

Chapter 4 Questions

1. **Spartacus & Bellows** manufactures two products, Alpha and Beta. The business's directors have decided to trial an Activity-Based Costing (ABC) system. The finance director produces the following list of cost drivers, overhead cost allocations to each driver and an estimate of quantities for the 2011 financial year:

Activity	Cost driver	Total	Product Alpha	Product Beta	Total cost per cost driver €
Planned units of production			2,000	2,000	
Machining	Machine hours	6,000	4,000	2,000	76,800
Packing	Labour hours	1,000	500	500	8,000
Materials ordering	No. of orders	100	60	40	10,750
Materials issues	No. of issues	25	17	8	2,600
Machine set up	No. of hours used in set up	80	43	37	12,960
Total					111,110

A unit of product Alpha uses two machine hours, whereas a unit of product Beta uses one machine hour.

Required: Calculate the overhead cost of one unit of product Alpha and one unit of product Beta using the new ABC costing system.

2. Identify and explain three significant constraints and problems that are associated with the implementation of ABC.

Chapter 4 Answers

1. Spartacus & Bellows

Cost per unit of cost driver:

Activity		Cost amount €
Machining	<u>Overhead</u> = <u>76,800</u>	€12.80 per machine hour
	Machine hours 6,000	
Packing	<u>Overhead</u> = <u>8,000</u>	€8.00 per labour hour
	Labour hours 1,000	
Materials ordering	<u>Overhead</u> = <u>10,750</u>	€107.50 per order
	No. of orders 100	
Materials issue	<u>Overhead</u> = <u>2,600</u>	€104.00 per issue
	No. of issues 25	
Machine set up	<u>Overhead</u> = <u>12,960</u>	€162.00 per hour
	No of hours 80	

Allocation of overhead between product Alpha and product Beta:

		Product		Product
		Alpha		Beta
		€		€
Machining	4,000 x €12.80	51,200	2,000 x €12.80	25,600

Packing	500 x €8.00	4,000	500 x €8.00	4,000
Materials ordering	60 x €107.50	6,450	40 x €107.50	4,300
Materials issues	17 x €104.00	1,768	8 x €104.00	832
Machine set up	43 x €162.00	6,966	37 x €162.00	5,994
Total		70,384		40,726

2. Constraints and problems in the implementation of ABC

- a) One of the major problems with ABC is the expense. There are high initial and on-going costs including, for example, the cost of new software, consultancy time and reorganisation and redundancy costs. Sometimes, the perceived benefits of ABC systems do not outweigh the considerable costs involved.
- b) Resistance by staff. New systems are often perceived as a threat by staff members, especially where the system is claimed to be more efficient, because they foresee (sometimes correctly) that redundancies might ensue. If staff members are resistant to a proposed change in systems they may fail to co-operate fully or may even attempt to sabotage the implementation.
- c) It can be difficult to ensure that ABC is implemented effectively in complex organisations. There is a trade-off between the number of cost drivers on the one hand and cost and efficiency on the other. A high number of cost drivers may well produce a more accurate result, but it will be expensive to gather information about them. Conversely, if the number of cost drivers is kept at a low level, the results of the ABC system may not be particularly accurate.