Activity Based Costing

Activity Based Costing

- ✓ **ABC is more accurate costing methodology**

- ✓ **Focus on indirect cost (Overheads)**

- ✓ **Traces rather than allocate each expenses category to particular cost object**

- ✓ **Makes "Indirect expenses" "direct"**

Steps in ABC

- ✓ **Identify the activities**

- ✓ **Determine cost for each activities**

- ✓ **Determine cost drivers**

- ✓ **Collect activity data**

- ✓ **Calculate product cost**

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How ABC works in SAP

- ✓ **SAP provides standard solutions for ABC**

- ✓ **Activities in ABC is same as business process in SAP, within the business process we have the process of cost allocation i.e. cost driver,**

- ✓ **Cost for each activities can be collected in business process just like a cost object**

- ✓ **Quantities for each activities i.e. quantity for cost driver is the basis for rate calculation of activities,**

- ✓ **Depending on the quantity required for manufacturing of a product the product cost will be computed,**

Continued...

How ABC works in SAP

- ✓ **The booking of Indirect cost i.e. overhead or cost other than direct in nature would be routed through Business Processes**

- ✓ **There are two options available for collection of indirect cost on Business Processes:**

  - ✓ **Booking in cost centre and then allocation to Business processes**

  - ✓ **Direct booking on the business processes**

- ✓ **Allocation of indirect cost from business process to product takes place for following purpose**

  - ✓ **Standard cost estimation at product level**

  - ✓ **Actual cost booking through template allocation process**

Planning in Business Process

- ✓ **The business process planning is same as cost centre planning, the only difference between them is a cost centre may have multiple activity types and the business process can have only one cost driver for allocation of cost,**

- ✓ **At cost element level the planning of input cost and planning of output quantity can be entered in business process based on that plan price of cost driver can be calculated,**

- ✓ **At product level we need to plan and fix the activity quantity for each business process, based on that system will compute the standard cost and also post the actual allocation,**

- ✓ **In business process the concept of revaluation of actual price at production order level is same as we know for cost centres,**

ABC Illustration

Step 1,2,3 are Identification of activities, determine cost for each activity, determine cost drivers, respectively

Activities	Plan Cost	Cost drivers
Set up	10,000	No. of Setups
Machining	40,000	Machining Hours
Receiving	10,000	No. of Receipts
Packing	10,000	No. of Deliveries
Engineering	30,000	Engineering Hours
Total overhead cost	1,00,000	

ABC Illustration-Demo in SAP

Step 1,2,3 are Identification of activities, determine cost for each activity, determine cost drivers,

```
List: Processes                        Date:   09.08.2014      Sei  2      2

Business process group      ABC_BP            Business Process Groups
Cost Element/Group          *
Reporting period            5   to        5   2014
```

Business processes		Actual	Plan	Abs. var.	Var.(%)
SETUP	Set UP	65,000.00	10,000.00	55,000.00	550.00
MACHINING	Machining	115,000.00	40,000.00	75,000.00	187.50
RECEIVING	Receiving	60,000.00	10,000.00	50,000.00	500.00
PACKING	Packing	61,000.00	10,000.00	51,000.00	510.00
ENGINEERING	Engineering	270,000.00	30,000.00	240,000.00	800.00
* Debit		571,000.00	100,000.00	471,000.00	471.00
SETUP	Set UP	65,000.00-	10,000.00-	55,000.00-	550.00
MACHINING	Machining	114,999.89-	40,000.00-	74,999.89-	187.50
RECEIVING	Receiving	60,000.00-	10,000.00-	50,000.00-	500.00
PACKING	Packing	61,000.00-	10,000.00-	51,000.00-	510.00
ENGINEERING	Engineering	269,999.92-	30,000.00-	239,999.92-	800.00
* Credit		570,999.81-	100,000.00-	470,999.81-	471.00
** Over/underabsorption		0.19		0.19	

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ABC Illustration

Step 4 & 5 are collect activity data and calculate product cost

Activities	Cost	Plan Activity for A	Plan Activity for B	Overhead Cost for A	Overhead Cost for B
Set up	10,000	1	3	2,500	7,500
Machining	40,000	100	1900	2,000	38,000
Receiving	10,000	1	3	2,500	7,500
Packing	10,000	1	3	2,500	7,500
Engineering	30,000	500	500	15,000	15,000
Total overhead cost				24,500	75,500
Unit of production				100	950
Overhead cost per unit				245	79.47

ABC Illustration- SAP Demo

Step 4 & 5 are collect activity data and calculate product cost

Material	1960		Product A - ABC
Plant	8101		

Costing Data | Dates | Qty Struct. | Valuation | History | **Costs**

Costs Based On | 1 Costing Lot Size | 100 | EA

Itemization for material 1960 in plant 8101

Itm	I	Resource	Cost Eleme	Σ	Total Value	Quantity	Un
1	E	PROD-ABC ABC-WC ABCLHR	94301020		2,000.00	100.0	HR
2	M	8101 1959			0.00	100	EA
3	X	SETUP	94301910		2,500.00	1	EA
4	X	MACHINING	94301920		2,000.00	100.0	HR
5	X	RECEIVING	94301930		2,500.00	1	EA
6	X	PACKING	94301940		2,500.00	1	EA
7	X	ENGINEERING	94301950		15,000.00	500	EA
					26,500.00		

Material	1961		Product B - ABC
Plant	8101		

Costing Data | Dates | Qty Struct. | Valuation | History | **Costs**

Costs Based On | 1 Costing Lot Size | 950 | EA

Itemization for material 1961 in plant 8101

Itm	I	Resource	Cost Elem.	Σ	Total Value	Quantity	Un
1	E	PROD-ABC ABC-WC ABCLHR	94301020		38,000.00	1,900.0	HR
2	M	8101 1959			0.00	950	EA
3	X	SETUP	94301910		7,500.00	3	EA
4	X	MACHINING	94301920		38,000.00	1,900.0	HR
5	X	RECEIVING	94301930		7,500.00	3	EA
6	X	PACKING	94301940		7,500.00	3	EA
7	X	ENGINEERING	94301950		15,000.00	500	EA
					113,500.00		

Traditional Cost Accounting

Allocation of indirect expenses/overheads to products is based on volume based measures e.g. labor hours , machine hours , (assumption is relation between overhead and volume based measures)

Product	A	B
Direct Labor Hour	1 / unit	2 / unit
Rate/Labor Hour (Rs)	20	20
Direct Labor cost	20	40
Production unit	100	950
Total overhead cost (Rs)	1,00,000	
Total Dir.Lab. Hours	2000 Hours	
Overhead cost / Dir.Lab. Hours	1,00,000 / 2000=50	
Overhead allocation	50	100

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Traditional Cost Accounting

Allocation of indirect expenses/overheads to products is based on volume based measures e.g. labor hours ,

Comparison of product cost

Comparison of product cost between
Traditional Cost Accounting (TCA) and Activity Based Costing (ABC)

Product A	TCA	ABC
Overhead Cost	50	245
Direct Labor cost	20	20
Total product cost	70	265
Product B		
Overhead Cost	100	79.47
Direct Labor cost	40	40
Total product cost	140	119.47

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Facts derivation out of ABC

Product A	TCA	ABC
Overhead Cost	50	245
Direct Labor cost	20	20
Total product cost	70	265
Product B		
Overhead Cost	100	79.47
Direct Labor cost	40	40
Total product cost	140	119.47

✓**Contribution for product A is much lower than B and hence product A is money losers**

✓**Production facility for product A is under utilized and it results into high overhead cost burden on existing production of product A**

✓**Opportunity cost loss for product A is substantial**

Summarization for ABC in SAP

- ✓ **Identification of direct cost and indirect cost from total cost of product**

- ✓ **For indirect cost we need to find out the process/activities, and cost drivers for that process**

- ✓ **Planning of activity quantity for processes**

- ✓ **Existing process of standard cost estimation to be reviewed and cost allocation for indirect cost to be deactivated and ABC way of cost allocation to be configured and tested,**

- ✓ **Review of calculated cost through ABC**

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