

Product Costing

1. Objective and Scope

1.1 Objective of this Procedure

This procedure describes the Group requirements for Costing - Product Costing

It includes:

- the roles and responsibilities within the SBS RtR organization
- the tasks to be performed
- the related deadlines.

More precisely, this document will focus on:

- Part 4.1 : the overview of responsibilities in the light of SBS organization
- Part 4.2 : the Product Costing process General Description
- Part 4.3 : the Standard Unit Fixed Cost Calculation process
- Part 4.4 : the New Manufactured Product Cost Calculation process
- Part 4.5 : the Procured Product Cost Calculation process
- Part 4.6 : the Manual Costing Product Calculation process
- Part 4.7 : the Periodic Costing Update process
- Part 4.8 : the related Internal Controls

1.2 Scope

This organizational procedure (P) applies to all companies included in the Solvay Business Services scope of entities.

This procedure takes effect as of disclosure of the document to the Group.

2. Reference Documents

For the reference to Internal Controls, check [IAC Internal controls](#)

3. Definitions

[Costing - Glossary](#)

4. Organizational Procedure

4.1 General Roles and Responsibilities

WW RtR PE Costing : Process Management Team – WW level

- PE Costing is the owner of the process for the Group at a worldwide level
- Ensure efficient governance of the process through rules definition, communication and enforcement.
- Manage internal controls on Costing and Cost Accounting
- Deploy procedures / orientation defined at RtR Process Management level
- Manage the delivery accounting team in each region
- Deploy common/standard procedures and support local teams
- Establish the link between Process Management and Delivery team in each region
- Mostly act as supervisors to ensure process efficiency and performance enhancement
- Create/Maintain the controlling network
- Leverage the controlling network to achieve process efficiency and transmission of required expertise

The Process Expert will work closely with a **Delivery team** in charge of Su MAC activities organized as follows:

SU MAC Service centers

- Perform daily operations related to the Product Costing process, in line with guidance and rules defined upfront, for activities not requiring proximity to customers or specific local knowledge
- Optimize and standardize operations, as well as documentation materials (mostly Operating Procedures).
- Offer standard services and conduct related internal controls
- Three centers serving their regions as well as the whole world, and coordinated worldwide (Lisbon, Curitiba, Bangkok)

Non-GBS Roles:

Corporate Controlling

- Responsible for giving instructions on process objective

GROUP ACCOUNTING REPORTING (GAR)

- Responsible for giving instructions on process objective

GBU Finance Directors

- Responsible for financial statements compliance
- Designate FRA and GCCO, and in general, all responsible of internal controls to be performed by the GBU

GBU Finance Responsible Assigned (FRA)

- Responsible for validating Costing processes
- For reason of simplification, there is only one role GBU FRA, however in some sub-processes this role could be developed by 2 actors: FRA and GCCO

GBU Costing Control Owner (GCCO)

- Responsible for some internal control regarding IAC processes

4.2 Costing Model Architecture: General Process Description

4.2.1 Costing Model Architecture Roles and Responsibilities

The Product Costing activity implies inputs and responsibilities from various actors in the organization, as described below:

4.2.1.1 ***SBS actors of the Costing Model Architecture***

RtR PE Costing

- Define the generic roles of the Costing and cost accounting organization
- Define, communicate and implement Product costing procedures
- Validate Product costing procedures
- Lead Product costing projects
- Design of internal controls on the process
- Organize teams in order to ensure the proper functioning of the Product costing process
- Ensure a proper allocation of resources to the Product costing process
- Ensure the link between process management and delivery team in each region
- Provide feedback, relay information from the regions to PE costing
- Control and validate the costing models
- Supervise internal control efficiency within the region

SU MAC service centers

- Parameterize SAP with all the information provided by out of SBS functions
- maintain the system accuracy
- Run costings

4.2.1.2 ***Non-GBS actors of the Costing Model Architecture***

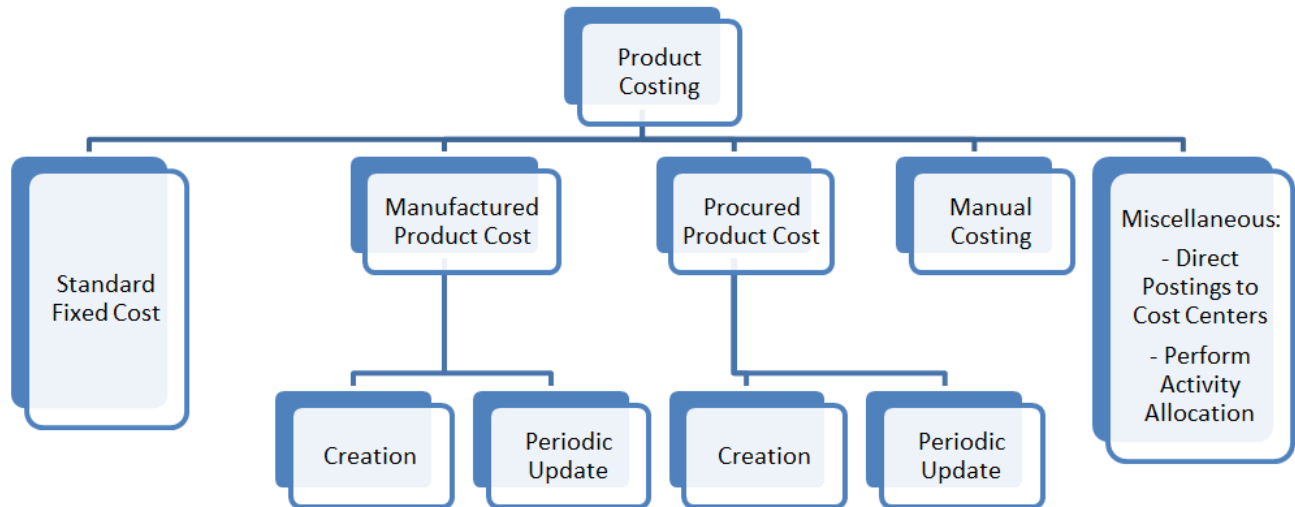
FRA/Site Controller

- Estimate the calculation elements of Unit Fixed Costs
- Provide the calculation elements of Unit Fixed Costs to the service center
- Validate the costing calculations results
- Perform several Internal controls related to the product costing
- Approve product release

Industrial/Supply Chain Functions

- Provide the products version (BOM, Recipe)
- Provide the FIA (Fiche Info Achat)
- Input the data in the Product Master Data

4.2.2 Product costing Flowchart

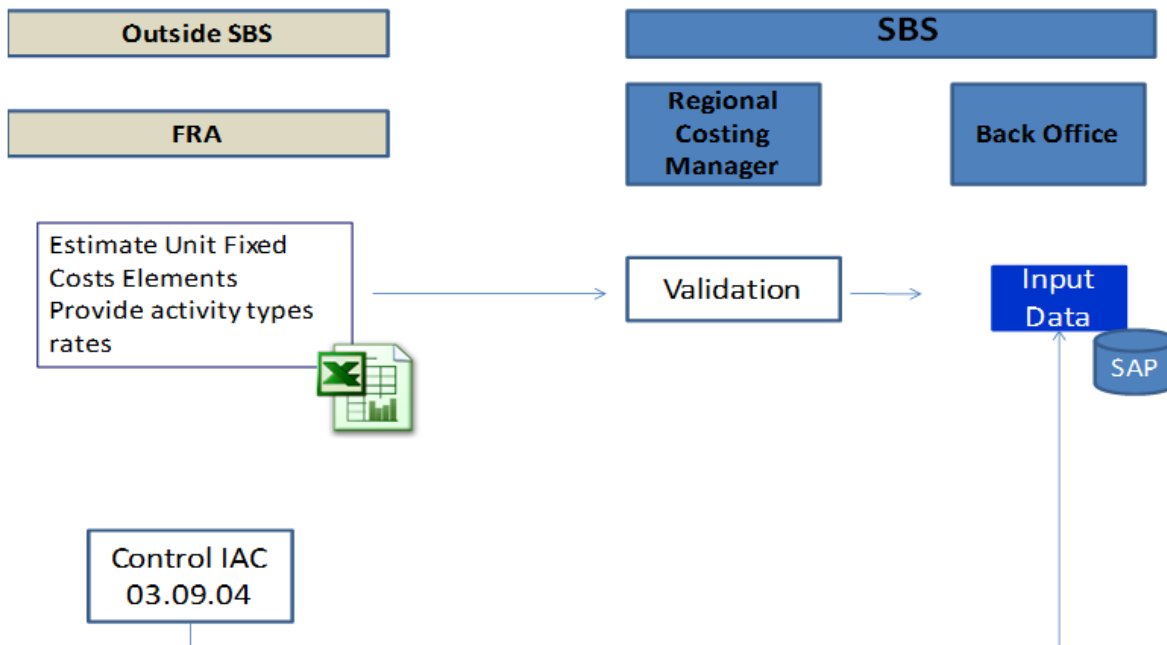


4.3 The Standard Unit Fixed Cost

The estimation of the standard unit fixed costs (activity rate) is an upfront activity for product costing; this activity is an important and necessary step for product costing in RCS. The calculation is done every year and the process should be completed before November 15th.

The main rules underlying the standard unit fixed cost calculation are the following:

- FRA estimates the unit fixed rates
- The Regional Costing Manager controls and validate the data provided by FRA
- The Regional Costing Manager sends the data to SC by email. The data is in excel format
- RtR SC uploads the received data in SAP
- FRA performs control IAC 01.09



Note: For PF1 and for RCS companies where it is legally required, Standard Fixed Costs are the Actual Average Costs of the previous business cycle. They are obtained from the yearly "Material Ledger" update (See section 4.7 Periodic Updates)

4.4 New Manufactured Product

4.4.1 Key principles

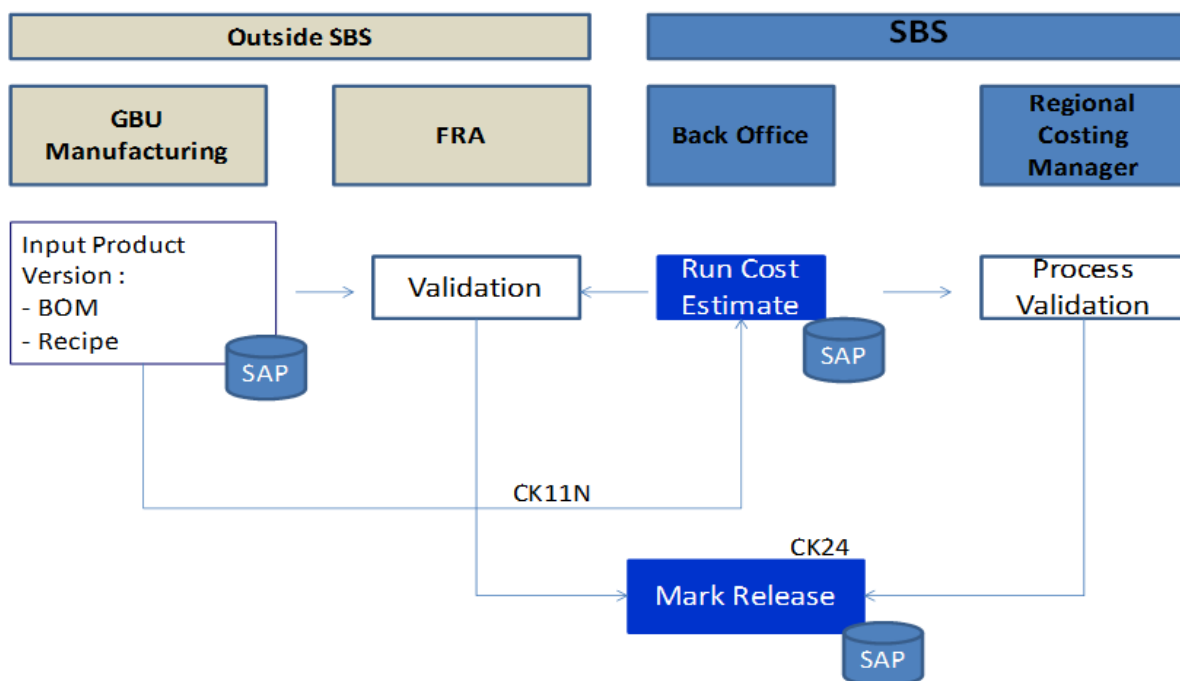
1. New products are created when requested by the GBU.
All the data relative to the calculation is estimated and inputted in the system by the industrials. 2. RtR BO is responsible for running the cost estimate. Each new product cost has to be calculated and released in the system before production can start
2. The data imputed by the industrials and released are validated by FRA
3. The regional costing managers validates the accuracy of the product cost calculation process

4.4.2 Roles and Responsibilities

The new manufactured product cost calculation activity implies inputs and responsibilities from two main actors in the organization (SBS), as described below:

- RtR BO is responsible for:
 - checking that all the data is correctly inputted in the system
 - running the cost estimate (CK11N)
 - notifying by email the regional manager that the cost estimate has been run
 - mark release when the costing model is validated by all parties (CK24)
- - perform release
 - validating the accuracy of the product cost calculation process

4.4.3 Process Flowchart



4.5 Procured Products

4.5.1 Key principles

Each new product has to be validated and released in the system before procurement can start purchase orders. Procured products are either procured from another plant or purchased for vendor. The following are the main underlying rules governing the costing of procured new products:

- SU MAC is responsible for running the cost estimate
- All the data relative to the calculation (PIR) is provided by PSL
- All creation request of PIR will be submitted by SU MAC to PSL team
- GBU validate the accuracy of the product cost calculation process.

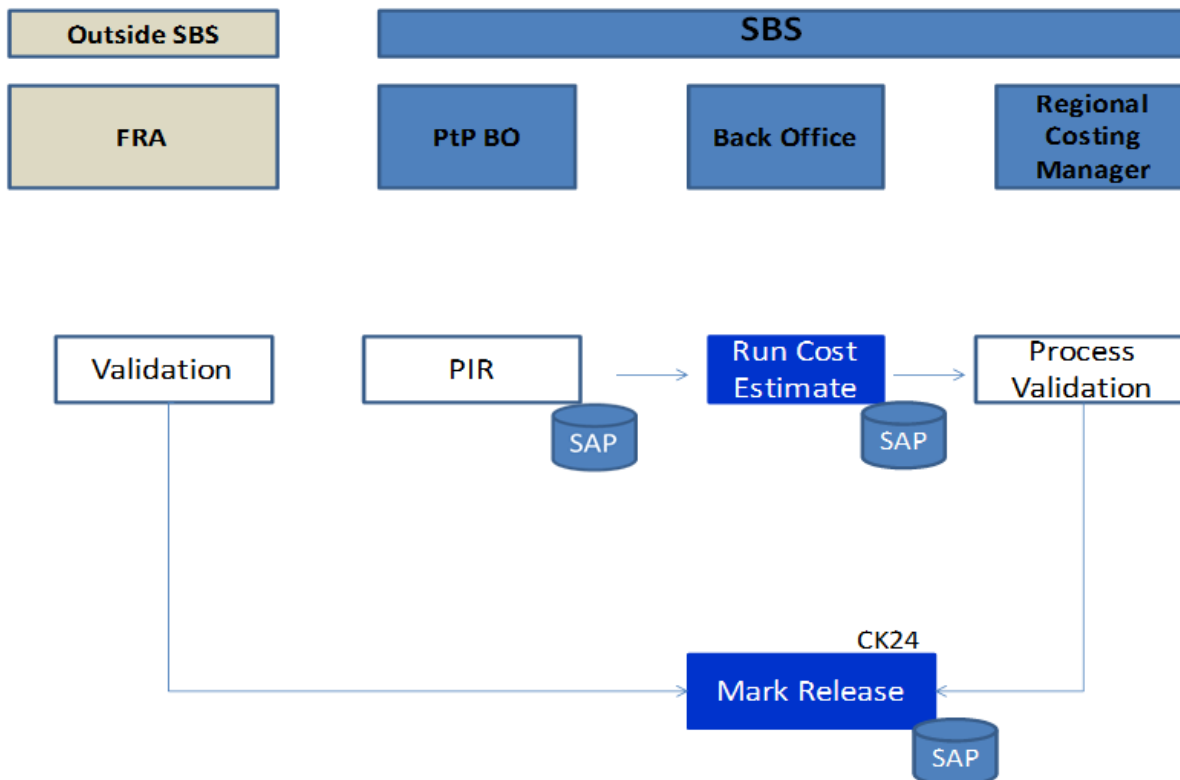
4.5.2 Roles and Responsibilities

The purchased products cost calculation activity implies inputs and responsibilities from three main actors in the organization (SBS), as described below:

- SU MAC is responsible for:
 - checking that all the data is correctly inputted in the system
 - running the cost estimate CK11N
 - notifying by email the regional costing manager that the cost estimate has been run
 - mark release when the costing model is validated by all parties (CK24)
- FRA is responsible for:
 - validating the product cost calculation
 - instruct the RtR BO to mark release

- PSL is responsible for:
 - inputting the PIR data in the system

4.5.3 Process Flowchart



4.6 Manual Costing Products

4.6.1 Key principles

The manual costing process is applied for 3 types of products:

1. The by-products resulting from the manufacturing process; these products can be an important part of the business.
2. The waste and recyclables; these products cannot be used or normally sold, but they might still be of value as second rate raw material or products to be sold on recycling markets.
3. The 7 strategic raw materials defined for specific GBUs (RCS environment) .

The costing of by-products, waste and recyclables is done manually, based on their estimated "Selling Price", and frequency of costing is based on materiality of these types of inventories, but always at least annually.

For specific GBU's the cost of the 7 strategic raw materials is calculated using the Integrated FIFO method.

The following are the main underlying rules governing the costing of manufactured new products:

- Back Office is responsible for inputting the cost estimates in SAP
- The cost calculation is estimated by FRA based on educated estimates
- Integrated FIFO is used to estimate the cost of the 7 raw materials
- The regional costing managers validate and approve the input of the RtR BO

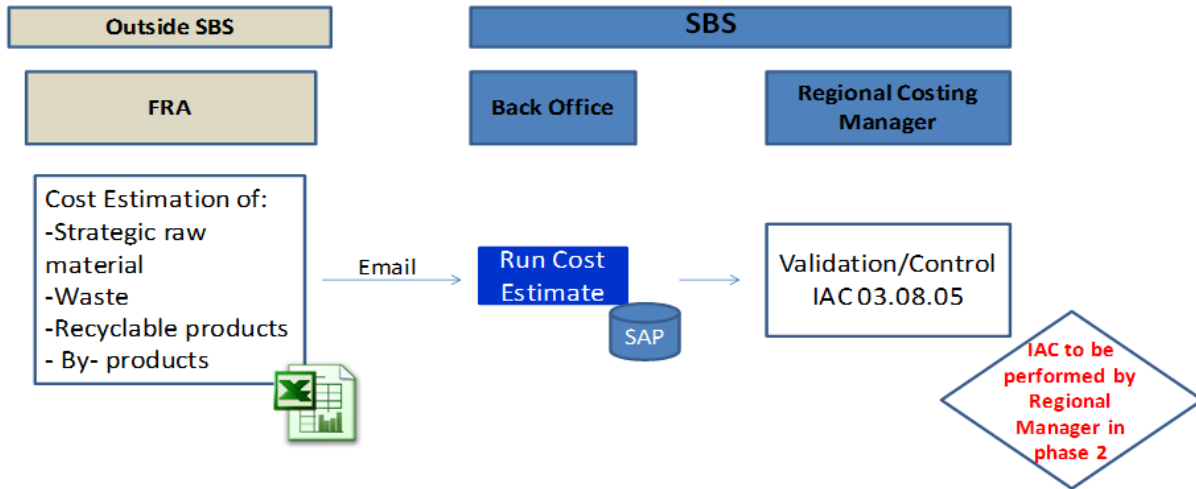
Note: In PF1 the standard cost for waste and recyclables is 0. The by-products are treated as manufactured products.

4.6.2 Roles and Responsibilities

The manual cost calculation activity implies inputs and responsibilities from two main actors in the organization (SBS), as described below:

- SU MAC is responsible for:
 - inputting the data sent by FRA in the system
 - notifying by email the regional costing manager that the cost estimates have been inputted
 - solving any technical problem and performing consistency checks on % of variation
- WW PE Expert is responsible for:
 - solving complex issues and review of manual costing based on knowledge on business and plants

4.6.3 Process Flowcharts



4.7 Manual Costing Products

4.7.1 Key principles

The Product Master Data has to be updated to ensure higher reporting accuracy. The following are the main underlying rules governing the periodic update process:

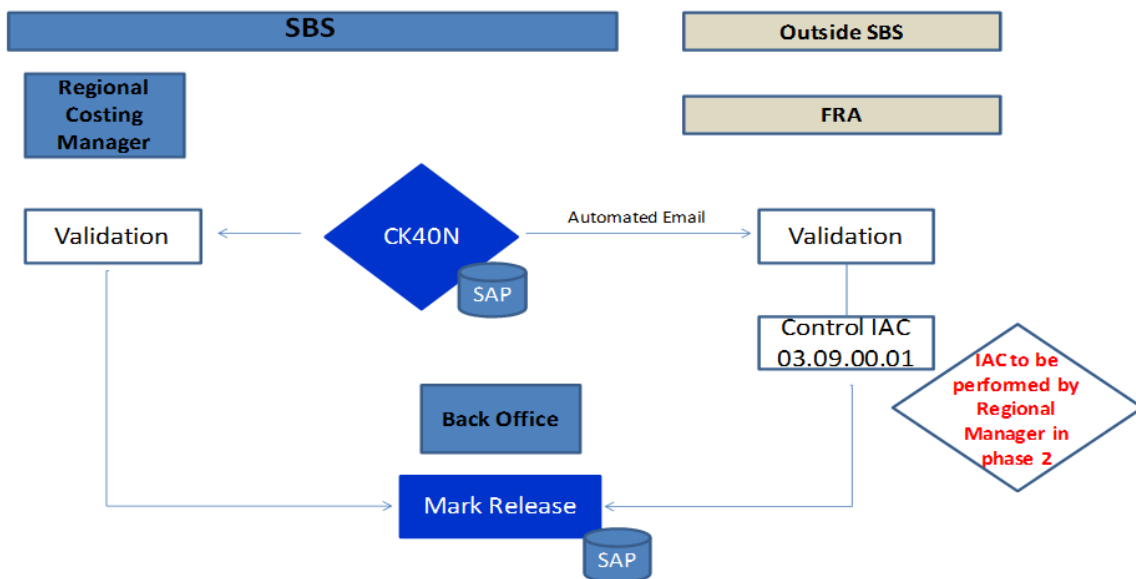
- Costing is run between D-4 and D-1 before closing and automated notifications are sent to FRA and regional costing manager for validation
- FRA and regional costing manager perform internal control IAC 03.09.00.01
- Last validation must be done by end to working day on D-1 before closing
- SU MAC mark release

There are two main differences between the periodic updates at RCS and PF1:

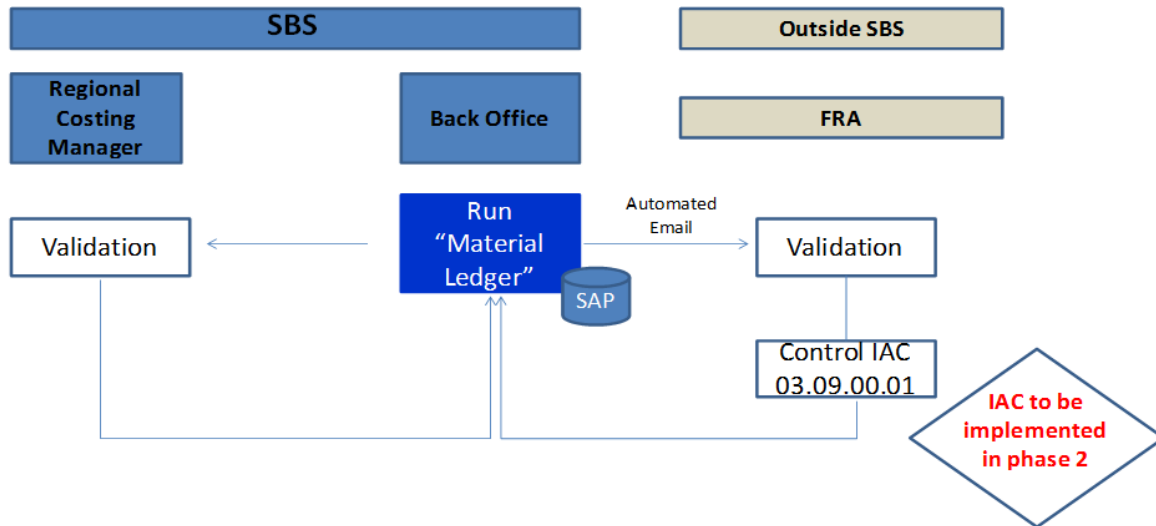
- WP1:
 - The update is done monthly
 - Use of CK40N
 - For WP1 companies where it is legally required, variances are allocated monthly between inventory and cost of sales using "Material Ledgers"
- PF1:
 - The standard update is done yearly
 - Variances are allocated monthly between inventory and cost of sales using "Material Ledgers"

4.7.2 Process Flow charts

RCS



PF1



4.7.3 Roles and Responsibilities

The periodic updates activities imply inputs and responsibilities from two main actors in the organization (SBS), as described below:

- SU MAC is responsible for:
 - running Material Ledger for PF1
 - notifying by email the regional costing manager that the costing has been run
 - marking release when the costing model is validated by all parties
- FRA:
 - validating the product cost calculation
 - instruct the SU MAC to mark the release
 - validating Material Ledger for PF1

4.8 Internal Core Controls

In order to ensure a control on the costing model (Semi-Standard Cost), the Internal Core Control **IAC 01.09** has been established. This control applies only to WP1 today.

- **Control objective:** Costing model is documented, and validated including fixed cost assessment flows and allocation keys.

In order to ensure a control on the manual costing products, the Internal Core Control **IAC 03.08.05** has been established.

- **Control objective:** Check that usage of manual cost calculation and "Commercial Price" is appropriate.

In order to ensure a control on the costing model (CK40N/ Material Ledger), the Internal Core Control **IAC 03.09.00.01** has been established.

- **Control objective:** Cost calculation reports are validated: all items mentioned in BOM are valid.

5. RECORD PRODUCTION TRANSACTION (to be further detailed)

5.1 Perform Activity Allocation (KB21N)

5.1.1 Key Principles

The activity allocation is the input of utilities consumption data based on actual quantity used instead of using standard costs, and of other activities types (maintenance, engineering, IT) as per the request of the site controllers. The roles and responsibilities within SBS still need to be defined.