



Distribution Center MANAGEMENT

February 2010

Managing people, materials and costs in the warehouse or DC

From the Golden Zone

Seven critical steps to planning your warehouse or distribution center

By Craig Bertorello

There's no room for mistakes in today's economy, and that includes building or re-engineering distribution centers. More than ever, the "measure twice, cut once" rule applies, since having to tack on additional capital outlays five, six, seven years down the road is costly. The projection of inventory and how it is to be stored and moved are the driving factors in any design project. After all, a 20 percent deviation on a 200,000-square-foot storage area can result in a 40,000-square-foot shortfall or surplus.

Keeping in mind that a distribution center may be a company's largest capital investment, as well as the final stop before the product reaches the customer, it's imperative you do the planning perfectly the first time. Here are seven critical steps to follow when planning a warehouse or distribution center.

1. Define goals and objectives. These should be closely aligned with the overall strategy for the new facility. They can be defined as minimizing warehousing operating costs, maximizing picking productivity, or simply providing the best customer service. They can also be defined more specifically, such as maximizing cube utilization, providing maximum flexibility in the final layout to accommodate future expansion or changes in business, or maximizing efficiency and productivity with a minimal amount of resources.

2. Document the process. Review the existing or proposed methodology and process, and conduct personal interviews with the staff dedicated to all major functional areas within the process. Recent changes in the economy may have caused some downsizing and movement of personnel to work areas they may not be totally familiar with, so be sure to interview enough people familiar with each functional area. If those interviewed can't identify areas of opportunity for improvement in their department or area, you should look to interview more people from that department or functional area as there is always room for improvement.

A 20 percent deviation on a 200,000-square-foot storage area can result in a 40,000-square-foot shortfall or surplus.

3. Collect information and data. Collect any and all information specific to the new facility. Since it is best to work from inside the facility out when considering new construction, don't let any building constraints restrict design. When considering existing space for the new facility, make sure the information includes accurate drawings showing column sizes and locations, dock and personnel doors and locations, ceiling height restrictions, and ceiling girder/joist construction. It is also important to collect all relevant product information pertaining to the number of stockkeeping units (SKUs) to be stored and picked within the

This article was reprinted from the February 2010 issue of *Distribution Center Management*.

Interested readers may subscribe to the monthly newsletter by visiting <http://www.DistributionGroup.com> or phoning (973) 265-2300.

© 2010 Alexander Communications Group, Inc. All rights reserved.

No part of this article may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise without the prior written permission of Alexander Communications Group.

facility, along with their dimensional measurements, weights, order history, and velocity data.

4. Analysis. Once you've collected information about the building and the inventory, perform a thorough analysis to determine if you can achieve your goals and objectives. The analysis should answer the following questions:

- How well does the product flow into, within, and out of the facility?
- Does the forward pick area hold sufficient inventory to avoid excessive replenishment requirements?
- Is the storage system and area large enough to accommodate the inventory, including any required safety stock?
- What type of conveying and sortation equipment will be used?
- What are the staffing requirements?
- Does the operating budget include staffing, maintenance, utilities, and the cost of the information system?
- How well will the facility adapt to a change in operating requirements?
- How effectively will the warehouse management system work with the automated material handling system?

If the analysis determines that you can meet the goals and objectives, you can then develop the detailed solution and project plan. If the goals and objectives cannot be met, determine an alternate plan of action, such as modifying the goals and objectives or making substantial changes to the building design.

5. Create a detailed project plan. This plan should identify all the steps required to create the warehouse or distribution center layout, including the overall goals and objectives, and the results of the information and data analysis used in developing the plan. The project plan should contain the major tasks to be undertaken, the resources needed to achieve each task, and how much time should be allotted to accomplish the tasks successfully.

6. Implementation. The implementation phase of the project is when the "rubber meets the road." It's during this phase that the layout is transformed from concept to reality. All resources within the new facility need to work together to ensure the project plan's goals are met. Since there is a set order in which components of the system should be installed, delivery of all products must be carefully coordinated so as to arrive at the time when they are needed.

7. Post-project review. Once the project has been completed and inventory is moving smoothly in and out of the facility, a closeout meeting should be scheduled. This session will include a discussion with the implementation team as to whether the final layout was implemented as originally designed and approved, and to confirm that any changes were appropriately documented. This step is critical for future project planning.

Craig Bertorello is vice president of operations at TriFactor, a material handling systems integrator based in Lakeland, FL. Reach him at 904-493-2171, cbertorello@trifactor.com, www.trifactor.com.



Distribution Center Management

712 Main Street — Suite 187B, Boonton, NJ 07005-1450

Telephone: (973) 265-2300 • Fax: (973) 402-6056 • Email: info@DistributionGroup.com • Website: www.DistributionGroup.com

Distribution Center Management™ is published monthly by Alexander Communications Group, Inc., which provides news, data and information on key distribution and warehousing topics through newsletters, books and website.



© 2010 Alexander Communications Group, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Alexander Communications Group.