VARGO™

Considerations in Evaluating a Batch Fulfillment System

As specific business needs dictate, the following requirements should be considered when evaluating a batch pick system. The batch pick system should:

- Either increase picking productivity and reduce the overall operational labor OR increase operational capacity and possibly eliminate facility expansion
- Provide user (selector) interfaces that are simple, easy to read, visible for all work positions and free the use of selectors hands as much as possible
- Satisfy order accuracy requirements
- Provide physical compatibility of carts, modules and stations within aisles and the overall facility
- Provide seamless integration of carts, modules and stations of multiple types
- Allow highly efficiently handling of normal job processing as well as exceptions
- Provide a simple means of allowing customized pick exceptions
- Support multiple picking strategies (pick and pass, bucket brigades, gather and pack, etc.
- Minimize release and setup time for complete & new orders
- Organize work to minimize transit time
- Allow selectors to re-locate and change direction of their assigned work
- Allow efficient transfer of containers between locations
- Adapt, in real time, to operational variances and user modified conditions
- Allow simple inclusion of new storage locations and deletion of existing locations
- Allow simple organization of the pick path sequence suggested by the system
- Minimize disruption of existing operations during installation

- Minimize modifications required to existing software system

In addition to the above stated requirements, the following system features are also worth considering:

- Number of and ergonomic suitability of batch pick cells
- "Next start" order optimization
- Efficiency in utilization of pick cells, allow staging to avoid wasting
- Battery life
- Multiple validation options for the picked item:
  - No validation
  - Scan storage location
  - Scan item UPC
  - Scan storage location or item UPC
  - Scan storage location and item UPC
  - Full visual validation
- Multiple validation options the correct order to pick:
  - No validation
  - Scan cell
  - Scan container
  - Scan cell or container
  - Scan cell and container
- Voice assisted picking
- Put lights options
  - Single light per cell
  - Put lights – numerical display per cell
  - Put lights with one confirmation button per vehicle
  - Put lights with one confirmation button per cell
- Automatic drawers with push/pull mechanisms
- Zone inventory managed by:
  - Host computer
  - Batch pick system

- Cartonization:
  - Host cartonized (system has to allow selectors to split cartons in case of cartonization error)
  - Selector cartonized
- Vehicles
  - Push cart
  - Self-propelled cart
  - Cherry picker vehicle (flat rack and carousel rack)
- Storage locations
  - Fixed and non-fixed SKUs
  - Single and multiple SKUs per location
  - Single and multiple locations per SKU
- Multi-zone operations
- Video camera to help selector "see" what is in front of the cart
- Internal phone system / PBX connection to workstations
- Shortest path information to reach the next location from any place
- Pick-Through-Zero for "opportunistic" cycle count

- Weight validation

Smart Cart Vendors

SOFT™ supports all the listed features for batch pick systems and can implement any additional features that the customer may require for their specific application.

Vendors:

- Vargo Adaptive Software: www.VARGOcompanies.com
- AL Systems: www.alsysinc.com
- Able Storage Systems: www.ablestorage.com.au
- Daifuku: www.skdaifuku.com
- Data Control Systems: www.datacontrol.com
- Innovative Picking Technologies: www.ipti.net
- Knapp: www.knapp.com
- Lightning Pick: www.lightningpick.com
- Rapistan: www.rapistan.com
- Real Time Solutions: www.fkilogistex.com/realtime