

FIND WHAT'S NEXT. About Macmillan



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About the Project



Operational Assessment

- Contracted BHS Strategy in 2013
- Evaluate current methods & procedures through floor-level observations
- Analyze historical operational data
- Conduct executive to floor-level interviews to understand business requirements
- Focus on Best Practices as defined through experience and Industrial Engineering principles
- Develop recommendations document to compare/contrast current practices to recommended best practices





Existing Configuration

- 3 Level Split Case Picking Module
 - 30,000 Split Case Picking Locations
- Zone Routing On Each Level
- Separate Area for New Releases
- Separate Area for Built to Order Kitting Process
- Special Handling Area
- Cube Utilization Within Storage Area
- WCS and Pick To Voice System
- Reserve Racking With Full Pallet/Half Pallet/Hand Stack Locations





About the Project



Proposed New Configuration

- Extensive Data Analysis
- Project Implementation Within Existing Operation
- Modify all (3) Pick Module Levels/Mediums to Execute Best Practice Recommendations
- Increase pick module to 50,000 Split Case Picking Locations
- Relocate New Releases within Pick Module
- Relocate Kitting area/Special Handling Next to Pick Module
- Build New "On the Fly" Kitting Process
- Improve Cube Utilization within Storage area
- Combine Multiple Operations/Facilities Within One Distribution Center







Did you know that...?

... 30% of warehouses are considered "efficient"

Why...?

- ... do 30% of implementations fail
- ... are 42% of implementations over budget?
- ... are 56% of implementations late in "Going Live"





FIND WHAT'S It's likely due to LACK of



... commitment from upper management

... knowledge

... experience

... a dedicated team

... testing

... training

... clear direction

... a detailed plan to get there





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NEXT.

The BEGINNING



14 PS





FIND WHAT'S The "4 Ps" of ENABLING P NEXT. IMPROVEMENT

- McCormick Place South | Chicago March 23-26, 2015 promatshow.com
 - wered by 🎇 MHI
- Priorities Why are we doing this? Answer should be a compelling one
- Processes Document Current State..., but IMPLEMENT Best Practices
- Physical Support new process with the right Equipment & Technology
- Personnel Define **NEW Roles** that Support Change





The To-Do List





- Provides a starting point
- Identifies unique requirements
- 2. Define <u>Future</u> State
 - Best Practices
 - Define new "day-in-the-life"
 - Don't let WMS capabilities limit you
- 3. Determine GAPS
 - Is filling them worth it?
 - Justify modifications









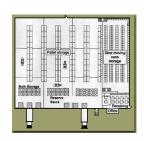
The To-Do List



4. How much do we bite off?



- 5. Finalize Layout
 - Determine location naming / numbering
 - Define zones (storage, picking, etc.)



6. Configure the system (rule sets, etc.)









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The To-Do List



7. TEST... TEST... EVERYTHING!



8. Train Everyone

- Super Users...THROUGHOUT
- Everyone else... <u>Just</u> prior to go-live



9. Follow-up

- Did we meet exceed expectations?
- Measurable success Saved \$\$\$, improved customer experience, improved safety, improved throughput, etc.







The Outcome



- Increased Split Case Picking Capacity by 67% while shrinking footprint of split case area by 15%
- Increase Reserve Storage capacity by 4%
- Created Kit on the Fly Assembly Process
- Implemented Without Loss in Service And Within Same Operational Footprint By Commissioning Level Modifications Zone by Zone
- Added New Automation And Modified Existing To Facilitate Operational Changes And New Zone Routing
- Moved All Processing To a Centrally Located Area Next To Pick Module
- Reinforced Ceiling To Hang New Automation To Keep Drive Through Areas Clean And Increase Floor Staging Locations
- Upgraded WCS and Voice Pick Software For Additional Operational Efficiency Gains
- Repaired Existing Damaged Uprights During Process To Facilitate Safety Best Practices
- Liquidate Remaining Materials To Create Additional Project Savings/ROI

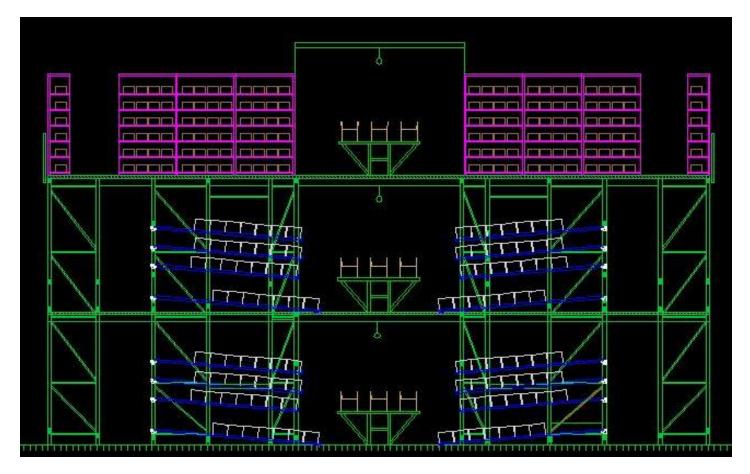




FIND WHAT'S I V Q N V E R P Layout I ANEXT. A P U L W E S W D R W



Existing Pick Levels



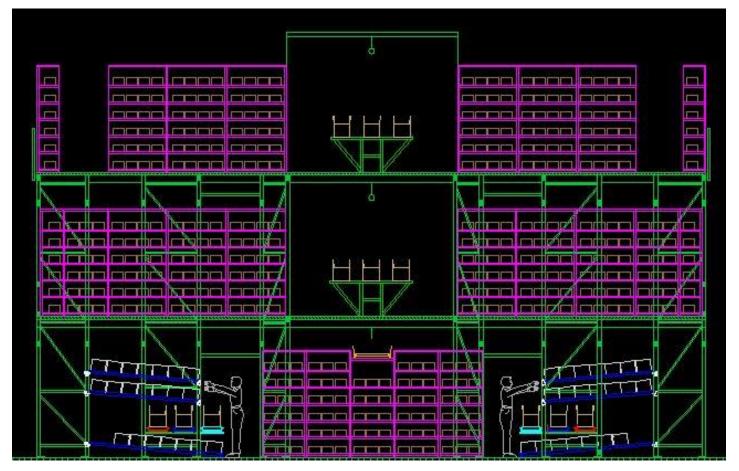




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New Pick Levels







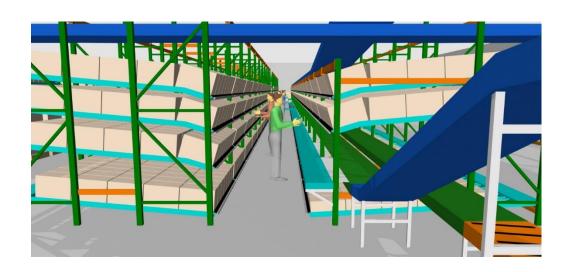
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Split Case Picking









FIND WHAT'S Reserve Storage



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- Remove Wood Pallets
 - Utilize wire mesh





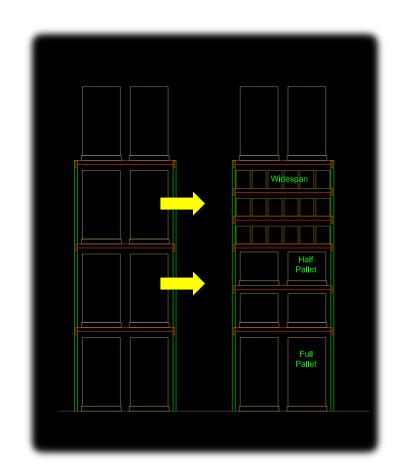




FIND WHAT'S NEXT. Reserve Storage



- Reorganize storage equipment
- Add Half-Pallet and wide span Locations
 - Increase cube utilization
 - Ensures every item has a location
 - Increase available empty locations due to improved cube utilization
 - Can be implemented in any / all aisles throughout Warehouse







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- 1. 15% 30% FTE savings overall
- 2. Results of *improvements*
 - Improved Location-level inventory accuracy
 - Improved throughput
 - Improved control
- 3. Improved responsiveness
 - To internal & external customers
- 4. Improved planning



5. Less reliance on tribal knowledge

















- Projectcreated awareness to MPS to opportunities
 - Not all have been considered / implemented
- Changed the attitude of the MPS team
 - What once was thought of as "too big" can be achieved
 - Break down any issue into smaller bites / initiatives
- Introduced the power of "compounded" thinking
 - One idea builds on another if everyone is aligned
- Created a mindset of creativity and appropriate risk taking









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