JITS

HELM APPS — INDUSTRIAL SOFTWARE

Just In Time & Sequencing

Driving Your Production Line

Most ERP systems do not provide any functionality to drive the shop floor operations, leaving an increasing gap in the IT application stack.

Our Shop Floor Management System is designed to fill the gap between SCADA process control systems and ERP systems.

Our software systems can help you achieve operational excellence on the shop floor.

JIT Sequencing allows manufacturing plants to achieve operational excellence, reduce wastage and increase savings. The typical ROI of an implementation is in weeks rather than months or years.

JITS Highlights

DEMAND RECEIVING & PROCESSING

- Enables operation of modern day pull based supply chain that produces and ships based on firm demand.
- Allows for reduced finished good inventory across the whole supply chain resulting in savings across multiple fronts.

PRODUCTION SCHEDULING

- Easily do detailed production scheduling using lean manufacturing principles and execute to the schedule with 100% accuracy.
- Track schedule attainment in real time.

SERIALIZATION & LABELLING

- Ensure 100% compliance with customer/statutory labelling requirements

LINE SIDE INVENTORY

- Ensure smooth flow of materials between your raw material warehouses and line side.
- Maintain accurate inventory with real time updates from the shop floor to your ERP system.

PACKAGING & SHIPPING

- Produce accurate shipping paper work, Labels, ASN
- Pack and ship products with 100% accuracy

MONITORING

- Monitor your manufacturing operations in real time with alerts, alarms and dash boards

ERP INTEGRATION

- Integrate and exchange data with specialized Industry 4.0 systems using industry standards.
- Electronically integrate the shop floor with customers to receive and respond to demand quickly.

TRACE DATA & GENEALOGY

Trace your product component history back to the source.

JITS

- An ERP agnostic stand alone shop floor system
- A flexible and configurable solution for many business scenarios
- An Open Systems Architecture based
- application for enhancements and integration

Proven

Our systems are in use in **50+ factories** across the globe, part of world class production lines.

We have an extremely strong, proven track record with Tier 1 Automotive components suppliers who supply on a JIT basis using a multitude of JIT practices such as sequence supply, Kanban, Pickup Sheets etc.

You will find full technical details of our solution in this brochure and our sales team is available for all your questions

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Shop Floor System

**One System
Many Business Scenarios**

Supply Chain Scenarios

Customer Ordering Scenarios

Packaging & Shipping Scenarios

Production Scheduling Scenarios

Lineside Replenishment Scenarios

Manufacturing Execution Scenarios

Ready To Transform Your Factory With Our Expertise?

Demand Receiving & Processing

Enabling Pull-Based Supply Chain

The essence of Lean is to **produce only what is required.**

JIT Sequencing order receivers enable your factory to be directly connected to customers and partners in order to be able to receive a variety of information such as :

- Firm orders with required engineering data
- Current Inventory levels
- Production rates

This enables the operation of a modern day pull based supply chain that produces and ships based on firm demand.

It allows for reduced finished good inventory across the whole supply chain resulting in savings across multiple fronts.

The information can be received via a variety of methods such as:

- Traditional EDI
- Socket based communications
- Web Service based Interfaces

A fully flexible rules based engine.

Demand Processing is a flexible, configurable engine that coverts data received by the receiver into actionable information such as work orders, shipping orders and in some cases information that is displayed on real time dash boards.

Data can be received and processed from multiple external systems at the same time. When receiving order data, it is important to validate the data to make sure that it is correct and that it does not cause disruptions anywhere inside the supply chain. The demand processor does these validations and alerts users to wrong data or setup issues.

Customer input validated, translated by Demand Processing module.

The demand processor is a rules based engine which means that it can be configured for different scenarios based on customers, product groups etc.

In a typical manufacturing environment the demand receiving and processing module can deliver the following benefits:

- Provide real time insight into what the demand is.
- Automate mundane manual tasks such as Order Entry / Order modifications.
- Validate the order data for errors / wrong system setup / engineering data errors. This can avoid costly down-time on the factory floor.

Production Scheduling

A fully flexible rules based engine.

Detailed scheduling is one of the key elements to the practice of lean manufacturing. Each work centre should be level loaded, should not over produce and should keep downstream operations adequately supplied.

In a demand driven, lean manufacturing environment, detailed scheduling logic is unique by product group, work centre and customer. The production scheduling module in JIT Sequencing is a rules based engine that is designed to allow for creating a library of scheduling methodologies that can be applied as required.

The module can take into account build complexity, cycle times, customer coverage, inventory positions as parameters. Scheduling can be completely automatic with minimum intervention from the team to handle exceptions. It can also be a manual process where a master scheduler reviews and approves a schedule as needed.

Scheduling is fully integrated to other modules such as demand processing and replenishment.

CHAMPION OF THE PRODUCTION LINE

- Reduce manual work with Excel sheets etc. that is needed for production scheduling.
- Make the scheduling process more reactive to changes in demand, down times etc.
- Seamlessly and automatically communicate with other functional areas such as sub assembly production, line side replenishment etc.
- Seamlessly pass the schedule and changes there of to the MES module for execution.
- Track schedule conformance and attainment.

Scheduling Cockpits

Scheduling cockpits provide the master scheduler(s) a pilot view of plant operations and allow the master scheduler(s) to intervene as necessary.

Scheduling cockpits are designed to bring to a single point all the key information that is required for the master scheduler. This means that this view/function in the screen gives the master scheduler a view of the demand, production & shipping operations.

Scheduling cockpits play a vital role in JIT manufacturing environments where lead time from order to delivery is in hours.

Our scheduling module can help you to:

- Reduce manual work with Excel sheets
- Make the scheduling process more reactive to changes in demand, down times etc.
- Seamlessly and automatically communicate with other functional areas such as sub assembly production, line side replenishment etc.
- Seamlessly pass the schedule and changes there of to the MES module for execution
- Track schedule conformance and attainment.

Serialization & Labelling

Serialization

Serialization is the key to tracking and tracing the production.

Without proper IT systems, effective track and trace is almost impossible. In many businesses this is mandated by law.

The serialization module in JIT sequencing uniquely identifies production units with serial numbers or license plates, enabling trace data collection and storage. It is highly configurable to meet diverse requirements from customers and government agencies.

Labelling

- Accurate barcoded labels are key to a smooth supply chain without which it is impossible to function. The labelling module in this system is a configurable and can be setup to print any required label format.
- The labels can be individual part labels for production tracking and tracing, shipping labels, container/pallet labels etc.
- The module also supports working with RFID's instead of paper labels

Advantages

- Setup any number of label formats of any sizes as required
- Print labels on a variety of printer hardware that is commonly available in the market including common office printers

Lineside Inventory

Line Side Replenishment

Line Side Replenishment is about bringing the correct raw material components to the production line side at the correct time.

The replenishment module is integrated to the scheduling module and enables for raw material picking and delivery operations to be orchestrated perfectly in synch with the manufacturing operations.

The replenishment module is designed to allow for as many number of picking operations and for delivery to as many line side locations.

The replenishment module can pass data to external warehousing systems, pick to light systems etc. where required.

Advantages

- Ensure a smooth flow of goods between warehouses and line side.
- Avoid wastage of shop floor space with excess inventory.
- Reduce labor in replenishment operations.
- Avoid repair/rework/down time by ensuring that correct components are used.
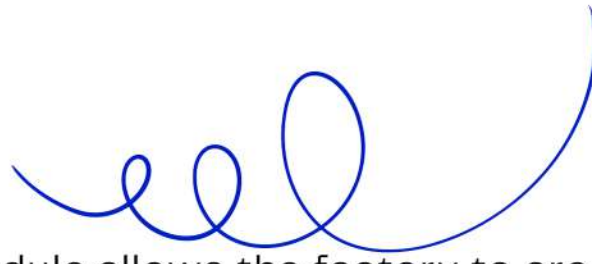
JIT Replenishment

The JIT Replenishment module allows the factory to create a seamless connection between the production line(s) and suppliers.

When the production schedule module has calculated the production mix, the JIT replenishment module calculates pickup sheets.

This module allows you to send pickup sheets to suppliers that match the production plan with drop zones and exact required times.

Material can be off-loaded directly from the trailers to the lineside for consumption.

The JIT Replenishment module ensures that the right components are ordered with the correct packaging and shipping instructions so material is off-loaded from the trailers in the exact order they are required.

The process is designed to keep the raw material orders in perfect sync with the production schedule.

Unique Benefits

- Reduce material handling by moving
- material directly from the receiving dock to the production line side.
- Reduce warehouse space.
- React to changes in customer demand and production schedules.
- Automate receiving tasks by integrating receiving and inspection activities with the production activities.
- Maintain accurate traceability of component usages against the supplier batch numbers.

Packaging and Shipping

The JIT Sequencing packaging module is designed to achieve the following:

- Ensure that each order or shipment is correctly fulfilled with the correct product(s) and accessories.
- The packaging and shipping module ensures that all products packed have passed all the relevant quality checks and is a good finished item. The list of checks are completely configurable by customer, market etc.
- Print the correct packaging and shipping labels in accordance with customer and statutory regulations.
- Use hand held scanners / RFID devices to error proof the outbound logistic operations.
- The shipping module ensures that right material is loaded to the trucks in the most optimum way to maximize truck utilization, aid easy loading / unloading of material.
- Electronically communicate / notify customers with Advanced Shipping Notices etc.

Unique Benefits

- Avoid expensive product returns due to bad products being shipped or incomplete orders.
- Maintain accurate traceability of products shipped.
- Maintain an outstanding supplier rating with customers.
- Maximize use of trucks with Milk Runs / Multiple drop offs.
- Automate and error proof Outbound Logistic Operations.

ERP Integration
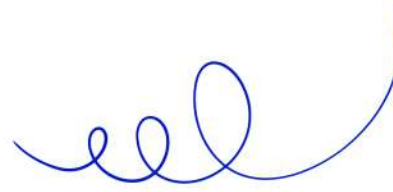
Keeping the main ERP system updated is extremely important. We have designed an ERP integration module into JIT Sequencing that allows for seamless near real time exchange of information between the MOM system and the ERP system.

- The JIT Sequencing system can integrate to external ERP systems such as QAD, SAP, Infor, Oracle, Microsoft Dynamics using a standard set of interfaces
- Typically information exchanged can be all types of master data such as Customer data, Item master data, Bill of Material data etc.
- The JIT Sequencing system can also transact with the ERP system to report production transaction, shipping transactions, down load order data etc.
- Integration is designed to be robust, fault tolerant and near real time. Typically data exchange between the systems are done in a matter of seconds with automatic fault checking and reconciliation.
- The ERP integration module is configurable making it possible for the system to be adjusted easily for any kind of data payload that comes from or goes to the ERP system.

Advantages

- Maintain near real time data in your ERP system with continuous updates from the shop floor system.
- Avoid duplication of effort in setup of master data by synchronizing data from the ERP system to other.
- Avoid costly down time in production due to missing or bad master data setup.
- Maintain a single version of truth in terms of transactional data such as inventory position, order fulfilment etc.
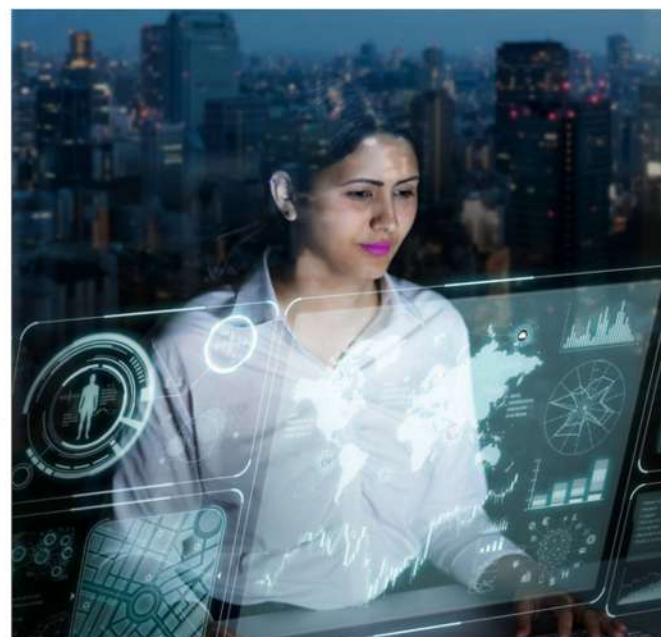
Trace Data & Genealogy
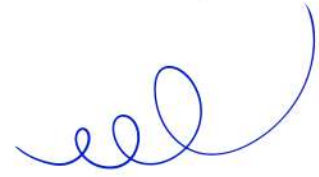
Maintaining accurate trace data for each finished item shipped is important. This means marrying the trace data collected in the MES / SCADA systems to the order data. The trace data and genealogy module in JIT Sequencing is design to do exactly that.

The module communicates through a standard set of interfaces with external MES/SCADA system(s) to collect the trace data and marry it with the product label serial and/or the customer order information.

As a manufacturer you can be rest assured that you have the most accurate trace data for any product produced.

Advantages

- Protect your business with accurate trace data and be ready to handle any eventuality in terms of claims / call backs.
- Handle warranty claims with confidence and apportion responsibility to component suppliers.
- Be compliant with customer and statutory regulations for traceability.

Customer Service

All **JIT Sequencing installations are actively monitored round the clock by a dedicated support team** so that any issues are caught and rectified even before the plant operations teams know about it.

Innovation

Our engineers utilize **emerging technologies and tools** to develop practical and cost-effective solutions for real-world problems in global manufacturing.

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