Strategic Selection and Implementation of a Warehouse Management System (WMS)

Presented By: Mike Rader
June 30, 2011
AGENDA

- Introduction
- WMS Market
- Selecting a WMS
- Implementing a WMS
Mike Rader

• **enVista (2004 – Current)** – Partner & Vice President of Services

• **Manhattan Associates (2000-2004)** – Sr. Director of Professional Services

• **Intrepa (2000)** – VP of Professional Services

enVista Overview

Source to Consumption
Technology

- Software System Selection
- WMS, LMS, TMS Implementation
- IT Infrastructure & Management
- Web Development
AGENDA

• Introduction
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• Selecting a WMS
• Implementing a WMS
A Brief History of the WMS Market

Early 1990’s
Market Takes Off Still Totally Custom

Late 1990’s
Fairly Well-Packaged Solutions Reach Market

Mid-2000’s
More Consolidation, ERP Player Get Stronger

Late 1980’s
First Real-Time WMS’s (Custom) Emerge

Mid-1990’s
First Packaged Solutions, but still Highly Custom

Early 2000’s
Focus on “Logistics Suites”; Some Industry Consolidation

Now
Focus on Outside Four Walls
Dramatic Changes in the Market

Acquired

HighJump Software
 provia. software
 irista
 SAP
 Manhattan Associates
 RedPrairie
 catalyst
 ORACLE
 swisslog
 MOTEK
 optum
 YANTRA
 Acquired
 CADRE TECHNOLOGIES
 Retek
 Marc Global
 envista

Acquired

Acquired

Acquired
WMS Market Landscape

Source: Gartner (July 2010)
10 Lessons Learned

1. Lack of executive commitment
2. Being under prepared
3. Poor business requirement definition
4. Believing everything you are told / buying futures
5. Not managing the demo
6. Focusing on the software – not the company
7. Lack of Teamwork
8. Lack of due diligence
9. Under budgeting
10. Under negotiating
# 1 – Lack of Executive Commitment

- This is the kiss of death for systems projects
  - Steps to take:
    - Executive approval of budget / project is the most important first step to take
    - Develop a business case
    - Involve Finance, IT and Operations
    - Develop budget, ROI, cost justification and timeline
  - Executive Commitment – First & Foremost!
How to get CEO commitment

“I need 80 million dollars to develop a plan of a concept of a vision of the seed of an idea.”
# 2 – Being Under Prepared

• This is the reason why companies buy the wrong software system

• Steps to take:
  – Document and map a thorough study of your current operations
  – Business process review & improvement
  – Develop the RFP to reflect realistic needs – not the universal wish list
  – Interview your prospective vendors beforehand

• Get help if you need it – this is time consuming!
# 3 – Poor Requirements Definition

- This is why companies over-modify software
- Steps to take:
  - Establish a team of empowered “change agents”
  - Develop process flows – especially exception handling
  - **Don’t automate the bad – Consider Process Improvement First**
  - Don’t produce a Taj Mahal wish list
  - Allow vendors to visit your operations
- Invest time up front to prevent back-end scope creep!
# 4 – Believing everything you are told / buying futures

• This is why software implementations drag on forever

• Steps to take:
  – Don’t buy on relationships alone
  – Don’t believe RFP responses
  – Get everything in writing
  – Don’t buy into future releases
  – Scripted Demo - before signing

• Get what you pay for!
# 5 – Not Managing the Demo

• This is why ugly surprises happen

• Steps to take:
  – Control the agenda
  – Provide vendor with scripted demo and your data
  – Take diligent notes on all issues
  – Ask too many questions
  – Assume nothing
## Vendor Demo Score Summary

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>Points</th>
<th>Ranking</th>
<th>Vendor1</th>
<th>Vendor2</th>
<th>Vendor3</th>
<th>Vendor1</th>
<th>Vendor2</th>
<th>Vendor3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vendor1</td>
<td>Vendor2</td>
<td>Vendor3</td>
<td>Vendor1</td>
<td>Vendor2</td>
<td>Vendor3</td>
</tr>
<tr>
<td>User Interface</td>
<td>81.9%</td>
<td>85.4%</td>
<td>90.5%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing</td>
<td>84.2%</td>
<td>71.3%</td>
<td>92.6%</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picking</td>
<td>77.8%</td>
<td>87.3%</td>
<td>91.8%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>Reporting</td>
<td>82.3%</td>
<td>91.1%</td>
<td>95.3%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory Management</td>
<td>83.4%</td>
<td>88.9%</td>
<td>87.2%</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replenishment</td>
<td>98.8%</td>
<td>94.0%</td>
<td>98.6%</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Configuration</td>
<td>76.8%</td>
<td>89.9%</td>
<td>93.6%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving</td>
<td>69.7%</td>
<td>83.2%</td>
<td>92.4%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Putaway</td>
<td>66.8%</td>
<td>89.0%</td>
<td>84.2%</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>Shipping</td>
<td>73.0%</td>
<td>91.3%</td>
<td>91.5%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>Appt. Scheduling</td>
<td>47.4%</td>
<td>93.9%</td>
<td>94.1%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>76.6%</td>
<td>87.8%</td>
<td>92.0%</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 155 Total Scripts | No. of Areas Won | 1 | 2 | 8 |
# 6 – Focusing on the software – not the company

• This is why companies end up with weak partnerships

• Steps to take:
  – Study the software development methodology and release cycle
  – Study support desk logs
  – Service and support – meet your staff
  – Meet with who will actually do the implementation
  – Check for user groups, user conferences

• Choose the right partner and product!
# 7 – Lack of Teamwork

- This is how a new systems gets a bad name within the company
- Steps to take:
  - Include Sales, Procurement, Finance, Merchandising for political buy-in
  - Inclusion in decision process creates a sense of ownership among the team
  - Allow all areas of the company to have a voice during the selection process reduces the change management effort during implementation
Involvement promotes ownership

A WMS affects all areas of an Organization

- Inventory Control
- Customer Service
- Finance/Costing
- Information Systems
- Human Resources
- Industrial Engineering
- Operations
- Facility/Infrastructure
# 8 – Lack of due diligence

- This is why companies end up with a legacy system
- Steps to take:
  - Investigate open litigation
  - Recognize site visits can be loaded
  - Reference calls – many, detailed and prepared
  - Request detailed company financials
  - Study the revenue breakdown
  - Evaluate head count distribution
  - Visit head office – meet executive team
- Take no chances!
# 9 – Under Budgeting

- This is why software projects are shelved or delayed

**Steps to take:**
- Expect the services budget to be 1.5 times the software costs
- Study supplier’s revenue ratio services: license fees
- Carefully review service contract proposals
  - Roles & Responsibilities
- Don’t underestimate the internal effort required
- Be overly conservative by a long shot!
The Typical Systems Project

“I’m pleased to report that our project is ahead of schedule and under budget... not bad for the first hour!”

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# 10 – Under Negotiating

• This is why we overspend on software projects

• Steps to take:
  • Everything is negotiable – license fees, services rates, custom enhancements, support costs, warranty, down-payment, etc.
  • You are only in a position of power prior to contract signing
  • Research quarter-end or year-end milestones to increase your leverage
  • Minimize your up-front skin in the game in case you have to back out (e.g. down-payment)

• WMS contracts must have some element of “win-win”
  • You should want your WMS vendor to be profitable on your project
**Supply Chain ROI Spectrum**

<table>
<thead>
<tr>
<th>Good Payback Timeline</th>
<th>Warm</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 Months</td>
<td></td>
<td></td>
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<tr>
<td>30 Months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36+ Months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **LMS w/ WMS (6.6 months)**
- **LMS Only (15 months)**
- **WMS Only (20 months)**
- **Customer IT WMS (25 months)**

**Median Payback of Supply Chain Projects = 18 months**

- **Project Could be Supported, especially if there is industry and/or customer drivers forcing change**
- **ROI does not support project – look at low cost alternatives and improvements vs. technology investment**

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Consultants or Go It Alone?
Outside Consultants *When* ….

- Required by the Executive Group
- Need “outside” experience and vision
  - Team is too close to past personal or team accomplishments
  - Can’t look outside “the way it’s always been done”
  - Synchronized Distribution (Material Flow and enabling technology)
- Small Team w/o the bandwidth to manage all or any of the steps in the selection project schedule
Outside Consultants *When* ….

- Consultants do bring a methodology and process and will keep you focused = shorter selection process
- A good consultant understands the marketplace and can provide value during your negotiations
- A good consultant should be a coach and facilitator…. But YOU need to OWN and MANAGE the project!
- Be careful of consultants who are 3rd Party integrators…. Biased towards their bench of resources or vendor partner affiliations
The Solution
World-Class Transformation-Based Technology Evaluation Methodology

Requirements Planning
- Project Planning
- Document Current Processes
- Define Technical Requirements

System Evaluation
- Develop RFP
- Operational Scenarios
- Reference Check Prep
- Bidder Walk Thrus
- Scripted Demos

System Selection
- Vendor Evaluation Summary
- TCO Analysis
- Select Finalists
- Reference Checks
- Negotiations

Project Management
Typical Software Selection Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Planning</td>
<td>2-8</td>
</tr>
<tr>
<td>System Evaluation</td>
<td>4</td>
</tr>
<tr>
<td>System Selection</td>
<td>6-10</td>
</tr>
<tr>
<td>Project Management</td>
<td>8-12</td>
</tr>
</tbody>
</table>
AGENDA

• Introduction
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• Implementing a WMS
Keys to Success

1. Operations Owns the Project
2. Get Commitment from All Levels
3. Build a Trusting Relationship with Your Vendor
4. Set Clear, Correct Expectations
5. Utilize a Proven Methodology
6. Build a “Solution” Design
7. You Can’t Test Enough
8. Training Makes it Work
#1 - Operations Owns the Project

- No one knows the business better and what the requirements are.
  - Operations should be directly involved in how the system will be configured and used.
- Conduct the user acceptance testing
- Lead the end user training efforts
- Understanding how and why the WMS works gives operations the ability to react quicker once it’s live
#2 - Get Commitment from All Levels

- Buy in is required from all levels.
  - Executive management must put forth the commitment from the beginning to show the rest of the organization the way.
  - Middle management in Operations must own the project.
    - It’s an operations project. Not IT. This system must work for Operations. IT supports.
  - Own your system – not the Vendor or the 3PI
  - Seek suggestions from your User Community
    - This let’s them have a say in the process and gives them some ownership.
    - This helps you get buy-in from this level.
Users are in Charge

• People are the most important part of a WMS
  – The WMS can be the most sophisticated system ever written. But if the people using it don’t buy in, it will never work.
  – The WMS WILL FAIL IF PEOPLE DON’T BELIEVE IN IT AND USE IT.
  – It’s very simple for users to sabotage the entire implementation.
#3 - Build a Trusting Relationship with your Vendor and Integrator

• Know the new functionality coming out
  – Statement of Direction
  – Whitepapers
  – Release Notes

• Network with other users of that WMS

• Attend the vendor’s user conference

• The relationship should be a win-win

• Trust is an important factor to the success of the project
#4 – Set Clear, Realistic Expectations

“What to Expect when Expecting a WMS”
#5 – Utilize a Proven Methodology

<table>
<thead>
<tr>
<th><strong>enAble Methodology</strong></th>
<th><strong>Implementation Services</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assess</strong></td>
<td></td>
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<tr>
<td>Project Planning</td>
<td></td>
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<tr>
<td>Baseline Education</td>
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<tr>
<td>Requirements Definition</td>
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<tr>
<td>CRP Planning</td>
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<tr>
<td>Conference Room Pilot</td>
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<tr>
<td><strong>Build</strong></td>
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<tr>
<td>Functional Design</td>
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<tr>
<td>Interface Requirements</td>
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<tr>
<td>Advanced Education</td>
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<tr>
<td>Implementation Planning</td>
<td></td>
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<tr>
<td>Configure</td>
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<tr>
<td>Technical Development</td>
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<tr>
<td>Hardware Requirements</td>
<td></td>
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<tr>
<td>Report Development</td>
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<tr>
<td><strong>Learn</strong></td>
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<tr>
<td>UAT Planning</td>
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<tr>
<td>Hardware Installation</td>
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<tr>
<td>Integration Test Prep</td>
<td></td>
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<tr>
<td>Integration Testing</td>
<td></td>
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<tr>
<td>Training Development</td>
<td></td>
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<tr>
<td>User Acceptance Testing</td>
<td></td>
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<tr>
<td>User Training</td>
<td></td>
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<tr>
<td><strong>Execute</strong></td>
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<tr>
<td>Conversion Planning</td>
<td></td>
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<tr>
<td>FAT Planning</td>
<td></td>
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<tr>
<td>Facility Prep</td>
<td></td>
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<tr>
<td>Field Acceptance Testing</td>
<td></td>
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<tr>
<td>Physical Inventory &amp; Cutover</td>
<td></td>
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<tr>
<td>Go-Live Support</td>
<td></td>
</tr>
</tbody>
</table>

PROJECT MANAGEMENT

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#6 – Build a “Solution”

- Consider all parts of the process when designing the solution
  - Invite the WMS to the IE table
  - Consider the WMS abilities when designing the facility
  - Most WMS’s have key functions for warehouse automation
  - If WMS not considered in facility design and MHE design, WMS modifications could go up

- Define good processes
  - A WMS will only help bad processes go faster. It will not fix bad processes
  - Most likely, a WMS will uncover bad processes when it’s first turned on.
Teamwork

“Let’s make sure we’re all pulling in the same direction”.

WMS Vendor
Operations
Consultant
Material Handling Vendor
Union
Information Technology
Steering Committee
#7 - You Can’t Test Enough

• 360° testing is key
  – ERP -> WMS -> MHE and back

• User Acceptance testing
  – Key users must validate the system against original design

• Stress Testing
  – Simulation and repeatable tests

• Field Acceptance Testing, “Does it really work”
  – Test the physical processes
  – Eliminate go live surprises
#8 – Training Makes it Work

• Train the supervisors to be trainers and trouble shooters on the floor
  – Involve them in the config and training of why the WMS does what it does.
  – This will allow them to resolve issues much quicker if they know why the WMS is doing what it’s doing.
  – Provide a forum for open communication back to the config team so the supervisors can suggest improvements to the WMS.
Final thoughts - Takeaways

• The WMS is not the answer to everything
  – It’s one piece of the puzzle

• People, People, People
  – No matter how good the system is – if the people using it don’t buy-in and trust it, it will fail.

• KISS (Keep It Simple Stupid)
  – Your goal shouldn’t be to have the fanciest warehouse.
  – Your goal should be to have the most efficient warehouse.
Thank You!

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