

# ACCAspace

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## ACCA F2

### Management Accounting (MA)

### 管理会计

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## Part E Performance measurement overview

1. Mission statement
2. Critical success factor
3. Key performance indicator
4. Financial performance measurement
5. Non-financial performance measures
6. 3E
7. The balanced scorecard
8. External consideration



## Part E Performance measurement-application

1. efficiency, activity and capacity ratio
2. contract costing
3. Performance measures for servicing
4. benchmarking
5. Cost reduction
6. Value analysis



## Part E Performance measurement-application

### 1. Performance measures for manufacturing

#### 1.1 efficiency, activity and capacity ratio

Standard hours are useful in computing levels of **efficiency, activity and capacity**. Any management accounting reports involving budgets and variance analysis should incorporate control ratios. The three main control ratios are the efficiency, capacity and activity ratios.

- (a) **The capacity ratio compares actual hours worked and budgeted hours, and measures the extent to which planned utilisation has been achieved.** (Utilisation in this context refers to the proportion of available time that was actually worked.)
- (b) **The activity or production volume ratio compares the number of standard hours to the actual work produced and budgeted hours.**
- (c) **The efficiency ratio measures the efficiency of the labour force by comparing equivalent standard hours for work produced and actual hours worked.**



## Part E Performance measurement-application

Given the following information about Nico for quarter 1 of 20X5, calculate a capacity ratio, an activity ratio and an efficiency ratio and explain their meaning.

Budgeted hours	1,100 standard hours
Standard hours produced	1,125 standard hours
Actual hours worked	1,200

### 1.8 Solution

$$\text{Capacity ratio} = \frac{\text{Actual hours worked}}{\text{Budgeted hours}} \times 100\% = \frac{1,200}{1,100} \times 100\% = 109\%$$

$$\text{Activity ratio} = \frac{\text{Standard hours produced}}{\text{Budgeted hours}} \times 100\% = \frac{1,125}{1,100} \times 100\% = 102\%$$

The overall activity or production volume for the quarter was 2% greater than forecast. This was achieved by a 9% increase in capacity.

$$\text{Efficiency ratio} = \frac{\text{Standard hours produced}}{\text{Actual hours worked}} \times 100\% = \frac{1,125}{1,200} \times 100\% = 94\%$$

The labour force worked 6% below standard levels of efficiency.



## Part E Performance measurement-application

### 1.2 contract costing

$$\frac{\text{value of work certified to date}}{\text{contract price}} \times \text{overall expected profit}$$

Or

$$\frac{\text{cost incurred to date}}{\text{total expected costs to completion}} \times \text{overall expected profit}$$



## Part E Performance measurement-application

### 2. Performance measures for servicing

Dimension	Type	Example of measure
Competitive performance	Competitor focused	Market share Prices Product features
	Customer focused	Customer retention Customer numbers
Financial performance	Profitability	Profit Working capital cycle
	Liquidity	Bad debts



## Part E Performance measurement-application

<b>Quality of service</b>	<b>Reliability</b>  <b>Responsiveness</b>  <b>Courtesy</b>  <b>Competence</b>  <b>Availability</b>  <b>Accessibility</b>	<b>Punctuality</b> Dependability of service and staff  Response times Number of phone lines Delivery speed (for goods ordered online or by phone)  Politeness Respect to customers  Staff skill Expertise Knowledge Diligence  Product availability Product range  Ease of finding site
<b>Flexibility</b>	<b>Delivery speed</b>  <b>Volume</b>  <b>Specification</b>	Customer waiting time Time from customer enquiry to job completion  Spare capacity to deal with peak times  Number of product lines Range of staff





## Part E Performance measurement-application

<b>Resource utilisation</b> (productivity)	Human resources  Premises	Labour hours worked  Skill levels of work performed by staff grade  % of area used for value adding services, or customer-facing services
<b>Innovation</b>	Cost  Speed	Development cost per new product line / service  Time taken from: <ul style="list-style-type: none"><li>- concept to prototype launch</li><li>- concept to offered to customers</li></ul>



## Part E Performance measurement-application

### 3. Benchmarking

Benchmarking is an attempt to identify best practices and, by comparison of operations, to achieve improved performance.

Type	Description
Internal benchmarking	A method of comparing one operating unit or function with another within the same industry
Functional benchmarking	Internal functions are compared with those of the best external practitioners of those functions, regardless of the industry they are in (also known as <b>operational</b> or <b>generic</b> benchmarking)
Competitive benchmarking	Information is gathered about direct competitors, through techniques such as reverse engineering*
Strategic benchmarking	A type of competitive benchmarking aimed at strategic action and organisational change



## Part E Cost reduction and value enhancement

### 4. Cost reduction methods

#### 4.1 variety reduction

#### 4.2 improving efficiency

#### 4.3 material cost reduction

- ❑ Bulk purchases
- ❑ Use standard material rather than special material
- ❑ Bid for suppliers



## Part E Cost reduction and value enhancement

### 4.4 labor cost reduction

-Labor efficiency could be improved by changing working method (work study or an organization and method study )

#### 4.4.1 Work study

**Work study** is a means of raising the production efficiency (productivity) of an operating unit by the reorganisation of work. There are two main parts to work study: method study and work measurement.

**Method study** is the systematic recording and critical examination of existing and proposed ways of doing work in order to develop and apply easier and more effective methods, and reduce costs.

**Work measurement** involves establishing the time for a qualified worker to carry out a specified job at a specified level of performance.



## Part E Cost reduction and value enhancement

### 4.4.2 organization and methods (O & M)

Organisation and methods (O&M) is a term for techniques, including method study and work measurement, that are used to examine clerical, administrative and management procedures in order to make improvements.



## Part E Cost reduction and value enhancement

### 4.5 Other methods

- using ABC to identify non-value added activities
- using JIT to reduce inventory holding cost
- using standard cost to control cost
- using target cost and life cycle costing



## Part E Cost reduction and value enhancement

### 5. Value analysis

#### 5.1 Four aspects of value

**Cost value** is the cost of producing and selling an item.

**Exchange value** is the market value of the product or service.

**Use value** is what the article does; the purposes it fulfils.

**Esteem value** is the prestige the customer attaches to the product.



## Part E Cost reduction and value enhancement

### 5.2 Value analysis

#### 5.2.1 Introduction

**Value analysis** is a planned, scientific approach to cost reduction, which reviews the material composition of a product and the product's design so that modifications and improvements can be made which do not reduce the value of the product to the customer or the user.

**Value engineering** is the application of similar techniques to new products.





## Part E Cost reduction and value enhancement

### 5.2.2 Benefits of value analysis

Area	Method
Product design	At the <b>design stage</b> VA is called <b>value engineering</b> . The designer should be cost conscious and avoid unnecessary complications. <b>Simple product design</b> can avoid production and quality control problems, thereby resulting in lower costs.
Components and material costs	The purchasing department should beware of lapsing into habit with routine buying decisions. Buyers ought to be <b>fully aware</b> of technology changes, and significant changes in material prices that new technology creates. The purchasing department has a crucial role to play in reducing costs and improving value by obtaining the desired quality materials at the lowest possible price.
Production methods	These ought to be reviewed continually, on a product by product basis, especially with changing technology.



## Part E Cost reduction and value enhancement

### 5.2.3 Steps for value analysis

#### Step 1

**Selecting a product or service for study.** The product selected should be one which accounts for a high proportion of the organisation's costs, since the **greatest cost savings should be obtainable from high cost areas.** The choice should also take into account the expected future life of the product and the stage of its 'life cycle' that it has reached. A product reaching the end of its marketable life is unlikely to offer scope for substantial savings, unless cost reduction measures would also extend the product's life.

#### Step 2

**Obtaining and recording information.** The questions to be asked include: What is the

product or service supposed to do? Does it succeed? What are the costs of the product or service? Are there alternative ways of making or providing it? What do these alternatives cost?



## Part E Cost reduction and value enhancement

### Step 3

**Analysing the information and evaluating the product.** Each aspect of the product or service should be evaluated. Any cost reductions should be achieved without the loss of use or esteem value. (Or at least, cost savings must exceed any loss in value suffered.) The type of questions to be asked and answered in the analysis stage are as follows.

- (a) Are all the parts necessary?
- (b) Can the parts be obtained or made at a lower cost?
- (c) Can standardised parts be used?
- (d) Are all the features of the product or service necessary?
- (e) Can any of the features be incorporated at a lower cost?
- (f) Does the value provided by each feature justify its cost?
- (g) Can the product be made or the service performed at a lower cost?



## Part E Cost reduction and value enhancement

- Step 4** **Considering alternatives.** From the analysis, a variety of options can be devised. This is the **'new ideas' stage** of the study, and alternative options would mix ideas for eliminating unnecessary parts or features, combining several features into one, standardising certain components or features, or introducing new methods of operation or new sources of supply (for example external purchase of components instead of in-house manufacture). New advances in technology might be considered, and a creative approach should underlie this phase of the exercise.
- Step 5** **Selection of the least-cost alternative.** The evaluation of each alternative should be recorded, and costs (and other aspects of value) compared.
- Step 6** **Recommendation.** The **preferred alternative** should then be recommended to the **decision makers for approval.** The VA team itself will not have the authority to decide whether or not a cost reduction proposal should be implemented.
- Step 7** **Implementation and follow-up.** Once a VA proposal is approved and accepted, its **implementation must be properly planned and co-ordinated.** The VA team should review the implementation and, where appropriate, improve the new product or method in the light of practical experience.



## Part E Performance measurement-application

# Exercise



## Part E Performance measurement-application

Q1. X Co. budgeted to make 1000units in May using 2000 hours of direct labor. Actual output was 1100units which took 2300 hours.

Production/volume ratio.



## Part E Cost reduction and value enhancement

Q2. The following statements are made about value analysis. Which two of them are correct ?

- (1) It seeks the lowest cost method of achieving a desired function.
- (2) It always results in inferior quality.
- (3) It ignores esteem value.
- (4) It is applicable to both physical products and services.

- A. 14
- B. 12
- C. 34
- D. 23

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