

#### Introduction

The ability to precisely manage inventory, monitor stock rotation and fill customer orders quickly, accurately and efficiently separates successful distribution operations from their less fortunate peers. It requires focused industry domain expertise and advanced understanding of logistics to truly ascertain how well distribution operations are performing, how they compare within the overall industry and which investments in new procedures, processes or technologies will provide the best return on investment (ROI).

AGI's logistics professionals assist our customers with a complete assessment of their operations, including in-depth process analysis; key metric performance reviews; and top-to-bottom examination of technology utilization, quality drivers, costs and organizational capabilities (with an eye towards potential changes to or growth of either the organization itself or its overall inventory).

### **Operations & Technology Assessment**

This document outlines the activities, schedule and analysis associated with AGI's Operations & Technology Assessment offering. This engagement typically lasts anywhere from five to twenty five business days at the customer site (depending on the overall complexity of the operation), with a proportional number of work days back at AGI finalizing operational analysis and deliverable preparation.

While quite helpful in scoping overall warehouse management system (WMS) needs, AGI's assessment is independent of any specific WMS technology, instead providing a comprehensive analysis of current operational metrics and the potential for future efficiency gains. A conceptual flow of both current and future state processes will be provided (along with cost metrics) and will be aligned with anticipated technology investments in order to provide a quantifiable return on investment summary. In addition, AGI will recommend improvements to the warehouse operation based on an evaluation of the data collected and any specific requests of the customer.

Over the course of AGI's Assessment our Distribution Consultants provide the following:

- Inbound & Receiving Process Assessment. We evaluate important characteristics of the receiving operations, including the following: receiving capacity and speed, quality reconciliation and tracking, systems integration and personnel.
- Put-Away Process Assessment. We assess Put-Away operations and address important issues, including the critical question as to how well are storage locations managed?
- Storage Process Assessment. We review storage procedures and highlight key storage issues. Are storage slots organized to maximize pick density and minimize pick times? Does the warehouse make appropriate use of pallet rack for bulk storage and flow rack for high-volume picking? What material handling equipment or conveyor systems are used and/or needed during storage processes?
- Restocking Process Assessment. We determine which features of the customer company's restocking processes are most critical and how effectively they are being managed. How well is execution of restocking to pick row areas conducted?
- Order Picking Process Assessment. We analyze order picking for efficiency, accuracy and effectiveness. Are inventory availability checks based on real-time data? Do slotting plans and automation minimize travel and pick times? What is the level of automation technology used (with respect to scan, voice, weight validation, sortation devices, etc.)? Does the company utilize zone, batch or wave picking techniques? Is picking primarily each-pick or case-pick? How are rush/expedited orders handled?
- **Loading Process Assessment**. We examine loading and route management processes in detail. Are routes static or dynamic, how are routes built each day. Are they optimized? How is the loading process managed for quality and speed?



- **Ancillary Processes Assessment**. We review other processes that may occur in the warehouse such as repacking and breakage management, date code rotation, SKU addition/deletion processes and route returns processing.
- Quality Assurance Process Assessment. We ascertain whether quality control is an implicit part of all warehouse operations. What are the processes for inspection of received goods? How does the company check for order completeness and accuracy? Is statistical process control practiced and, if so, with what degree of sophistication? Are there manual or technical quality checks?
- Layout Assessment. We inspect the layout of the warehouse. Do products flow continuously through the warehouse or are there stoppage points that require costly double-handling? Are receiving and shipping located such that throughput is maximized? Are forward pick area utilized and maximized for efficiency? Are lane depth and width appropriate? What percentage of storage capacity is utilized? What are the expansion options?
- Inventory Control Assessment. Quality inventory information is one of the most fundamental drivers behind a successful distribution operation. Is inventory scanned at all transaction points to ensure complete visibility of raw materials, work in process, and finished goods? Can accurate and current order status be attained easily?
- Labor Assessment. We calculate labor requirements based on statistical per unit volumes of similar beverage operations and determine if the warehouse is overstaffed, properly staffed, or understaffed. We calculate throughput potential based on current staffing. We review training procedures and materials for in-house and contracted labor. We review warehouse employee hiring trends, evaluate union involvement and informally assess employee morale.
- Facilities Assessment. The facilities are evaluated in comparison with overall operational needs. Is
  the warehouse clean and well-cared for? Is the warehouse well lit? Is there appropriate safety and
  compliance signage within the facilities? What security precautions are in place to prevent theft? Are
  heating and air conditioning systems sufficient? Are break areas comfortably designed for
  employees?
- Key Metrics Assessment. We collect various productivity statistics specific to beverage distributors such as case/unit picks per person-hour, order fill rates, order error rates and associated specific per unit costs for each metric.
- Technical Infrastructure Review. We evaluate the use of technology within the operation including current accounting, manufacturing and/or supplier systems, use of Warehouse Management System (WMS), Radio Frequency (RF), Bar Code, Electronic Data Interchange (EDI) technologies, and Automated Material Handling Equipment. How well do in-house technologies support current and future needs? Are reporting capabilities sufficient?

## **Typical Schedule of Assessment Activities**

As with any valuable review and evaluation there is significant involvement required of customer subject matter experts and key operations individuals. The following pages include a typical ten day schedule that will prove useful in effective resource planning for an assessment. Whenever possible, assessments begin on a Monday morning, but schedule starting points and successive activities can be flexible based on customer resource availability.



Typical 15 Day Assessment Agenda					
Process Name	Resources Required	Date	Time		
Monday					
Preparation - Travel	AGI		8:00 - 12:00		
Review of Overall Assessment Scope & Project Goals	Key Project Stake Holders, Distribution Center Senior Mgmt, IT Management, Business Leadership	Day 1	1:00 - 2:00		
Follow Up Review of Distribution Center -	Distribution Center		2:30 - 3:00		
Review of Key Processes	Management Distribution Center Management, Key Stakeholders				
Identification of Key Project/Solution Business Metrics & Drivers	DC Management, Business Leadership, Key Stakeholders		3:00 - 5:00		
Facility/RF Analysis	Distribution Center Management, IT				
	management, rr				
Tuesday – As Is Review					
Inbound Process Review	AGI		8:00 - 9:00		
Receiving Processes					
Receipts from Vendors		Day 2			
Unknown Receipts	Receiving Supervisor, IT		9:00 - 12:00		
Returns					
Transfers	_				
Receipt Labeling - As Is					
Put Away Processes	-				
Put Away to Stock	Put Away/Stock		4.00 4.00		
Planned Location Overview	Supervisor		1:00 - 4:00		
Staging  QA Hold Processes	-				
QA Hold Processes					
Wednesday – As Is Review					
Picking/Outbound Processes	AGI		8:00 - 9:00		
Outbound Order Types & Status					
Outbound Order Sources					
Release Planning	Distribution Center				
Order Release	Management,	Day 3	9:00 - 3:00		
Picking	Picking/Staging Supervisor				
Cancels & Changes					
Picking Management					
Follow Documentation	AGI		3:00 - 5:00		



Thursday – As Is Review			
Inventory Management			
Physical Inventory		Day 4	
Cycle Count	Inventory Control, DC		9:00 - 12:00
Repack & Hold	Management		
Adjustments	†	,	
Facility Analysis	_		
Layout Evaluation and data gathering	Operations Management		1:00 - 4:00
Friday – As Is Review			
Receiving Processes			
Receipts from Vendors, RM		Day 5	
Unknown Receipts	7		0.00 40.00
Returns	1		9:00 - 12:00
Transfers	1		
Receipt Labeling - As Is	Inbound Staff		
Put Away Processes	1		
Put Away to Stock – RM & FG	1		
Planned Location Overview	†		1:00 - 4:00
Staging			1.00
QA Hold Processes	-		
CA Hold I Tocesses			
Monday – To Be			
Integration Requirements			9:00 - 12:00
To Be Processes			
Picking/Outbound Processes	†		
Outbound Order Types & Status	AGI (offsite)	Day 6	
Outbound Order Sources		, -	1:00 - 4:00
Release Planning			
Order Release			
Order Release			
Tuesday – To Be			
Picking			
Cancels & Changes	1		
Picking Management	1		9:00 - 12:00
Staging	1		
QA Hold Processes	AGI (offsite)	Day 7	
Inventory Management	1 ' '		
Physical Inventory	1		4.00 1.00
Cycle Count	1		1:00 - 4:00
Repack & Hold	1		
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Wednesday - Friday			
Future State Process Completion and further	AGI & Customer	Dave 9, 0, 40	
analysis	Stakeholders	Days 8, 9, 10	



Monday - Wednesday			
Facility Layout Analysis	AGI (offsite)	Day 11,12,13	8:00 - 5:00
Thursday - Friday			
Metrics documentation and ROI analysis completion	AGI (offsite)	Day 14, 15	8:00 - 5:00
Document Prep and deliverable completion			



# **Customer Experiences with AGI's Assessment**

"AGI's assessment of our operation rapidly identified our areas of greatest improvement – which turned out to be our greatest areas of pain. The organized deliverables and real world metrics gave us the confidence to move forward with needed changes to our operation."

Joe Puglia

Senior Vice President, Distribution Operations Schenck Company

"The complete operational analysis and evaluation of or processes, efficiency and facility provided our company with the necessary information to move our operation forward with best practices and gain a detailed understanding of the capabilities of our staff and facility. The extremely discrete financial analysis proved invaluable in understanding the investment return that we would receive."

Thom Decoff
Chief Financial Officer
Merrimack Valley Distributors

#### Additional Information

AGI's Operations & Technology Assessment has proven quite successful for many of our customer organizations in various phases of warehouse management readiness. We pride ourselves on evaluating and presenting all relevant data points in helping our customers to make informed, WMS-independent decisions with respect to their future operational needs. If you would like additional information about AGI's Assessment services and/or any of our other solutions, please contact me AGI for more information and pricing.



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