

Practical Guide to SAP® CO Templates

- Implement and properly use templates
- Scenarios for using templates in SAP Product Costing and Cost Object Controlling
- Template configuration tasks
- Easy cost planning applications

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2 Templates in product costing

Templates are made up of rows and columns that are used to calculate allocation quantities. Each row of a template defines an allocation for cost objects using calculations and characteristics assigned to the columns. Product cost estimates can use templates to generate detailed cost allocations from cost centers and business processes that are much more specific than other standard allocation techniques. In looking at how product cost estimates use templates, we are introduced to the concepts of how rows and columns work together to generate the allocations.

2.1 Costing scenario

Chapter 1 introduced a process for using templates to allocate activities to a cost center. The standard way for assigning activity costs in product costing is through the costing definition of work centers that are used in a routing. Cost center/activity type costs are allocated to the product using the formulas assigned to the work center based on the lot size quantity assigned to the material cost estimate. This works well for picking up machine and labor costs, but other overhead costs cannot be determined in detail without using templates. They can calculate activity quantities that are based on specific characteristics associated with the material and the order. The following product costing scenario further demonstrates the power of templates and template allocations.

Plant P100 makes widgets. At the beginning of each production order, the production support department spends two hours setting up the machine. After every 100 widgets are made, the production support department needs to recalibrate the machine. This takes 30 minutes. A finished widget is packed at the end of the process. Packaging requirements vary based on the weight of the widget and whether the widget is declared as a dangerous good. A maximum of 250 kg can be loaded onto a pallet. If a widget is declared a dangerous good, then a special pallet is required for shipping purposes. This special pallet is not only more expensive than standard pallets, but also requires extra handling costs. Quality

inspection is performed for each widget. This requires looking at each individual component as well as the final product, and takes half a minute per material. Any widget components that are considered dangerous goods require additional inspection. This inspection takes 1 minute per component.

Three cost centers are used when manufacturing widgets. Cost center 1301 is the manufacturing cost center and the work center WMAKER (Widget Maker) is assigned to that cost center. There are two activity types used for picking up overhead costs from 1301. These are 1000 (machine hours), and 2000 (labor hours). Cost center 1501 is the manufacturing support cost center. This cost center is responsible for machine setups and calibrations. Activity type 9010 represents the cost of 1 hour of services from this cost center. Cost center 1601 is the quality control cost center and is responsible for inspection of the widget components. Activity type 9020 represents the cost of 1 hour of inspection time. Two packaging business processes are used to represent the cost of palletizing and shipping the widgets. Plan costs include both the cost of the pallet and the labor and supply cost associated with preparing the widgets for shipment. Business process BP001 is associated with standard pallets. Business process BP002 represents special pallets that are reguired when handling dangerous goods.

The material cost estimate for the widgets should not only include the cost of the components, but also the costs of manufacturing, machine setup, quality inspections, and shipping. The manufacturing cost is determined from the formulas and activity types assigned to the WMAKER work center. The remaining costs are determined by using the MANUFACT template.

2.2 Cost estimate

Material A-100 is a widget that has two components. One B-100 and one B-101 are assembled to make one A-100 unit. The net weight of the final product is 4.1 kg, which is defined on the BASIC 1 tab of the material master, as shown in Figure 2.1.

Dimensions/EANs			
Gross Weight	4.100	Weight Unit	KG
Net Weight	4.100		

Figure 2.1: A-100 weights

The dangerous goods profile is defined on the BASIC 2 tab (see Figure 2.2). Here, it is blank, which indicates that this material is not classified as a dangerous good.

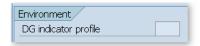


Figure 2.2: A-100 dangerous goods profile

The costing lot size as defined on the COSTING 1 tab is 1,000 and the overhead group assignment is WIDGET (see Figure 2.3). Overhead key WIDGET is assigned to that overhead group.

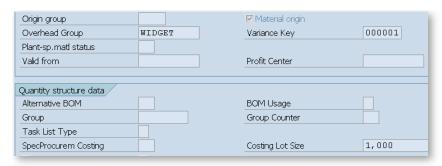


Figure 2.3: A-100 overhead group and costing lot size

A template MANUFACT has been defined to account for the special costing scenarios, as defined in Section 2.1. A cost estimate has been created for material A-100 in plant P100.

	_							_	1 000		
Costs Based On Cos					sting Lot Size		<u> </u>	1,000			
	<u>A</u>	9		70 20	‰ [1		1		話		
(temiz	zati	on	for mater	rial A-100 in p	olant P	100					
Itml	Vο	I	Resource	3		Cost Element	Ε	Total Value	Currncy	Quantity	Un
	1	E	1301	WMAKER	1000	943001		10,000.00	USD	50.00	Н
_	2	Е	1301	WMAKER	2000	943002		3,500.00	USD	100.00	Н
U	3	М	P100 B-1	100		400000		5,000.00	USD	1,000	EΑ
	4	М	P100 B-1	.01		400000		9,000.00	USD	1,000	EΑ
2	5	Е	1501	9010)	943160		337.50	USD	4.50	Н
Ø	6	Е	1501	9010)	943160		150.00	USD	2.00	Н
2 8 4 6	7	Е	1601	9020)	943170		750.02	USD	16.667	Н
Ô	8	Χ	BP001			943100		170.00	USD	17	EΑ
							- 2	28,907.52	USD		

Figure 2.4: A-100 cost estimate

The cost estimate itemization is shown in Figure 2.4 and is explained below:

- Items 1–4 on the itemization are the costs associated with the route and the bill of material (BOM).
- 2 Item 5 on the cost estimate is the recalibration cost using activity type 9010 from the cost center manufacturing support cost center 1501. After the first 100 items are produced, recalibration should begin. Because the costing size is 1,000, there should be 9 recalibration activities, each taking 30 minutes. This results in 4.5 hours of recalibration work for 1,000 widgets.
- 3 Item 6 is the initial machine setup for the run of 1,000 widgets. This process takes 2 hours. The same cost center and activity type is used for the fixed setup time and for the recalibration.
- 4 Item 7 is the inspection time. The activity type is from the quality control cost center. Because this is not considered a dangerous good, the component inspection only takes 30 seconds per material. There are 2 components in the BOM and this accounts for 1 minute of inspection for each widget. The activity time is therefore 1,000 minutes, which equates to 16.667 hours.

S Item 8 is the packaging cost. The dangerous goods profile is blank, so the standard pallet business process (BP001) is used in the cost estimate. This business process accounts for both the cost of the pallet and the processing that is required for preparing the pallet for shipment. The net weight of the material is 4.1 kg. The total number of widgets that can be assigned to a pallet is 60.98 (250/4.1). A partial widget does not make sense, and so the most number of widgets that can be put on a pallet is 60. Therefore, the quantity of pallets required for 1,000 widgets is 16.667 (1,000/60). However, since a fraction of a pallet cannot be used, 16.667 is rounded up to 17.

2.3 Connecting the template to the cost estimate

The result of the cost estimate in Section 2.2 matched the specifications for packaging, setup, recalibration, and testing. This was all accomplished by using the MANUFACT template. Section 1.3.3 discussed how templates need to be connected to the receiver objects so that their calculations can be used. In the case of cost centers, this is done by assigning the template directly to the applicable cost centers through master data maintenance. A more flexible approach has been developed for dealing with objects where the master data is less permanent, such as for orders or material cost estimates. Overhead costing sheets were already set up to use overhead keys assigned to the material master in order for them to be accessed for product costing. This same strategy was adapted for use with template allocations. The use of an overhead key is much more generic than directly assigning a template to the material and can point to different overhead structures depending on plant and costing variants.

Costing sheets are accessible to cost estimates through the valuation variant assigned to the costing variant of the cost estimate. The costing sheet is assigned to the valuation variant of the cost estimate; this is covered in Section 4.5. Because this connection already existed, assigning the template to a specific costing sheet also enables it to be accessed by the cost estimate. Section 4.4 provides details of the configuration using transaction KTPF through the use of overhead keys. Different overhead keys can be set up to connect to different templates, making it possible to use different sets of calculations depending on the material being costed.

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