ensures that users are able to locate any item in their warehouse, and eliminates "lost and/or missing" inventory, thus providing higher efficiency and faster customer response.

"It's crucial that warehouses begin to embrace Internet technology to enable them to enhance customer satisfaction levels and increase their client base."

"There's just more and more contracting going on out there, so third-party providers are just putting up bigger and bigger buildings."

Implementing a WMS

When selecting a WMS solution it is imperative that there is a mutual agreement on what needs to be changed, added, and interfaced to existing systems.

Step One:

Assess Current Operating Characteristics

Review the layout, ABC frequency class (the class indicates the speed of movement of the product, where A is the fastest, B the next fastest and so on) and describe the data flow in the warehouse.

Step Two:

Recognize Needs which of these functions does your warehouse need?

- Receiving
- Put away
- Serial number tracking
- Order processing
- Cross docking
- Replenishment
- Order picking
- Shipping
- Multiple warehouses
- Cycle counting
- Documents/Reports
- Labor monitoring
- Bar code compliance labeling
- Future growth of the system

Step Three:

Analysis Transactions

Review last year's warehouse transactions by month, to get a sense of the volume of receipts, put-aways and picks per person, per hour.

In addition, do an analysis of:

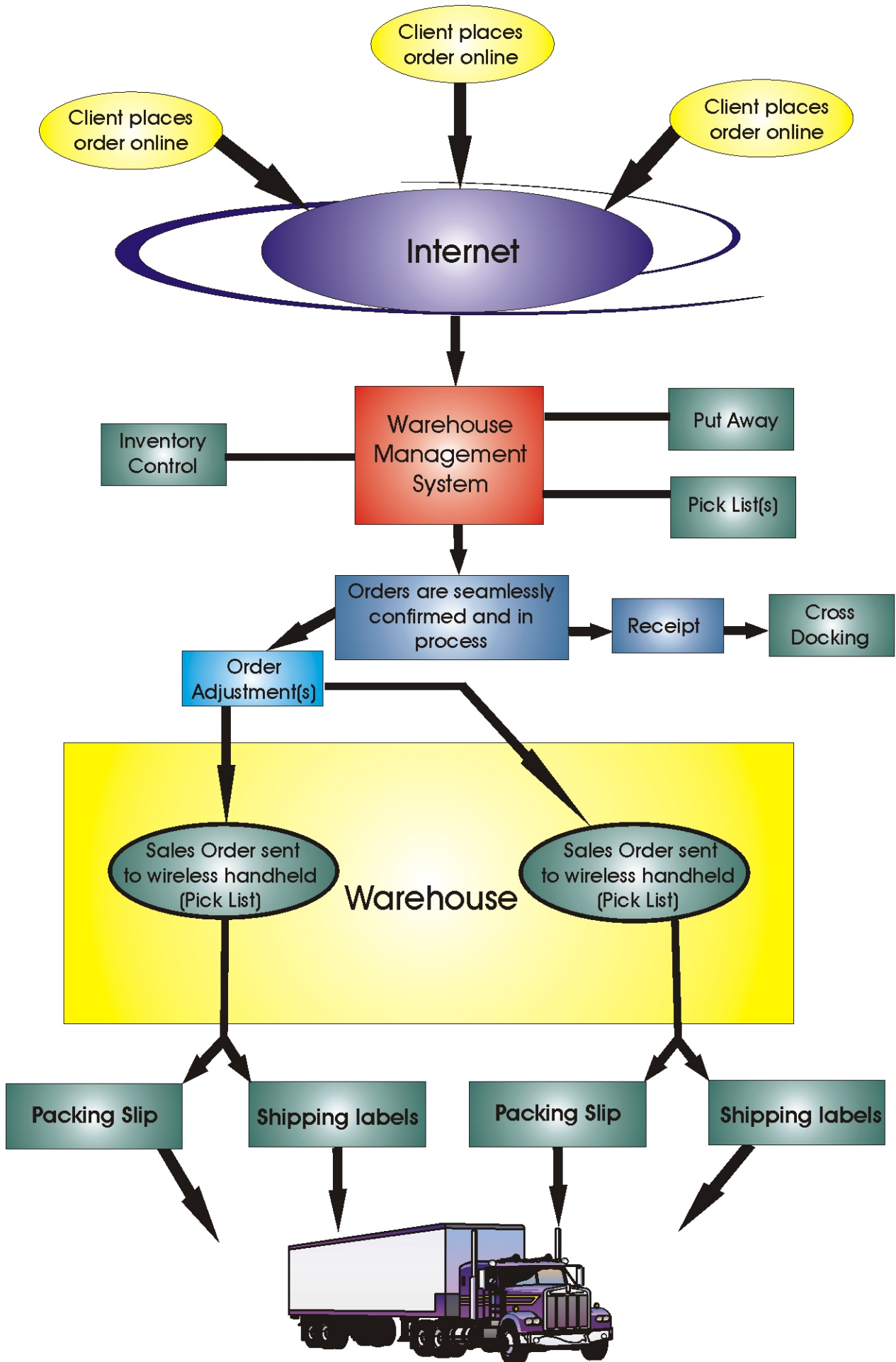
- Daily work detail
- Distribution of orders processed per month
- Units shipped per month
- Unit storage profiles

Step Four:

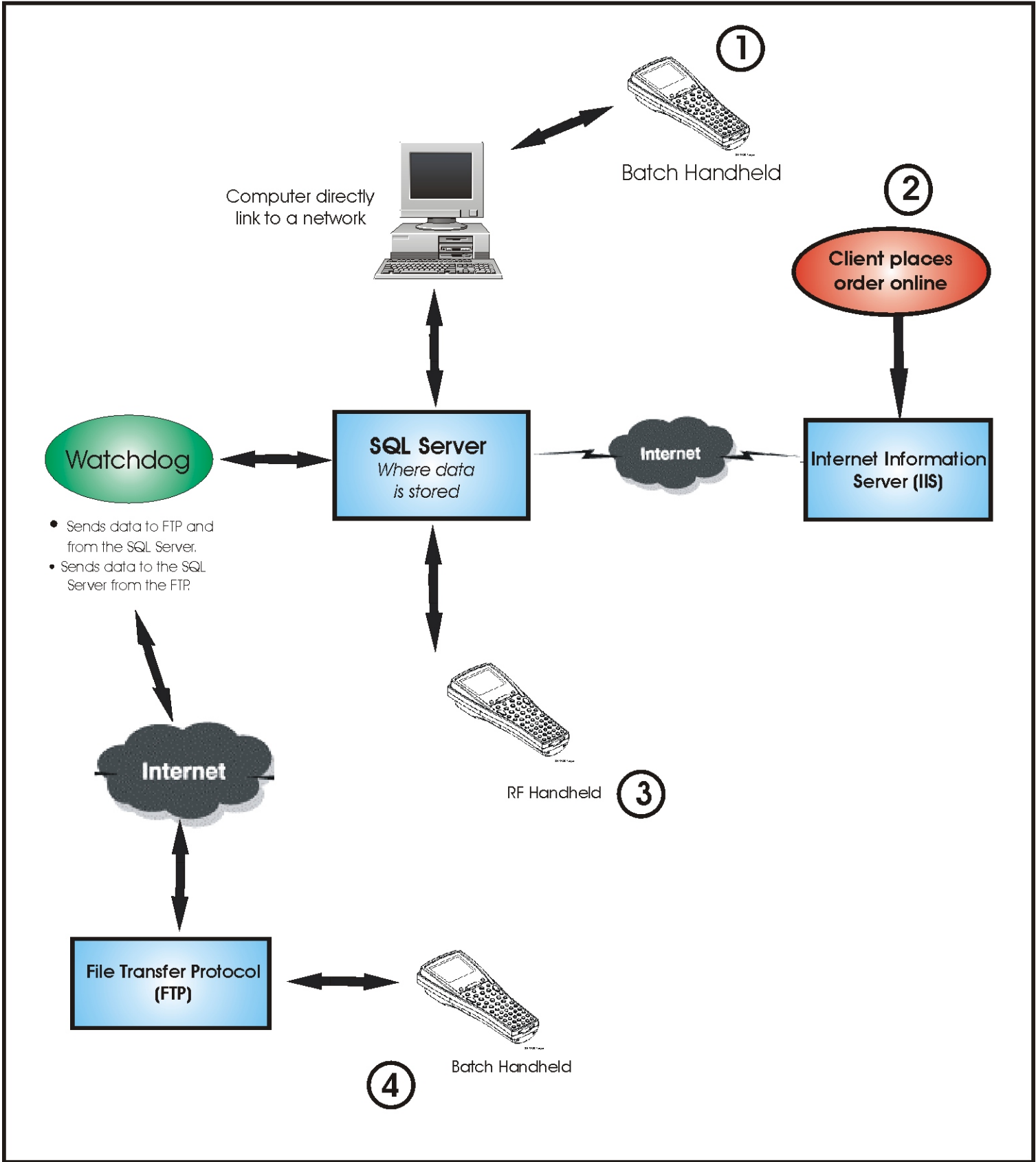
Analysis Flow of Information

- Receiving
- Storage location management
- Picking
- Special customer processing requirements
- Order completion
- Shipping documentation

Warehouse Management Flow Chart



Typical System Architectures



Pick the Right Solution WHIPPET Wireless Warehouse Management System

Today's 3PL warehouses are choosing SageData's WHIPPET - Wireless Warehouse Management System, which is revolutionizing how warehouses conduct, compete and measure success in their warehouse operations.

WHIPPET enables warehouses to compete under these new rules of competition. The solution has been designed to focus on synchronizing warehouse operations at a reasonable cost, and increase customer service level expectations by using Internet technology.

WHIPPET incorporates features to support warehouse operations including: receiving, cross docking, order processing, put away, inventory management (serial number tracking, replenishment), picking, shipping, cycle counting, third party import/export modules, online ordering and reporting.

Additionally, SageData's WMS continuously checks the accuracy of inventory records and significantly reduces errors. As a result of improving inventory, so does the warehouse visibility. With real time information on product location and availability for potential, in-progress, and completed orders, this means that demands on time are reduced and more accurate information is available for your staff and customers.

Inventory Set-up Screen

Descriptive Inventory List

BC SKU	Model	Desc	Loc	Qty	Total	Time	Mnt	Owner	Class	Ser No	Coll	Cost
12345	ZIP100	battery	5 FLOOR	100	1000	02/09/2001 11:17	AMERICAN POWER CON		87624			0.00
11111	ZC-5650	pc	5 FLOOR	5	23	02/20/2001 17:11	ANVAB		A			0.00

The Path to Success

Given the importance of accurate inventory information, a WMS is the logical first step in making a warehouse more efficient and productive. Businesses that are researching diverse warehouse management tools and logistic solutions should consider a WMS solution as the first step. Once a WMS is implemented, the business will begin to reap immediate benefits. Payback for a wireless WMS is generally within 9-12 months of implementation.

Summary

To compete in fierce global markets, businesses need to look for the most effective way to obtain a competitive advantage. Lucky for mid-sized warehouses, as the WMS industry has matured, it has introduced standard products with proven implementation methodologies that have reduced implementation time, lowered costs and sped up return on investment. As a result, many organizations have been able to reap the benefits of a WMS and gain a competitive advantage in the marketplace.

A warehouse management solution can provide essential information that enables businesses to make critical decisions faster and more accurate, based on more up-to-date information, increase customer service levels and most importantly, maximize employee productivity.

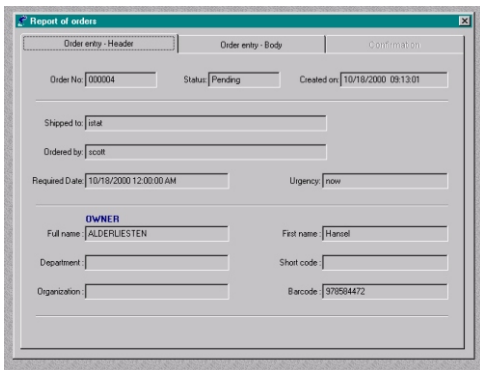
In researching a WMS solution, it's important to look for a flexible, scalable and robust WMS that will enable a business to maintain and provide continuous improvements to their warehousing operations. But more importantly, an organization must look for a WMS supplier with a proven implementation history, a track record of successful installations, and corporate culture that will support and complement the company's business practices.

SageData Solutions WMS WHiPPET, will help warehouses increase inventory visibility, improve productivity and decrease operation costs.

For more information on WHiPPET Wireless Warehouse Management, contact:

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Order Entry Set-up Screen



The screenshot displays a software window titled "Report of orders" with three tabs: "Order entry - Header", "Order entry - Body", and "Confirmation". The "Header" tab is active, showing the following fields:

- Order No: 000004
- Status: Pending
- Created on: 10/18/2000 09:13:01
- Shipped to: [Empty field]
- Ordered by: scott
- Required Date: 10/18/2000 12:00:00 AM
- Urgency: [Empty field]
- OWNER**
- Full name: ALDERLJESTEN
- First name: Hansel
- Department: [Empty field]
- Short code: [Empty field]
- Organization: [Empty field]
- Barcode: 979584472

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