

usiness Blue Print
oduction Planning

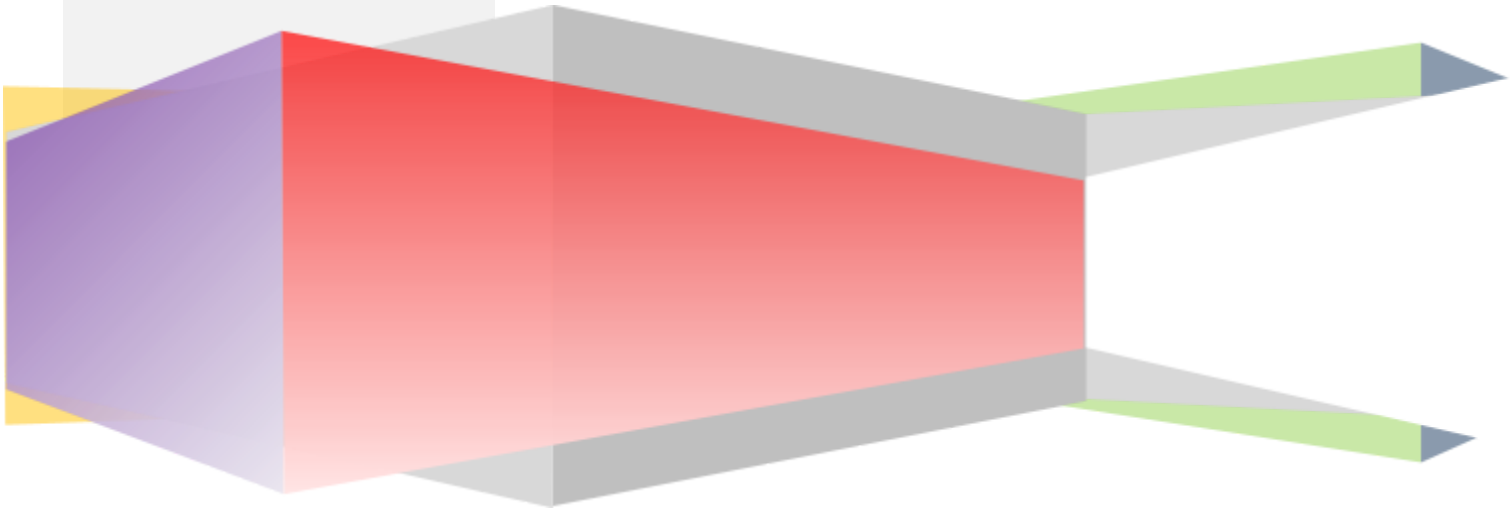


Table of Contents

1. ORGANIZATIONAL UNITS 6
2. MASTER DATA 6
3. BUSINESS PROCESS: 10
1. PROCESS OVERVIEW TABLE FOR PRODUCTION PLANNING. 14
2. REPORTING 16
3. GAPS & QUERIES DISCUSSION: 17

Production Planning Team

Organization Hierarchy	Designation	Acceptance/Signature

ABC India Ltd.
AFS Implementation Project

Introduction

The Purpose of the Business Blueprint, which is the main deliverable of Business Blueprint Phase of SAP Implementation, is to serve as conceptual master plan for Sales and Distribution module for ABC Industries Ltd. This Blueprint has been developed by discussing all inputs gathered from the core team by scheduling meetings and demos. This document shows the business requirements in detail, and serves as the basis for organization, configuration and development activities for Sales and Distribution Module.

Change Control:

Document Change Control :

Release	Description	Created by	Date	Reviewed by	Date	Section	Description
1.0	Production Planning		18.08.14		18.08.14		

1. Organizational Units

1.1 Plant:

In sales, plant refers to a physical organization unit from where goods are manufactured.

Plants codes defined for SIL:

Plant	Description	Location
5300	Seamless Garment	Bhilwara

2. Master Data

2.1 Bill of Material:

The Bill of Material will be created for Semi finish and finish material at plant level. BOM will have defined components, quantities, unit of measure and process byproducts for a predefined base quantity of BOM header material. BOM will have an effective date that is required during creation and further usage. Any material should have single BOM and identified by its unique number. BOM will be used to maintain different component details at plant level for a material.

The definition of the quantity structure of an AFS material (product) enables you to define grid and category-dependent specifications. These specifications can also be cost-relevant.

For the definition of the bills of material of AFS materials, the following costing-relevant functions are available:

- If you use AFS materials in the BOM as components whose grid values are different than those of the finished product, determine for each grid value of the finished product which grid value of the component material should be available for production and in which quantity.
- If you use AFS materials in the BOM as components whose grid values are identical to those of the finished product, specify for each component material a standard input quantity. If necessary, enter variances from the standard input quantity for each grid value of the finished product or enter the input quantity zero.
- Depending on the produced category of the finished product, you can usually specify (for all grid values) whether or not certain components should take part in the BOM explosion.

Transaction codes for managing Bill of materials in SAP

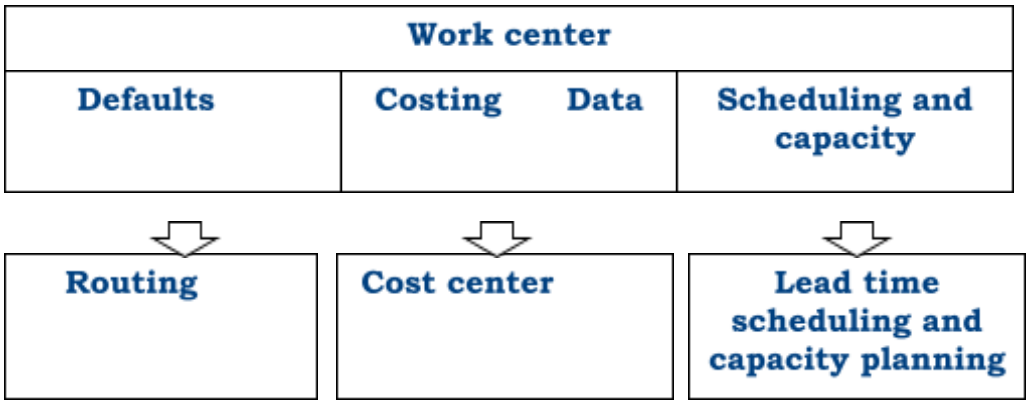
Transaction description	T. Code	Remarks
Creating BOM	CS01	Authorized user can create the BOM
Change BOM	CS02	Authorized user can change the BOM
Display BOM	CS03	This is only for display. No changes are allowed here.

2.2 Work Center:

Machine, labor, group of machines or group of labor can be defined as work center. Work center will be used in costing, scheduling and capacity planning.

Scheduling: operation times and formulae will be entered in work center. So that operation durations can be calculated.

Capacity: the available capacity and formulae for calculating capacity requirements are entered in work center.



Production operations are managed with work center by defining the work center in routing in each plant. Work center category, type of work center capacity, work center capacity formula, total hours available and factory calendar are to be defined.

Machines where set of operations are performed, has to be identified as work center. Similar types of machines are to be clubbed as one machine to get better control and capacity loading analysis in SAP.

Work center has six views to enter the work center data.

In the initial entry screen plant, work center name and work center categories are to be entered.

Inputs to Work Center

Work center views	Relevant fields
Basic data	Person responsible, usage and standard value key
Default	Control key, unit of measure for standard values
Capacity	Capacity category, Set up formula, processing formula
Capacity header	Capacity planner group, factory calendar, unit of measure, start time, end time, length of breaks, capacity utilization, number of individual capacities, relevant to finite scheduling and allowed overload
Scheduling	Capacity category, set formula, processing formula, dimension and unit measure of work
Costing	Cost center, activity type and formalae
Technical	System created

Transaction code for managing work centers in SAP

Transaction description	Transaction Code	Remarks
Creating Work Center	CR01	Authorized user can create a work center
Change Work Center	CR02	Authorized user can change the work center
Display Work Center	CR03	This is only for display. No changes are allowed here.

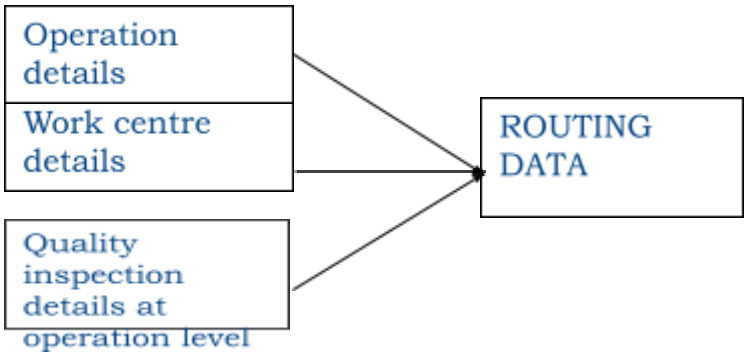
2.3 Routing

Routing will be created for Semi finish and finish material at plant level having defined set of operations and work center. Processing time, set up time and labor details will be maintained for the operation. Costing will be done at operation level in production cycle.

Any material can have multiple routings with defined work centers and operation details. Routing will be selected at the time of MRP run based on the

lot size. Lot size should be predefined for the proper selection of routing in the routing header. Routing will have a Group and Group counter. Group will be the same for alternative routing. Group counter identifies the Alternative routing with different number.

Control Key in operation:
Control key provides control in operation which trigger scheduling, 'capacity requirement', 'automatic goods receipt', costing and 'confirmation required' as per business process requirement for each operation. Each control key is used with operation, work center and operation details to make control data for scheduling, capacity and costing. Only one operation will be defined for 'Auto Goods Receipt' and 'milestone confirmation' in the production order.
Material routing data details based on material and plant



Inputs to Material routing

Routing	Relevant Fields
Initial input screen	Material, plant
Routing header view	Routing usage, status, range of lot size, unit of measure
Sequence overview	Range of Lot size
Operation overview	Work center, plant, control key, base quantity, operational unit, breaks, set up time, machine time, unit of machine and details of external processing if the operation is defined for external processing.
Material component allocation	New allocation, operation no, sequence
PRT view	PRT link, material, plant, quantity and control key

Inspection characteristic view	Characteristic, sampling procedure, catalog, tolerance key

Managing material routing in SAP

T.Code description	T. Code	Remarks
Creating Routing	CA01	Authorized user can create a Routing
Change Routing	CA02	Authorized user can change the Routing
Display Routing	CA03	This is only for display. No changes are allowed here.

3. Business Process:

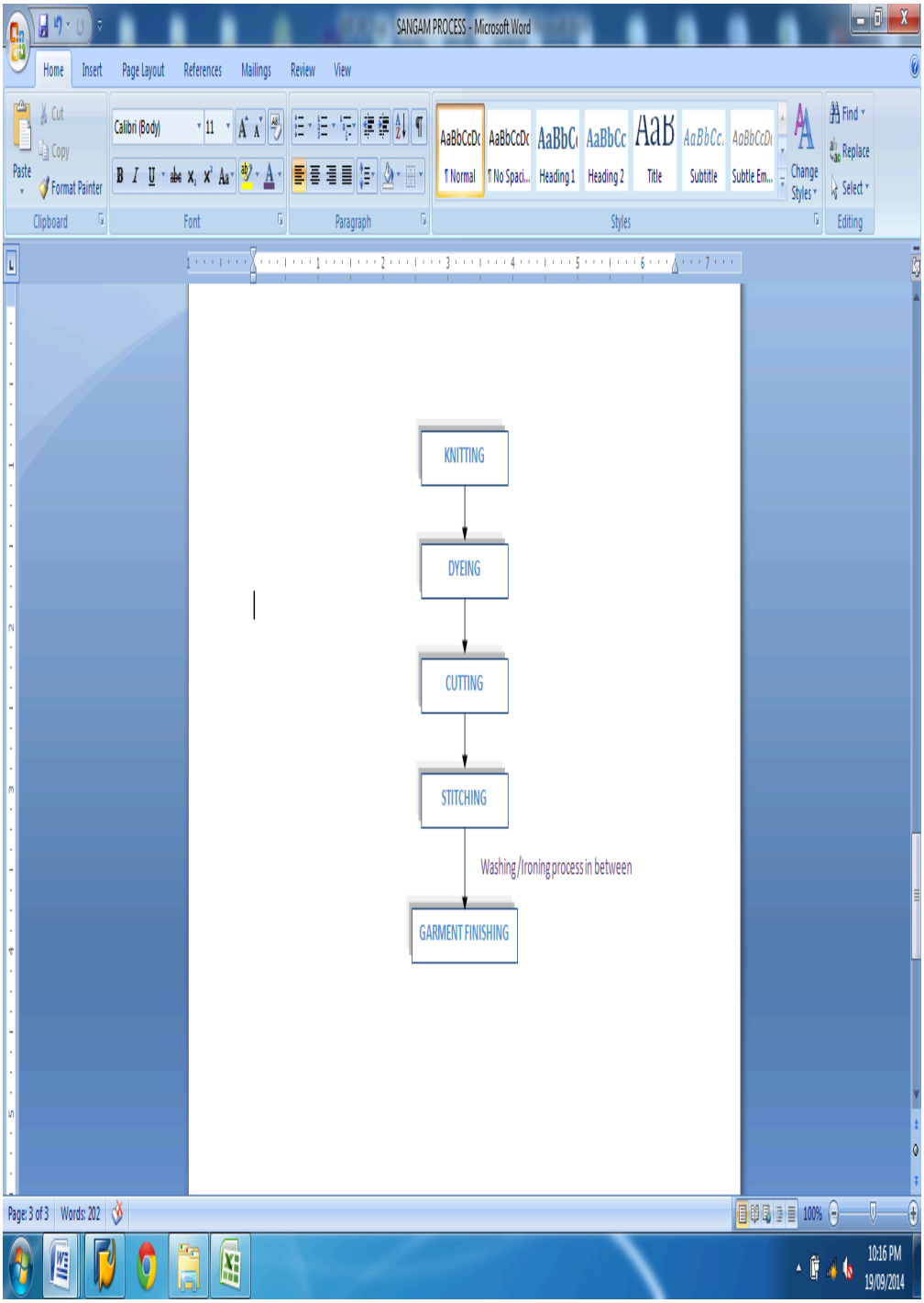
At ABC Seamless garment will be produced using numerous operations using yarn e.g. Nylon 66.

The various processes are Knitting, Dyeing, Cutting, Stitching, & finishing.

The sequence of operation is same more or less, sometimes dyeing operation may takes place after Knitting or after stitching.

Apart from these main operations washing, ironing etc. may takes place, as decided material code will not be created for these sub process however as per sequence these processes will be treated as operation in the main processes routing.

The Process flow chart is as follows,


SANGAM PROCESS - Microsoft Word
KNITTING
DYEING
CUTTING
STITCHING
Washing/Ironing process in between
GARMENT FINISHING

3.1 ORDER PLANNING AND PROCESS – Make To Stock Scenario

- Production orders contain all the information you need for the production process, for example quantity, basic date, information about BOM and routing. The production orders in AFS contain AFS-specific data (grid values and categories) to meet the requirements of the apparel and footwear industry.

- Create a production order for an AFS material in the SAP standard application. In a production order for an AFS material you can maintain the quantity to be produced at SKU level. Here you can find information from both the AFS BOM.

- Once the production order is created all the rid values are copied in to the production order from the Bill of material. In our case grid are color & size.

- If wants to create the color wise production orders, then we have to manually delete the other colors grid kipping which color is required.

- Once the order is created. Material availability check is carried out & then order can be released.

- Subsequent Goods issue, Confirmation & Goods receipt can then be takes place to produce the required SKU's stock during the Order Confirmation. This will consume the raw material stock & update the SFG, FG stock automatically in the one transaction only.

3.1.1 Production order type

Order type is one of the main controls which is having following items

1. Manual and automatic selection of BOM and routing.
2. Task list type as routing.
3. Reservation or purchase requisition selection.
6. Costing
7. Material availability check for materials.

Plant wise production order types will allow user to track respective production orders with different numbers. Costing will make use of the production order type.

3.1.2 MRP Controller.

The person responsible for a group of materials in MRP in a plant or company.

Material that takes part in material requirements planning must be assigned to an MRP controller.

MRP Controller	Description
SG01	Seamless Garment - SFG
SG02	Seamless Garment - FG

3.1.3 Production Scheduling Profile.

specify that in a production or process order particular operations in a business are carried out in parallel

MRP Controller	Description
SG01	Seamless Garment - SFG
SG02	Seamless Garment - FG

3.1.4 Production order Number Range

Each Order Type will have a unique number range assignment to identify specific plant with order number.

Suggested mapping of Order types (4 Digit)

Order Type	Description	Number range
ZSGS	Seamless Garment - SFG	
ZSGF	Seamless Garment - FG	

1. Process Overview Table for Production Planning.

Process step	Business condition	Business role	T. code	Expected results
Creating a BOM Master record	This is for to define the raw component required to manufacture finish product & its assignment as per grid values.	You create a BOM master record when you start a production of any new product.	CS01	The BOM master record has been created and the order can now be created.
Change BOM Master record	This helps to make changes in BOM master data.	Any required changes can be maintained in master data.	CS02	The BOM master record can be changed as per requirement
To display BOM Master record	This helps to view data associated to Bill of material.	All information on BOM reviewed at any point of time.	CS03	The BOM master record can be displayed as per requirement.
Creating a Work Centre Master record	This is for to defines the machine / labor as a work centre to determine capacity, scheduling, Costing, etc.	You create a Work Centre master record when a new machine is introduced.	CR01	Work centre are created & can be used in routing.
Change Work Centre Master record	This helps to make changes in Work Centre master data.	All information on Work Centre reviewed at any point of time.	CR02	Work centers can be changed as per requirement
To display Work Centre Master record	This helps to view data associated to Work Centre.	All information on Work Center reviewed at any point of time.	CR03	Work centers can be displayed as per requirement
Creating a Routing Master record	A representation of how you process work on your floor. Typically, a routing is made up of a series of operations, also called routing steps.	You create a Routing master record when a new operation sequence is defined for a	CA01	Routing is created for FG or SFG product.

Process step	Business condition	Business role	T. code	Expected results
		finish or SFG product.		
Change Routing Master record	This helps to make changes in Routing master data.	All information on Routing reviewed at any point of time.	CA02	Routing can be changed as per requirement
To display Routing Master record	This helps to view data associated to Routing.		CA03	Routing can be displayed as per requirement
To Create Production order	Determines the production quantity to produce Grid wise. Here for Grid wise production order manual deletion of other grid is necessary. Various other functions are also carried out during order creation like reading of BOM, Routing, material availability check, releasing of order, etc.	Production order of required color with different sizes is created	CO01	Production order is created
To Change Production order	This helps to change details maintained in Order. This change is applicable to certain parameters under specific status of order	Order can be changed say for quantity, read PP master data, etc.	CO02	We can change details regarding Order in subject.
To Display Production order	This helps to view details maintained in Order.	Order details can be viewed.	CO03	We can view details regarding Production order.
Creating Order Confirmation	This transaction is used to confirm the operation in routing as per the sequence maintained, as well as the goods issue	This is for the confirmation of order, Goods Issue & auto goods receipt.	CO11N	Order Confirmation is saved along with goods movement posting for raw

Process step	Business condition	Business role	T. code	Expected results
	for raw material assigned to this order can be done this is called back flush & also goods receipt of finish or SFG garment taken place as per the business requirement of SIL	Unless this we cannot post the FG or SFG in stock.		material & Finish or SFG materail.
Display Order Confirmation	This helps to display only the confirmation done operation wise.	We can view the Confirmed Order..	CO14	We can view the Confirmed Order.
Cancel Order Confirmation	This helps to cancel or reverse incorrect confirmation may be due to wrong input or due to incorrect goods movement during back flush & auto GR.	Cancel order confirmation Document.	CO13	Here order confirmation as well goods movement is cancelled.

2. Reporting

Process step	Business condition	Business role	T. code
Production Order Summary Report	Provides an overview of production order in details. This also helps to see the operation overview in order along with the Status. This also helps to see the confirmed & delivered order.	With the this report user can prepare a overview report	COOIS
Work centre List	This provides the list of work Centers.	List of Work Centers	CR05
Multilevel BOM report	This provides the level wise explosion Bill of Material	BOM Level determination	CS11,CS12, CS13
Automatic goods Movement : Error Handling	To see & rectify incorrect goods movement during Order Confirmation	Incorrect goods movement can be correct using this transactions	COGI

Process step	Business condition	Business role	T. code

3. Gaps & Queries Discussion:

1. **Job Cards**
   A customized screen will be provided to print the information/instructions related to Order.

   The format and logic for the same needs to be discussed by SIL internally as any such format is not available & then will be finalized & shared with Novel, scoping of the screen and logic to decided after format receipt by NovelERP

2. **Packing Process**
   The format and logic for the same needs to be discussed by SIL internally and finalized once the same is finalized internally by SIL the same will be shared to NovelERP, scoping of the screen and logic to decided after format receipt by NovelERP