

## Manufacturing Efficiency for Dynamics AX — Automatic Data Collection

### Dynamics AX Connector:

#### Download Data from Dynamics AX — Upload Results to Dynamics AX

The Dynamics AX Connector is an integrated module of MERLIN Server. The utility supports a bi-synchronous import and export of work orders and respective operational information to Microsoft's Dynamic AX 2012 and to/from machines on the shop floor.

#### Benefits:

- Accurate shop floor data, automatically.
- Eliminate data entry or scanning delays, real-time.
- Minimize errors found in manual input systems.
- Improve inventory accuracy, auto part counts.
- Provide accurate job costing data.

#### The Dynamics AX Connector:

- Communicates with Dynamics AX in real-time
- Prioritizes and queues transactions by date / time stamp automatically.
- Performs automatic data integrity tests on the data received within the Dynamics AX generated files.
- Outputs actual operational data collected against the work order upon completion.

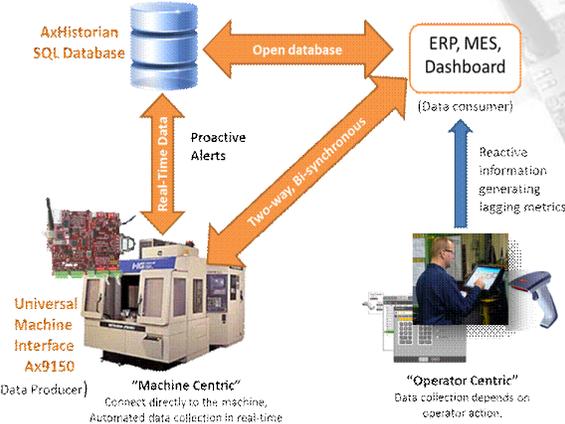
#### Additional Features:

- Product Standards loaded from Dynamics AX to MERLIN automatically
- Shift Schedule downloaded from Dynamics AX, by machine
- Work Orders scheduled by machine from Dynamics AX
- Operator list automatically generated
- Auto Count good & rejected parts with root cause
- Reject Reason and Down Time Reason counts collected
- Work order run-Now functionality to run machine work order immediately
- Integrations to shop floor Dynamics AX transaction terminals
- Native SQL and other files supported

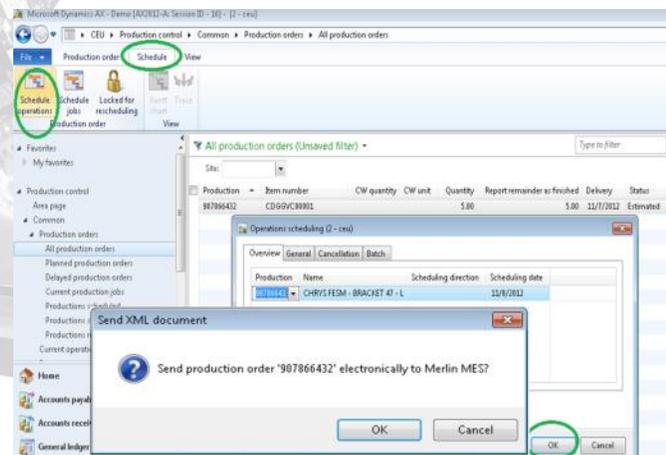


#### "Automated Approach"

#### "Traditional Approach"



Once the Dynamics AX system creates a production order, it's a simple process to access work orders, routings, jobs or Kanban cards. The Operator selects/scans the job to be run from a list on the hand held, (HMI, Tablet or traveler) and runs the job. Or, a user can queue a job through the MERLIN Job Queue for a specific machine.



The advanced functionality in MERLIN allows work order information to flow seamlessly from Microsoft Dynamics AX 2012 through MERLIN Manufacturing Execution System to the machine on the shop floor and relate actual productivity to Dynamics AX back, an electronic traveler, delivering a paperless shop floor. The benefits of plant-wide visibility mean proactive response, less downtime, improved production scheduling and quality, as well as more extensive data analysis and reporting capabilities, often translating into a 10%-50% increase in efficiency.

## Manufacturing Execution Real-time Lean Information Network

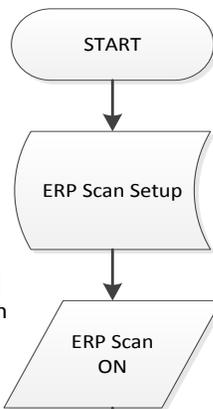
MERLIN is a Manufacturing Operations Management System for the communication and execution of production, **Connecting the Shop Floor to Top Floor.**

# MERLIN Dynamics AX Connector Import Flowchart

**NOTE A :**

This ERP Import Flowchart forms a part of the Memex ERP Connector. For specific file structures, schema, details, etc. please refer to the latest version of Memex's DAT file generator, available upon request.

File example **MRP2JQ- ddmmyyhhmmss - xxxxxxxxxxx . DAT**  
**[Filename]- [ Time Stamp (ts) ] - [Transaction ID(tid)]. [ext.]**  
 Where ddmmyyhhmmss is the timestamp, and xxxxxxxxxxx is a unique transaction number incremented for each single file or set of files received.



Configure Scan "Source" Directory in AxERP import utility located in AxConfig. Set target destination directory that DAT files are to be sent to, once imported..

Turn on AxERP Scan utility. Application maintains a "Wait" state until DAT files are received.

Waiting for DAT files. DAT files arrive and the Data integrity is checked.(DAT files refer to comma separated flat files with a predefined structure. (See Note A )

Move corrupted files to the "Unprocessed" directory, log action, return to the "wait state".



Load Master queue with time stamped files. This ensures that all files are prioritized, and consumed in order received.

Single Files or set of three (3) files. Single files (subcomponent of a 3 file set only) are prefixed with an "S". If the files are a set they will all have the same time stamp and unique transaction number.

Update job queue and product standard tables with data received by machine. Process new job selected and setup Ax9150/Ax2000 to track data against newly selected job.

Log results to file, move source files to "Debug" directory

