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THE ROLE OF COMPUTERS IN BUSINESS MANAGEMENT^{1/}

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^{1/} The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Secretariat of UNIDO. This paper has been reproduced without formal editing.

Introduction

It is agreed and indicated by nearly all surveys conducted, that Planning, Measurement and Control, is a major management function. Not only must every manager plan, but it is a primary responsibility of management at all levels in an organization. The nature and scope of planning responsibility will vary; at the highest corporate levels rests the duty of management to establish the fundamental direction of the enterprise and lay out strategies to achieve objectives. At the lowest levels of management practically all planning efforts are short-range management and operations oriented. In between these extremes the nature of business management duties changes with level, scope of managerial authority, and company organization.

The need for computerized tools is obvious, but the involvement of all management levels creates some basic requirements, which must be considered now and even more in the future by all systems offered to aid the Business Management process. These basic requirements are:

- o The systems must be easy to use and the methodology implemented easy to learn

- o This implied:
 - Flexibility and quality of the systems
 - Flexibility must be provided, to satisfy users of different sophistication levels
 - Scope-of-function must be such that problems can be solved in a variety of combinations of techniques -- in a shorter time span.

Business Management and its applications

Business Management is not represented by a specific technique; it is a wide application area which uses a large number of techniques and methods ranging from very simple ones to the more sophisticated.

It is the process which takes place in almost every enterprise at the highest level of executive decision-making as well as at middle and lower management levels.

Business Management is the planning, measurement, and control of an organization. Business Planning is the planning part of Business Management and includes the planning functions of Corporate, Financial, Resource and Personnel Management.

The major business function components of Business Management are:

- o Corporate Planning
 - Long-range Strategic Planning
 - Medium-range Tactical Planning
 - Short-range Operational and Budget Planning and Control

- o Finance and Accounting
 - Financial Management - Financial Planning - Financial Accounting
 - Cost Accounting

Corporate Planning is the formalized process of developing objectives for the corporation and its subparts, as well as developing and evaluating alternative courses of action. This is done on the basis of a systematic evaluation of external threats and the opportunities and the internal assessment

of strengths and weaknesses.

Corporate planning takes various forms depending on the time-scale and level of management involved.

In general, we can consider the following subdivisions:

- o Strategic Planning - (long term carried out by Top Management). The determination of objectives and the specification of strategies to achieve these objectives.
- o Tactical Planning - (medium-term carried out by Middle Management). Involves the detailed planning to achieve the functional objectives set by the strategic plan.
- o Operational Planning - (short-term carried out by Operational Management). Covers the area of detailed plans to meet short-term goals developed in tactical planning.

Financial Management is a major business function, the performance of which is often spread across organizational lines. It is primarily concerned with the monetary resources of the organization, while Manpower Management is concerned primarily with the human resource of the organization.

Viewing business functions as a hierarchy, Financial Management, is subordinate to Business Planning, which directs the use of all the resources of the organization on a strategic plan. It is on a par with Manpower Management, Physical Assets Management, Production/Service and other similar functions.

Financial Planning, Financial Operations, and Financial Analysis and Control represents one way in which financial management activities tend to group together functionally. Financial Planning provides intermediate and detailed budgets allocation the resources of the organization; Financial Operations performs and accounts for the financial business functions of the organization; Financial Analysis and Control examines the results and suggests

corrective measures for both Operations and Planning to implement.

These three general functions encompass the following planning, operations and control functions.

1. Financial Planning

- a. Revenue Planning**
- b. Expense Planning**
- c. Working Capital Planning**
- d. Long Term Capital Planning**

2. Financial Operations

- a. Payroll**
- b. Billing**
- c. Inventory Accounting**
- d. Receivables**
- e. Payables**
- f. Fixed Asset Accounting**
- g. Cash Management**
- h. Investment Management**
- i. Responsibility Accounting**

Business Management and the use of computers

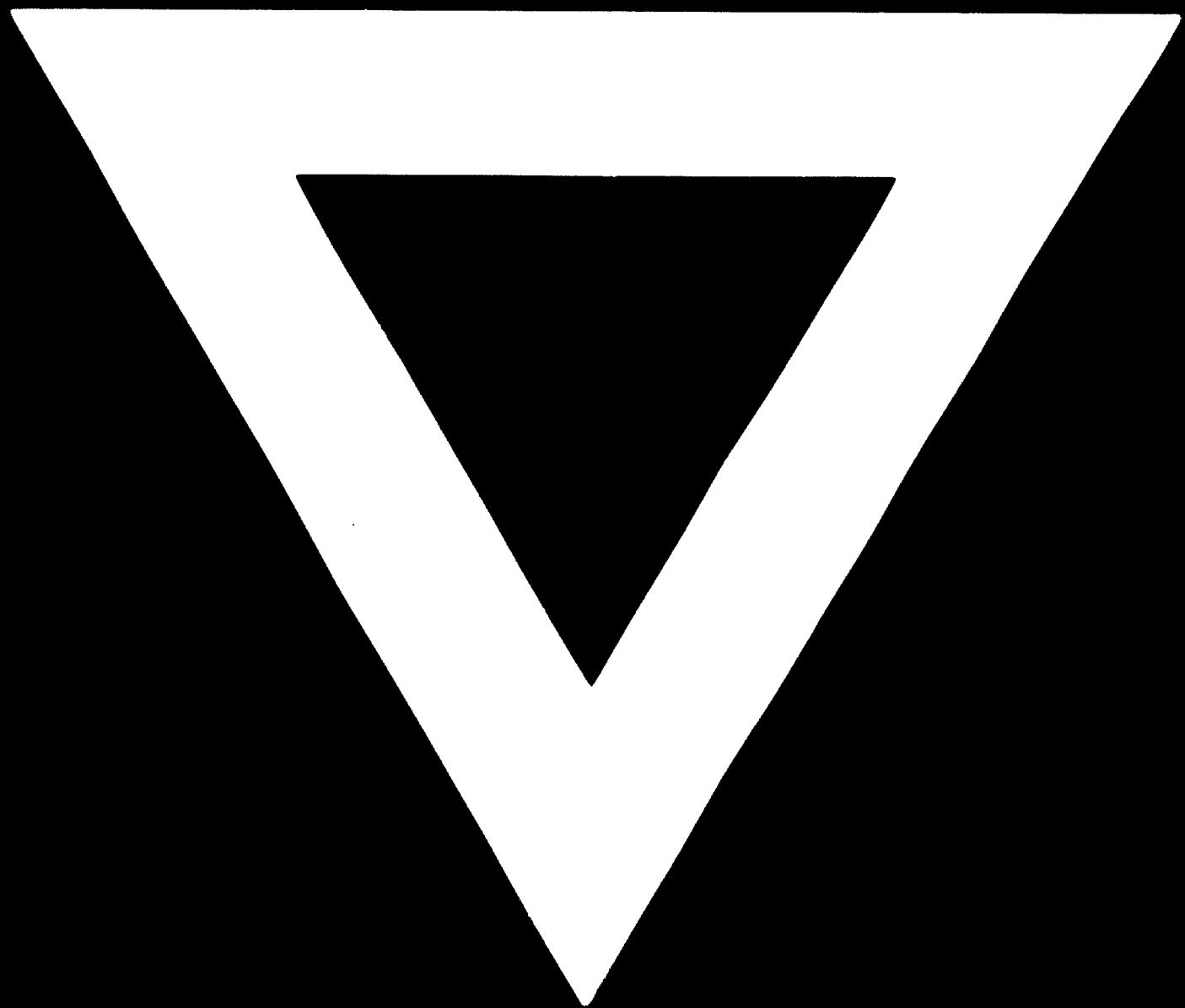
The different applications in Business Management are highly interrelated. Therefore it is useful to use a Business Data Base to integrate these different applications.

They require different types of systems support based on the amount of data involved, and the type of mathematical calculations necessary. Accounting is, from a systems point of view, the allocation of data to Cost Centers or Accounts, and the consolidation in specific hierarchies. It is transaction oriented, and the calculation techniques are almost common and mostly predefined. Therefore a computerized accounting system can consist of almost completely predefined data structures and calculation procedures which do not require a large effort for adjustment to the particular situation of a company. This is different in Business Planning. Short-range Planning - Budgeting - must reflect the accounting data structure in more or less the same way in order to make comparisons of actual and planned data to perform a business control, but the techniques to allocate budgets to the different functions and responsibility centers and the desired reports can differ from company to company. The similarity of the techniques is confined to basic functions, like discounting routines, depreciation, general routines on balance sheet calculations etc. Long-range and Resource Planning uses mostly simulation or optimization models which require a lower amount of data, but higher sophisticated calculation techniques, usually statistical techniques to develop these models

A number of these integrated systems are now in use, and their usage has grown considerably over the last years. One of these systems will be discussed in more detail on a specific example.



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