

just-in-time just-in-sequence solution at a glance

“Off-the-shelf” solution to manage complete information flows

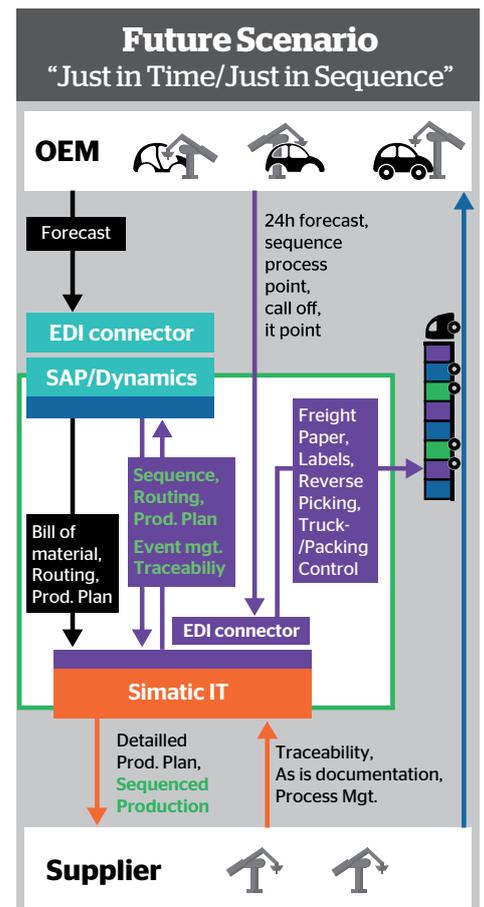
Today's vehicle manufacturers (OEMs) are under enormous pressure arising from both competition and complexity of operations. One way to deal with these challenges is to outsource value creation to first-tier suppliers. Those in return are more and more required to assume the responsibility for producing higher numbers of variants and transform themselves from a single-part supplier into a supplier of complete modules and systems, delivering them just-in-time (JIT) or just-in-sequence (JIS).

The challenge

While the concepts as such are not new, they are getting more difficult to keep up with, due to higher expectations on e.g. flexibility, cost, quality and delivery efficiency. Critical processes at the supplier as well as within the tightly coupled buyer-supplier relationship get under risk. Many of today's installed systems get to their limits not having been designed for increasing complexity and shorter reaction times, which are characterized by high time dependency and minimal buffers. What was once exceptional requests by the OEM is becoming today a constant shift in value-adding activity to the supply side. So, for the suppliers, it has never been more important to have a robust, standardized and modular IT solution to meet the requirements of multiple OEMs. The ability to deliver on a JIS basis has become an order winner and it is a key characteristic to remain competitive. Are you sure you can still cope with this increased responsibility in your collaboration with one or many OEMs?

The Siemens-Atos solution

The primary aim of this solution is to support suppliers to focus on their core competency of high quality products while the complexity and required flexibility of underlying lean IT processes can stay in the hands of specialists who have been supporting the suppliers' and OEMs' world and its interfaces for many years. Siemens and Atos have teamed up to provide a new level of sophistication and cutting-edge solutions to help satisfy the automotive manufacturers' requirements for its many variants.



Modular, configurable and out-of-the-box

JIT/JIS Solution Characteristics

General

- ▶ Produce without ERP-connection covering full functional IT-support of a lean JIT/JIS plant with ERP as a backend system in HQ.
- ▶ Incorporate existing shopfloor-IT, if present
- ▶ Customer cockpit (Monitor)
- ▶ Production planning, stock balance and warning
- ▶ Provide the OEM with production information
- ▶ Supports multi-plant data consolidation

OEM-connection

- ▶ Electronic Data Interchange (EDI) support for various OEM formats
- ▶ Receive sequencing data (JIS messages) via a broadcast pulse
- ▶ JIS broadcast plausibility check and exception handling
- ▶ Advanced shipment notification (ASN) via EDI

Production control

- ▶ Build parts to match sequence order communicated by OEM
- ▶ Reverse build sequence of parts for packing and loading trucks
- ▶ Produce "make-to-stock" and pack in sequence
- ▶ Production smoothing

Logistics and Sequencing

- ▶ Deliver and ship in time and correct sequence
- ▶ Deliver to multiple OEMs and/or production lines per plant
- ▶ Define and apply packing and truck loading rules
- ▶ Truck load control functionalities

Labeling and printing papers

- ▶ Flexible and easily adaptable specific labels to be affixed to parts and shipping racks (pre-defined labeling guidelines for all OEMs, each plant has the ability to allow for variations)
- ▶ Print delivery and shipping papers (predefined guidelines of all OEMs and VDA-standards)
- ▶ Printer independence

Traceability

- ▶ Full traceability from components to OEMs vehicle data (VIN)
- ▶ Track work centers
- ▶ Packaging control

Reporting

- ▶ Forecast reports
- ▶ Serial number genealogy report
- ▶ Component batch usage report ("where-used" list)
- ▶ Order status progress report

The benefits

Our JIT/JIS solution offers First Tier Suppliers and component manufacturers a fully integrated solution from ERP to production, covering end-to-end material and information flow with the OEM (EDI, production sequence, exception handling, time windows, trigger points, labels, ...).

Highlights

- ▶ Full functionality to execute individual requirements of different manufacturers and production and supply concepts
- ▶ EDI format evolution maintenance
- ▶ Minimizing communication mistakes with OEM by means of plausibility checks and systematic exception handling
- ▶ Easily adaptable to different production scenarios and supplier plant sizes
- ▶ Ability to adapt easily and quickly to new internal and external requirements
- ▶ Robust system supporting high availability and easy maintenance
- ▶ Short time, structured and flexible reaction on single production rule deviations.

On top of that, the JIT/JIS solution offers a very attractive operation and support concept based on standard software.

Modular Architecture

The solution main architectural features are:

- ▶ Ensure flexible solution concept
 - Scalable, modular and easy to be tailored for individual sites and scope of requirements. The JIT/JIS solution is a module of a wider MES offering and it can be extended with additional features, e.g. "as built" traceability, OEE functionalities, etc.
- ▶ Easy/adaptable/short life cycle development structure
 - Quickly adaptable to changes of both First Tier Supplier and OEM's scenario, e.g. new regulations.

The advantages

The joint Atos/Siemens solution leverages on SIMATIC IT (and ERP/SAP JIS enhancements), a standard software layer produced by one of the world's largest MES companies and on outstanding system integrator capabilities with longtime factory process improvement experience in automotive industries and close connection to the world's largest OEMs.

Given the broad range of OEM message formats supported, very little project-specific customization is needed to integrate EDI calls, delivery requests and production/packaging.

The JIT/JIS solution is modular, configurable and comes out-of-the-box, full MES features are included and can be activated when required. By reducing the level of customization, the software maintenance is highly simplified.

For more information:

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