SAP Best Practices for Subsidiary Integration in One Client

Production with Intercompany Replenishment

SAP Best Practices
Purpose, Benefits, and Key Process Steps

Purpose

- This scenario covers collaboration within a corporate group where the headquarters and the subsidiaries act as an occasional supplier between each other.
- Requesting Plant looks for a temporary source of supply due to Material shortage (any material type) or lack of production capacity (finished or semi-finished product).
- Buyer from the requesting Plant manually requests a material transfer from another Plant.
- Each Plant belongs to different organization and different company code.

Benefits

- Automation of the collaboration between headquarters and its subsidiaries
- Transactional focus, providing fully integrated business processes
- Based on existing well-tryed Best Practice Scenarios
- Transparent view of outstanding stock transfers, stock-in-transit
- Efficient Processing of intercompany stock transfers
- Sales order BOM processing and Order Change Management integrated in intercompany processing.
Scenario Overview
Flow and key points

Process flows covered
- Stock overview between Plants
- Planning overview between Plants
- Capacity analysis
- Purchase order (manually)
- Production Data changes
- Costing run
- BOM compare
- Order BOM Management
- Order Change Management (OCM)

Key Points
- Integrated collaboration between headquarters and associated subsidiaries
- Rapid ROI by reusing existing data exchange capabilities
- Built upon established SAP Best Practices Baseline package scenarios
Required SAP Applications and Company Roles

Required SAP Applications

- Headquarter with SAP ECC 6.0 EHP5 with related country BAiO Baseline Solution V1.605 installed
- Purchase Organization (Subsidiary 1 and 2) with the solution SAP BAiO for Subsidiary Integration V1.605 installed with related country Baseline Solution V1.605 variant files on the same SAP ECC 6.0 EHP5 instance and client as the headquarter

Company roles involved in the process flows

- Purchaser
- Production Planner
- Warehouse Clerk
- Warehouse Manager
- Billing Administrator
- Accounts Payable Accountant
- Engineering Specialist
- Sales Department
- Enterprise Controller
Business Process: Production with Intercompany Replenishment (Variant 1)

Production with Intercompany Replenishment Stock Availability Process:

1. Requesting Plant checks Delivering Plant stock availability
2. Requesting Plant creates and prints intercompany purchase order
3. Delivering Plant creates cross company delivery
   a. Delivering Plant posts the Goods Issue (GI) and prints delivery note
   b. Requesting Plant posts the Goods Receipt (GR)
4. Delivering Plant creates the intercompany billing
5. Requesting Plant processes the intercompany payment
Business Process: Production with Intercompany Replenishment (Variant 2)

Production with Intercompany Replenishment

Capacity analysis and manufacturing Process:

1. Requesting Plant asks Delivering Plant Capacity Analysis
   a. Delivering Plant confirms available Capacity
2. Requesting Plant creates and prints intercompany purchase order
3. Delivering Plant creates and confirms production order
4. Delivering Plant creates cross company delivery
   a. Delivering Plant posts the Goods Issue (GI) and prints delivery note
   b. Requesting Plant posts the Goods Receipt (GR)
5. Delivering Plant creates the intercompany billing
6. Requesting Plant processes the intercompany payment
Business Process: Production with Intercompany Replenishment (Variant 3)

Production with Intercompany Replenishment
Manufacturing Process with Production Data Changes:

1. Delivering Plant changes Production Data
2. Costing Run and dispatched information by the Headquarter to Subsidiaries
3. BOM Comparison and Costing Comparison in the Requesting Plant
4. Requesting Plant asks Delivering Plant Capacity Analysis
   a. Delivering Plant confirms available Capacity
5. Requesting Plant creates and prints an intercompany purchase order
6. Delivering Plant creates and confirms the production order
7. a. Delivering Plant creates cross company delivery and posts the Goods Issue (GI)
   b. Requesting Plant posts the Goods Receipt (GR)
8. Delivering Plant creates the intercompany billing
9. Requesting Plant processes the intercompany payment

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Business Process: Production with Intercompany Replenishment (Variant 4 – Step 1)

Production with Intercompany Replenishment
Manufacturing Process with Order Change Management:

1. Customer Request for Quotation to the Requesting Plant (not demonstrated in this scenario)
2. Quotation Generation and acceptance (not demonstrated in this scenario)
3. Sales Order Generation in the Delivering Plant
4. Delivering Plant creates and releases Production Order
5. Requesting Plant changes the initial Sales Order
6. Delivering Plant changes the Production Order using Order Change Management
   a. Delivering Plant produces, confirms production, post Goods Issue for the components and posts Goods Receipt for the produced material
   b. Delivering Plant creates delivery to Customer and posts the Goods Issue (GI)
7. Requesting Plant creates the Customer billing
8. Customer processes the payment
9. Delivering Plant creates the intercompany billing
10. Requesting Plant processes the intercompany payment
Business Process: Production with Intercompany Replenishment (Variant 4 – Step 2)

**Production with Intercompany Replenishment**
Manufacturing Process with Order Change Management:

1. Customer Request for Quotation to the Requesting Plant (not covered in this scenario)
2. Quotation Generation and acceptance (not covered in this scenario)
3. Sales Order Generation in the Delivering Plant
4. Order BOM Generation in the Delivering Plant
5. Delivering Plant creates and releases Production Order
6. Delivering Plant changes the Order BOM and the Production Order using Order Change Management
7. Delivering Plant produces, confirms production, post Goods Issue for the components and posts Goods Receipt for the produced material
8. Delivering Plant creates delivery to Customer and posts the Goods Issue (GI)
9. Requesting Plant creates the Customer billing
10. Customer processes the payment
11. Delivering Plant creates the intercompany billing
12. Requesting Plant processes the intercompany payment
Business Process in Detail: Production with Intercompany Replenishment (Variant 1)

Process Description in Detail:

Requesting Plant

- Check Material stock availability
- Create/Print/Send Intercompany Purchase Order
- Post the Goods Receipt
- Verify invoice
- Process outgoing payment

Material stock available for manufactured product

Create Delivery

Pick Material on stock

Post the Goods Issue and print delivery note

Create/Send/Print Billing Document

Delivering Plant
Business Process in Detail: Production with Intercompany Replenishment (Variant 2)

Process Description in Detail:

<table>
<thead>
<tr>
<th>Requesting Plant</th>
<th>Delivering Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Capacity Check</td>
<td>Check potential Capacity</td>
</tr>
<tr>
<td>Create/Print/Send Intercompany Purchase Order</td>
<td>Release Manufacturing Process</td>
</tr>
<tr>
<td>Confirm Manufacturing Process</td>
<td>Post Manufacturing Goods Receipt</td>
</tr>
<tr>
<td>Post Components Consumption Goods Issue</td>
<td>Create Delivery</td>
</tr>
<tr>
<td>Pick Material from stock</td>
<td>Post the Goods Issue and print delivery note</td>
</tr>
<tr>
<td>Post the Goods Receipt</td>
<td>Create/Send/Print Billing Document</td>
</tr>
<tr>
<td>Verify invoice</td>
<td></td>
</tr>
<tr>
<td>Process outgoing payment</td>
<td></td>
</tr>
</tbody>
</table>
Business Process in Detail: Production with Intercompany Replenishment (Variant 3)

Process Description in Detail:

- BOM and Costing Comparison
- Request Capacity Check
- Create/Print/Send Intercompany Purchase Order
- Change Production Data
  - Costing Run + information spread
- Check potential Capacity
- Release Manufacturing Process
- Confirm Manufacturing Process
- Post Manufacturing Goods Receipt
- Post Components Consumption Goods Issue
- Create Delivery
- Pick Material from stock
- Post the Goods Issue and print delivery note
- Create/Send/Print Billing Document

Production with Intercompany Replenishment - Manufacturing Process with Production Data Changes

Requesting Plant

Delivering Plant
## Business Process in Detail: Production with Intercompany Replenishment (Variant 4 - Step1)

### Process Description in Detail:

<table>
<thead>
<tr>
<th>Customer</th>
<th>Requesting Plant</th>
<th>Delivering Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request for Quotation</td>
<td>Quotation</td>
<td>Release Manufacturing Process</td>
</tr>
<tr>
<td>Requirements Change</td>
<td>Sales Order Creation</td>
<td>Setting Order Change Management</td>
</tr>
<tr>
<td></td>
<td>Sales Order Change</td>
<td>Change Production Order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post Manufacturing Receipt, Confirm Manufacturing Process</td>
</tr>
<tr>
<td>Post the Goods Receipt</td>
<td>Create/Send/Print Billing Document</td>
<td>Post Components Consumption Goods Issue</td>
</tr>
<tr>
<td>Verify invoice</td>
<td>Verify invoice</td>
<td>Create Delivery</td>
</tr>
<tr>
<td>Process outgoing payment</td>
<td>Process outgoing payment</td>
<td>Pick Material from stock</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post the Goods Issue and print delivery note</td>
</tr>
</tbody>
</table>

### Production with Intercompany Replenishment - Manufacturing Process with Order Change Management without Order BOM

- Request for Quotation
- Requirements Change
- Post the Goods Receipt
- Verify invoice
- Process outgoing payment

- Quotation
- Sales Order Creation
- Sales Order Change
- Create/Send/Print Billing Document
- Verify invoice
- Process outgoing payment

- Release Manufacturing Process
- Setting Order Change Management
- Change Production Order
- Post Manufacturing Receipt, Confirm Manufacturing Process
- Post Components Consumption Goods Issue
- Create Delivery
- Pick Material from stock
- Post the Goods Issue and print delivery note
- Create/Send/Print Billing Document
Business Process in Detail: Production with Intercompany Replenishment (Variant 4 - Step2)

Process Description in Detail:

Customer

- Request for Quotation
- Post the Goods Receipt
- Verify invoice
- Process outgoing payment

Quotation

- Sales Order Creation
- Create/Send/Print Billing Document
- Verify invoice
- Process outgoing payment

Requesting Plant

- Order BOM Management
- Release Manufacturing Process
- Change Order BOM
- Setting Order Change Management
- Change Production Order
- Post Manufacturing Goods Receipt, Confirm Manufacturing Process
- Post Components Consumption Goods Issue
- Create Delivery
- Pick Material from stock
- Post the Goods Issue and print delivery note
- Create/Send/Print Billing Document

Delivering Plant

- Post the Goods Receipt
- Verify invoice
- Process outgoing payment

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Process Flow Diagram

Production with Intercompany Replenishment

Stock Availability Process

Event | Process
---|---
Production Supervisor Requesting Plant | Missing Parts in Requesting Plant Manufacturing
| Requesting Plant Receives Purchase Order
| Informs the Warehouse Manager
| Informs the Warehouse Clerk
| Ship Material to Requesting Plant
| Requesting Delivering Plant Invoice

- Check Stock availability in Delivering Plant
- Create/Print/Send Intercompany Purchase Order
- Create Delivery Note from Intercompany PO
- Pick Material from Stock
- Goods Receipt and Stock Material
- Sales from local stock (B22)
- Invoice Receipt and Payment

Warehouse Manager Delivering Plant

Warehouse Clerk Delivering Plant

Warehouse Clerk Requesting Plant

Accounts Payable Accountant

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Process Flow Diagram

Production with Intercompany Replenishment
Manufacturing Process

- **Event**
  - Missing Parts or lack of Production in Requesting Plant Manufacturing
  - Requesting Plant Receives Purchase Order
  - Informs the Production Supervisor
  - Informs the Warehouse Manager
  - Informs the Warehouse Clerk
  - Ship Material to Requesting Plant
  - Requesting Delivering Plant Invoice

- **Production Supervisor Delivering Plant**
  - Check Potential Capacity in Delivering Plant

- **Purchaser Requesting Plant**
  - Create/Print/Send Intercompany Purchase Order

- **Warehouse Manager Delivering Plant**
  - Create Delivery Note from Intercompany PO

- **Warehouse Clerk Delivering Plant**
  - Pick Material from Stock

- **Warehouse Clerk Requesting Plant**
  - Goods Receipt and Stock Material

- **Accounts Payable Accountant**
  - Sales from local stock (B22)
  - Invoice Receipt and Payment

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Process Flow Diagram

Production with Intercompany Replenishment
Manufacturing Process with Production Data Change

Asynchronous Flow Prerequisite
Process Flow Diagram

Production with Intercompany Replenishment
Manufacturing Process with Production Data Change

- **Purchaser Requesting Plant**
  - Create/Print/Send Intercompany Purchase Order

- **Warehouse Manager Delivering Plant**
  - Create Delivery Note from Intercompany PO

- **Warehouse Clerk Delivering Plant**
  - Pick Material from Stock

- **Warehouse Clerk Requesting Plant**
  - Goods Receipt and Stock Material

- **Production Supervisor Delivering Plant**
  - Check Potential Capacity in Delivering Plant

- **Requesting Plant Receives Purchase Order**
  - Informs the Production Supervisor

- **Inform the Warehouse Manager**
  - Informs the Warehouse Clerk
  - Ship Material to Requesting Plant

- **Requesting Plant Invoice**
  - Sales from local stock (B22)

- **Accounts Payable Accountant**
  - Invoice Receipt and Payment

Events:
- Missing Parts or lack of Production in Requesting Plant Manufacturing
- Requesting Plant Receives Purchase Order
- Informs the Production Supervisor
- Informs the Warehouse Manager
- Informs the Warehouse Clerk
- Ship Material to Requesting Plant
- Requesting Plant Invoice
Process Flow Diagram

Production with Intercompany Replenishment
Manufacturing Process with Order Change Management without Order BOM

Manufacturing Flow with OCM ...

[Diagram showing the flow of processes involving different departments and events, such as Customer Requesting, Plant Receives Request for Quotation, Production Supervisor Delivering Plant, Sales Department, Engineering Specialist Delivering Plant, etc., with arrows indicating the sequence and interactions.]
Process Flow Diagram

Production with Intercompany Replenishment
Manufacturing Process with Order Change Management without Order BOM

... Delivery Flow

- Warehouse Clerk Requesting Plant
  - Create Delivery Note from Intercompany Sales Order
  - Pick Material from Stock

- Warehouse Department Delivering Plant
  - Informs the Warehouse Manager
  - Informs the Warehouse Clerk
  - Ship Material to Customer
  - Requesting Delivering Plant Invoice
  - Requesting Customer Invoice

- Customer
  - Goods Receipt and Stock Material
  - Invoice Receipt and Customer Payment

- Accounts Payable Accountant
  - Sales from central stock (B21)
  - Invoice Receipt and Intercompany Payment
Manufacturing Flow with OCM ...

- Customer Requesting Plant Receives Request for Quotation
- Sales Department After Approval Sales Order Creation
- Production Supervisor Delivering Plant Release Manufacturing Process in Delivering Plant
- Engineering Specialist Delivering Plant Order BOM Creation
- Engineering Specialist Delivering Plant Order BOM Change
- Engineering Specialist Delivering Plant Set Order Change Management
- Engineering Specialist Delivering Plant Change Production Order
- Engineering Specialist Delivering Plant Confirm Manufacturing Process + Goods Receipt
Process Flow Diagram
Production with Intercompany Replenishment
Manufacturing Process with Order Change Management with Order BOM

... Delivery Flow
Legend

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Usage Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band:</td>
<td>Identifies a user role, such as Accounts Payable Clerk or Sales Representative. This band can also identify an organization unit or group, rather than a specific role. The other process flow symbols in this table go into these rows. You have as many rows as required to cover all of the roles in the scenario.</td>
<td>Role band contains tasks common to that role.</td>
</tr>
<tr>
<td>External Events:</td>
<td>Contains events that start or end the scenario, or influence the course of events in the scenario.</td>
<td></td>
</tr>
<tr>
<td>Flow line (solid):</td>
<td>Line indicates the normal sequence of steps and direction of flow in the scenario.</td>
<td>Connects two tasks in a scenario process or a non-step event</td>
</tr>
<tr>
<td>Flow line (dashed):</td>
<td>Line indicates flow to infrequently-used or conditional tasks in a scenario.</td>
<td></td>
</tr>
<tr>
<td>Business Activity / Event:</td>
<td>Identifies an action that either leads into or out of the scenario, or an outside Process that happens during the scenario.</td>
<td>Does not correspond to a task step in the document</td>
</tr>
<tr>
<td>Unit Process:</td>
<td>Identifies a task that is covered in a step-by-step manner in the scenario.</td>
<td>Corresponds to a task step in the document</td>
</tr>
<tr>
<td>Process Reference:</td>
<td>If the scenario references another scenario in total, put the scenario number and name here.</td>
<td>Corresponds to a task step in the document</td>
</tr>
<tr>
<td>Sub-Process Reference:</td>
<td>If the scenario references another scenario in part, put the scenario number, name, and the step numbers from that scenario here.</td>
<td>Corresponds to a task step in the document</td>
</tr>
<tr>
<td>Process Decision:</td>
<td>Identifies a decision / branching point, signifying a choice to be made by the end user. Lines represent different choices emerging from different parts of the diamond.</td>
<td>Does not usually correspond to a task step in the document; Reflects a choice to be made after step execution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Usage Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagram Connection:</td>
<td>To next / From last Diagram: Leads to the next / previous page of the Diagram</td>
<td>Flow chart continues on the next / previous page</td>
</tr>
<tr>
<td>Hardcopy / Document:</td>
<td>Identifies a printed document, report, or form</td>
<td>Does not correspond to a task step in a document; instead, it is used to reflect a document generated by a task step; this shape does not have any outgoing flow lines</td>
</tr>
<tr>
<td>Financial Actuals:</td>
<td>Indicates a financial posting document</td>
<td>Does not correspond to a task step in a document; instead, it is used to reflect a document generated by a task step; this shape does not have any outgoing flow lines</td>
</tr>
<tr>
<td>Budget Planning:</td>
<td>Indicates a budget planning document</td>
<td>Does not correspond to a task step in a document; instead, it is used to reflect a document generated by a task step; this shape does not have any outgoing flow lines</td>
</tr>
<tr>
<td>Manual Process:</td>
<td>Covers a task that is manually done</td>
<td>Does not generally correspond to a task step in a document; instead, it is used to reflect a task that is manually performed, such as unloading a truck in the warehouse, which affects the process flow.</td>
</tr>
<tr>
<td>Existing Version / Data:</td>
<td>This block covers data that feeds in from an external process</td>
<td>Does not generally correspond to a task step in a document; instead, this shape reflects data coming from an external source; this step does not have any incoming flow lines</td>
</tr>
<tr>
<td>System Pass / Fail Decision:</td>
<td>This block covers an automatic decision made by the software</td>
<td>Does not generally correspond to a task step in the document; instead it is used to reflect an automatic decision by the system that is made after a step has been executed.</td>
</tr>
</tbody>
</table>