## Monarch Fx Alliance

## MonarchFx Material Handling Implementation and Maintenance

Our focus is to design, implement, and support complex DC/FC automation and robotics systems. MonarchFx uses the "Best-in-Class" Material Handling Equipment (MHE), enabling technologies and a full featured warehouse execution system to fully meet the MonarchFx members' operating needs.

We have a well defined implementation approach that delivers a fully integrated material handling system tailored to MonarchFx members' business and operational needs.

- MonarchFx implements superior, unbiased designs using "Best-in-Class" automation from leading material handling equipment and robotics manufacturers. Our implementation provides a best fit automated material handling system solution, customized to provide flexibility needed to adapt to the changing business environment.
- Implementations are ideally suited for a 3PL-operated multi-client DC/FC. Inventory can be segregated by a client or co-mingled depending on the needs of each MonarchFx member.
- MonarchFx uses proven material handling integration methodologies to reduce costs, improve speed to market, reduce risk, and improve system support and maintainability.
- MonarchFx is a total system integrator and takes full accountability for the overall success of implementation, from detailed planning through the life cycle system support.

The heart and brains of an automated material handling system is the Warehouse Execution System (WES). Tompkins International provides services in support of the MonarchEx Alliance through a developed and implemented industry leading WES, Tompkins Execution System (TES). TES provides a sophisticated single point of interface between the Warehouse Management System (WMS) and MHE. TES has the capability to control the flow of work to and within the DC/FC and control all automated MHE in the facility. The use of TES provides MonarchEx members the capability and flexibility to use a variety of DC/FC automation systems in a solution independent of an equipment manufacturer.

- Some of the features of TES include:
  - Single point of interface between the WMS and MHE.
  - MHE control independent of MHE manufacturer.
  - Rich set of standard management reports accessed via web browser.
  - Automated alert system to include fault and status events added to a server database.









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- Fully functional Graphical User Interface (GUI) that enables the user to visually determine system status and take action to correct exception conditions.
- Detailed system logging enables remote system trouble shooting and issue resolution.
- Ability to create customized applications to solve specific business requirements such as: an enterprise application integration, wave release, work flow management, product sequencing, and machine controlled packaging and assembly-line.

Tompkins International has an 11,000 ft<sup>2</sup>, \$7 million Emerging Technology Center (ETC) that enables testing solutions in a controlled environment before implementing. This shortens the development and implementation time and reduces risk. Some of the uses of the ETC include:

- <u>Demonstration Center</u> Allows members to visualize how solutions work before going live.
- Integration and Testing Lab An off-site evaluation center allowing for proof-of-concept while maintaining the integrity of ongoing operations. Critical for minimizing implementation risk.
- <u>Technology Evaluation Center (TEC)</u> The TEC provides access to "Best-in-Class" technology for unbiased application comparison.
- <u>Training Facility</u> A live, hands-on environment for realistic operations and maintenance instruction, including > 2,500 ft<sup>2</sup> of meeting rooms and training facilities.
- <u>Technical Support Center "Help Desk"</u> Technicians have access to the exact equipment deployed at various sites to expedite troubleshooting.

Tompkins International is an industry leader in providing integrated DC/FC automation and robotics system design and implementation across many industries.







