

PROFESSIONAL ACCOUNTANT The Challenges of the Next Decade (AGENDA 2015 PLUS)

Prof. B. Omane-Antwi

ABSTRACT

In the next 10 years, professional accountants will need to modify the way they perceive and carry out their mission. They will have to join the ranks of decision makers while keeping their roles of support and constructive critic to managers. They will need to extend their information management skills to the handling of non financial data to support a new definition of performance that is reflected in the Total Quality Management and value chain cultures.

The mission will change because the context or management has changed, e.g., flat organizations, fuzzy organizational boundaries reflecting partnerships with customers and suppliers, globalization, and a new emphasis on service activities.

The time horizons the professional accountant is used to will no longer be applicable. Such changes as target cost management, life-cycle thinking, and anticipatory crisis management are some of the reasons that will require professional accountants to become proactively involved in "managing for the future."

Based on a greater attention to the understanding and analysis of the causes of resource consumption, the professional accountant will become more interventionist and will be involved in both organizational engineering and becoming a change agent in the whole product cycle, from strategic intent identification to strategic performance analysis, through change management and communication.

The picture depicted of the professional accountant of the year 2015 plus is radically different from what

is seen today, Training for these professionals will need to encompass this new mission in its new context. Managers also will have to embrace and value the rich potential that resides in their close cooperation with this "new" professional accountant.

Key words: Professional accountant, decision accountant, interventionist accountant, cost accounting, managerial accounting, flat organizations, fuzzy organizational boundaries, contingency theory, agency theory, human information processing, total quality management, performance measurement, team-based organization, hierarchical model, matrix organization, networking organization, globalization, target cost management, responsibility accounting, zero-based budgeting (ZBB), lifecycle thinking, co-responsibility, information highways, tableau de bord, information Economics.

INTRODUCTION

Accounting in the year 2015 (the millennium challenge goal's target year) will be different from what is practiced today.

The last decade has seen a major evolution of manufacturing and sourcing with, for example, lean manufacturing, Total Quality Management, and sourcing partnerships. Accounting has been lagging behind, holding onto a model defined in the '50s/'60s. It is time to chart the course of and evolution that is budding in many leading-edge companies in Europe across the Atlantic as well as in Africa. This paper will be both descriptive and normative, in that it will extrapolate from the

author's experience of "best practices" in a myriad of businesses to suggest how accounting could (and should) fill the new demands formulated by managers in the current competitive environment.

It is important to bear in mind that if professional accountants do not give satisfactory answers to the needs of managers in the coming decade, engineers in information technology, quality managers, computer and software experts, sociologists, psychologists and theologians interested in human development and team work will step in and fulfill these needs.

Professional accountants must become bilingual. Bilingual in that they must "speak" both accounting and management. They have to push the term "cost accounting" to the background and focus clearly on "decision accounting". In the later expression, the word we emphasize is management not accounting. Management is the purpose; accounting is a process and a technique. Product costing or responsibility centre costing can no longer be the key issue for most professional accountants. Rather, the focal point of their attention would be to make sure that the cost, all the costs, is appropriate for the strategy that is being implemented. It means that they must identify and contribute to the management of the causes of the existence of all costs.

In short, professional accountants over the next decade will need to become part of management and decision-making. This statement might be seen by some as imperialist challenges to the jobs of managers and a threat to the sacrosanct separation between those who keep the accounts and those who manage. It is neither. Just as in the '60s the new wave brought movie critics and reviewers behind the camera to put their concepts to the test, the professional accountant will in the next decade necessarily mix the roles of information evaluator and decision-maker (or at least participant in decision-making), because, as we will see, trans-functional management requires it.

Our argument will be made in six sections. The first five describing the changes that will be required in defining and carrying out the professional accountants' mission, are;

1. the current state of accounting

2. the changing mission of the professional accountant;
3. the changing context of that mission;
4. new time horizons for that mission;
5. a changing focus for the mission.

The sixth section will present, in a synthetic way, a view of the key roles of the new professional accountants in their organizational engineering role and in their managerial roles.

1. THE CURRENT STATE OF ACCOUNTING

The current state of accounting is not reflected in a unified theory or a coherent set of practices. Perhaps the ultimate test of an accounting system is whether or not it motivates and assists managers in achieving organizational control. In general, among the various approaches that have guided practitioners in the design of an accounting system, a concern for organizational control per se has not been paramount. Moreover, there has been a lack of balance between accounting research and practice. This may be due to the fact that academic research is simply not relevant to practice or that research has moved away from rather than being ahead of practice. Explanations for these differences might include;

- (i) The tendency for academics to investigate "respectable" topics rather than useful ones
- (ii) The absence of a unifying conceptual framework;
- (iii) The dearth of empirically oriented research (cf. medicine or engineering); and
- (iv) The absence of documented case histories, etc, written by practitioners with the result that there is a limited awareness among practitioners themselves as well as between academics and practitioners as to the state of current accounting practice.

The partiality of accounting systems (in so far as they only include financial information) is at variance with the need to understand more fully the factors that are critical to the effectiveness of organizations. To this end, the design of accounting systems needs to facilitate the production of a broader range of performance indicators to cover such matters as;

- productivity;
- quality;
- manufacturing flexibility; and
- delivery performance.

Contemporary Developments

Since the 1970s, several approaches have developed that seek to provide broader conceptual frameworks for the development of accounting. These include;

(i) *The contingency theory approach*, which seeks to define specific aspects of an accounting system's design that are appropriate to a given set of circumstances. Such theories aim to be both descriptive (in explaining why organizations have the accounting systems that are in operation) and prescriptive (in recommending the design of accounting systems that ought to be operated in order that desired ends might be achieved). The critical weakness of work to date lies in the tendency of contingency theorists to overlook the fact that accounting systems design is but one part of the design of an overall organizational control system, and this inhibits the prescriptive potential of contingency theory. There is a risk, with this approach in that the central tenets of a contingency theory of accounting (i.e., that there should be a matching of an organization's accounting system with its context and that there is no single, universally applicable design for an accounting system) are likely to be a statement of the obvious to the average practitioner who devotes much of his effort to ensuring that this is so.

(ii) *The information economics approach*, which sees information as a commodity that can be bought and sold. As with other commodities, information has costs associated with it (stemming from its generation) and value to potential users. In principle, it is correct to take cognizance of the cost of producing (or acquiring) information of a specified quality relative to the value of that information to the user. Up to the present time, however, it has not proved possible to develop operationally useful means of incorporating the cost benefit analysis of information into the design of an accounting systems.

(iii) *The agency theory approach*, which stems from the recognition that the act of measuring and reporting an individual's actions affects those actions. This, in turn, locates the accounting system within a larger system of accountability in which the manager (or agent) is seen as being accountable to his principal for the effective use of the latter's

resources. The central question posed by agency theory is one that is relevant to the professional accountant since it is fundamental to organizational control; how can a superior (principal) who has imperfect information about the running of an organization (or division) motivate his subordinate (agent) to act in the organization's best interests?

(iv) *Human information processing (HIP) studies*, which focus on the process of individual decision-making and are based on theories derived from psychology. The main problem has been the trade-off between methodological rigour and the usefulness of the findings; the emphasis on methodological issues has tended to limit the research studies undertaken to the less significant aspects of accounting. In addition, few HIP studies have examined individuals in organizational settings. A recent development from HIP is that of expert systems. Useful models of simple, repetitive decisions have been built to help individuals with their decision-making, and there is logic in seeking to extend this approach and to build models based on more complex decisions requiring expert knowledge. This line of work is likely to be prominent in future developments.

(v) *Accounting as a social and organizational phenomenon*, which involves a shift from the psychological and social psychological approaches underlying HIP, for example, to approaches representing sociological and anthropological points of view. One can contrast the conventional view that accounting exists as a set of techniques for collecting and processing useful facts about organizational life in a supposedly objective way (i.e. untainted by social values or ideology) with the view that sees accounting as being both social and political in itself. Thus, the information that is produced by accounting systems is itself a social product that only has meaning in the context of the culture in which it is produced.

(vi) *The linking of accounting with competitive and strategic considerations* (although further work is needed to develop a satisfactory framework for strategic management accounting). The case has been well made for the design of accounting systems that are explicitly directed at the various stages of the strategic management process and which combine

elements of financial analysis, value chain analysis, strategic positioning analysis, and cost driver analysis. The adoption of a shift in perspective—from inward and backward to outward and forward.

Contemporary developments can be linked to one of two distinct avenues;

- the construction of qualitative decision-making or decision support techniques;
- the development of behavioural and organizational insights into the functioning of accounting systems

2. THE CHANGING MISSION OF THE PROFESSIONAL ACCOUNTANT.

The basic missions of the professional accountant have not changed greatly from the definitions Gordon Shillinglaw and Charles Horngren gave in the early '60s in their first textbooks. These popularized, in North America first and in Europe shortly after, William Vatter's concept of relevant costing. In France, although Andre Cibert had been teaching these concepts since the late, 50s in his course at the Ecole des Haures Etudes Commerciales, his ideas remained confidential, despite a first publication in 1964, until his very influential *Comptabilite Analytique*, published in 1968. Relevant costing meant a departure from product costing for valuation. It also meant that decision-making support was a central element of the mission of the professional accountant.

The study of controllership published in 1954 by H.A. Simon et al. highlighted the second element of the professional accountant's mission. Measurement and monitoring of performance have since been seen as essential components to the motivation of managers and workers alike. Since the early, 60s, the management accounting field has known very few conceptual modifications, all new techniques or tools being nothing more than permutations on the relationship between relevant costing and motivation.

At present these elements of the mission are fulfilled with great talent and competence. A profusion of excellent training programs all over the world, contribute to the preparation of future accountants and perpetuation of the same "value system."

Decision support will remain a key component of the mission of the professional accountant whatever the

evolution of the field. However, the definition of the concept of performance is changing very rapidly, particularly in the wake of the Total Quality Management approach, but also because of changes in the legitimacy basis of business. New components of the mission are being defined as a consequence. Performance is not only measured and monitored; it is now managed and constructed. And motivation of individuals is complemented by the development of goal congruence, a basis for a collective achievement of the strategic objectives. These three changes in the mission of the professional accountant are explored further below

A new definition of performance

Let me indicate that the development of green accounting, a resurgence of human resource accounting, and a push for social responsibility accounting might affect the job of the professional accountant in the future, but the author does not feel such evolution will be significant before the time horizon of these paper, namely the year 2015 therefore will take a microeconomic approach in this essay and look at performance mainly from the business's viewpoint.

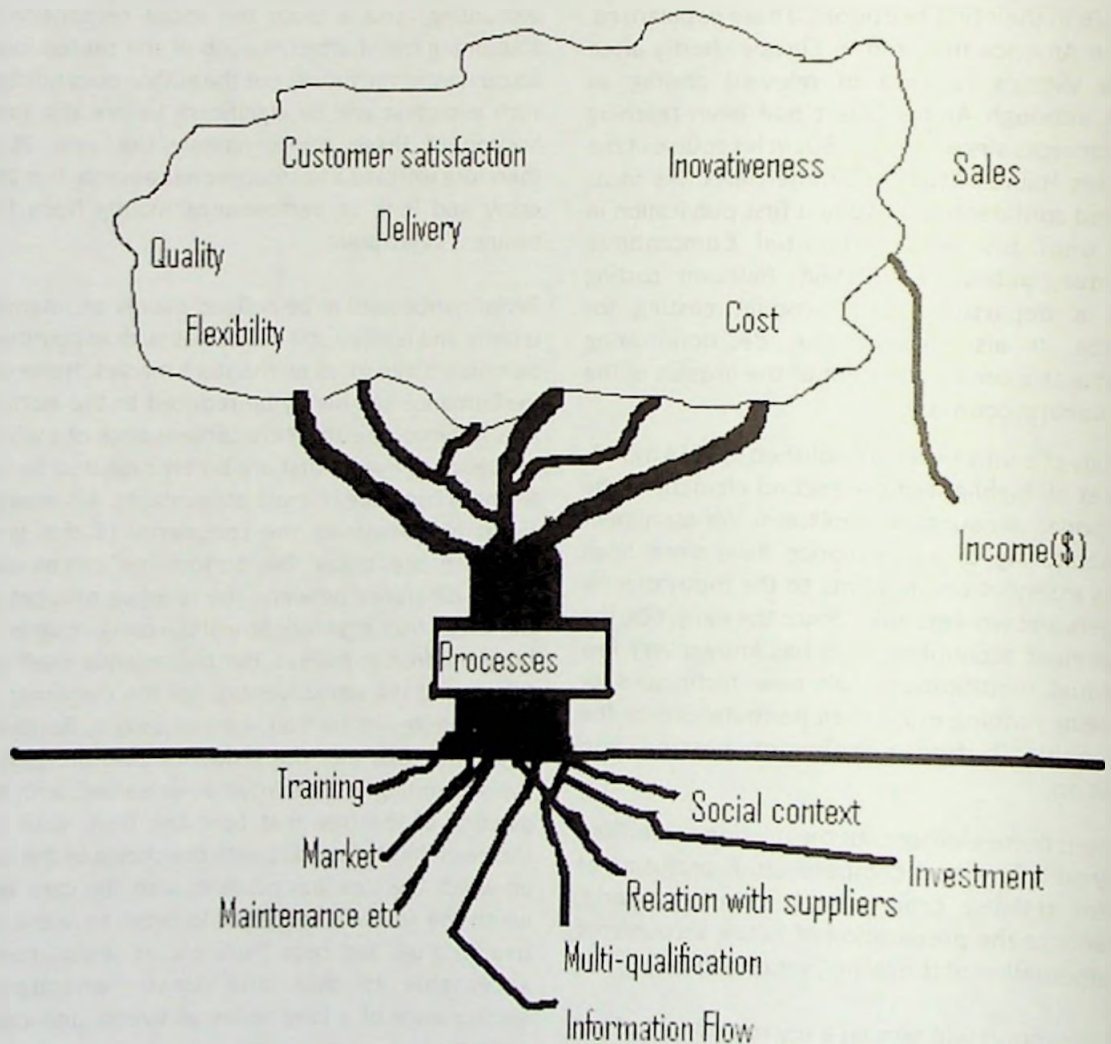
Performance used to be defined mainly on financial criteria and is often still defined as such in countries dominated by a focus on the stock market. However, performance can hardly be reduced to the bottom line. Net income is the mere consequence of a whole sequence of events that are barely captured by the financial language of most accountants. An analogy might help illustrate the complexity of the term "performance" today. The "bottom line" can be seen as the difference between the revenue brought by the sale of fruit after recovery of the costs incurred to bring the fruit to market. But the revenue itself is a function of the attractiveness, for the customer, of the attributes of the fruit, such as quality, flexibility, innovativeness, etc. The sequence that brought in the accounting result started even earlier, with the planting of the tree that bore the fruit, with the choice of the tree species, with the choice of the land on which the tree was planted, with the care with which the soil was nourished in order to allow the tree to grow and bear fruit, etc. It seems hardly acceptable to pick one small "anecdotal" consequence of a long series of events and call it performance.

If we want to talk about performance, we have to consider the whole chain of events and all the steps in that chain. A "performing" tree is one that will continue to bear highly marketable fruit for a long time, not just the tree that happens to have produced the highest profit this year. Performance is not only a destination, it is also a journey.

The diagram of Figure 1 illustrates some of the process of sales generation. It shows that performance is multifaceted and that most of the descriptors of a "performing" tree are not financial.

Figure 1
The performance causal model
 (Adapted from an idea of Douglas McBeth, U.K.)

The holistic view of performance that derives from Figure 1 implies that, just as in value chain management or in Total Quality Management, we cannot be satisfied with the end result alone. The process must be managed at all stages in order to create long-run performance. Cost information comes, by construction, too late for such a purpose. Costs are nothing more than a record of the financial consequences of what took place. They are history. While history is very important as a basis for the development of causal and anticipatory models, history is not an end in itself. Shaping the future is the end purpose of management. What is important, therefore, is the way the business processes are organized and the congruent motivation of managers and workers.



Performance management

Performance is not simply measured, it is proactively created. The professional accountant must use his or her skills to contribute to the creation of the ex ante context that will, before the actions are selected and implemented, maximize the likelihood that ex post results will be satisfactory. Results are not simply recorded passively, they are purposefully created. One of the contributions of the professional accountant to such a creation is cost management.

Cost management is not synonymous with cost minimization. Rather, it is the search for the "adequate and requisite" level of costs for the strategy intended by managers. Since processes are constructed and costs derive from these choices, costs can no longer be considered a burden. They result from the manager's decisions. They are therefore not critical measures of performance. Productivity, market share, cycle time, quality, flexibility, and many more non-financial measures critically condition the final result long before the financial result can be even estimated. In order to be a good cost manager, the professional accountant must apply him or herself to the management of factors that cause costs, and these factors are essentially non-financial.

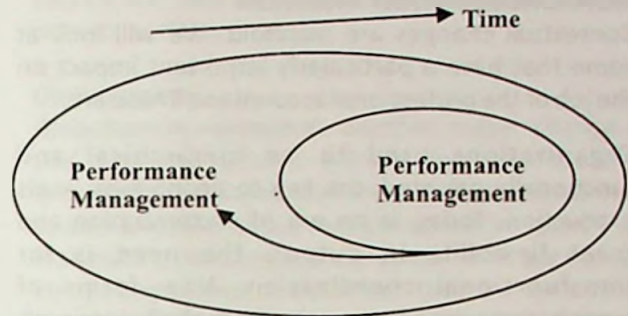
The emphases of the professional accountant's work must not continue to be based on measurement alone. Simply counting the "fruits of the tree" using any metric appropriate, whether financial or non-financial, is not enough. The professional accountant must contribute to creating the conditions for the managers and the workers to produce a fertile soil and to care for the long-term health of the tree, as well as to pick the fruit when ripe and to take it to market.

Measures (and support to the management) of both the "fertility of the soil" and the condition of the processes of "transformation of the nutrients into fruit and structural wood" are just a few examples of the wide ranging domain the professional accountant will report on in the next decade.

Professional accountants used to see their responsibility limited to that of performance measurement, but in the next decade the professional accountant will become an active participant in performance management.

Performance management precedes measurement and encompasses it, as represented in Figure 2;

Figure 2
Performance management precedes and encompasses performance measurement



It is important to redefine the professional accountant's mission to include the whole set of actions and activities called performance management. Clearly, the accountant is by far, not the only one involved in this task, but he or she can play a critical role in creating the conditions for performance to occur. While measurement is important, especially because of its feedback role, it is a necessary action but not a sufficient condition.

Goal congruence enhancement and facilitation

Management is a behavioural science, not a hard science. All the measurement and communication the professional accountant is involved in have one primary purpose; to create goal congruence. That is getting people to work together; guiding their behaviour, so that the strategic intent is fulfilled. It does not matter whether this is accomplished through performance evaluation or through budgeting or planning or through communication or through any of the tools professional accountants have at their disposal. What matters is the result; coordinated, purposeful behaviour that helps to achieve strategic objectives. Supporting goal congruence is a challenge professional accountants have to face today more than ever.

No more will professional accountants just deal in numbers; they will be dealing with people for people. Part of creating performance involves contributing to the creation of the conditions necessary for performance to occur. For example, timely cross-functional feedback information, based on non-

financial data, can certainly create the conditions for motivation, goal congruence, and effective reactivity to customer demands, thus paving the way for long-term performance.

3. CHANGES IN THE CONTEXT OF THE PROFESSIONAL ACCOUNTANT'S MISSION

Contextual changes are manifold. We will look at some that have a particularly important impact on the job of the professional accountant. These are;

Organizations used to be hierarchical and functionally oriented, the key to economical mass production. Today, in an era of customization and great flexibility in output, the need is for transfunctional coordination. New forms of organizations are being created that challenges such long accepted concepts as the exclusive and additive responsibility of managers. We are now in the process of managing the "white spaces between the cells on the organizational chart."

Whether we deal with matrix of team-based organizations, the new motto is "coresponsibility." The time has come for the flat, team-based organization.

Most firms know they must concentrate on their core competence. They must therefore rely on "partners" to provide the services the customers require. Cost management begins with cooperation with suppliers and customers. Many firms have entered into alliance pacts and participate in networks.

Market used to be limited to the domestic territory, but, today competition and sales are global-thanks to the ICT revolution.

Service activities are replacing manufacturing as the main component of businesses. Even in manufacturing firms, the support functions (i.e, services) represent more costs today than production does. Such contextual changes touch upon and reinforce the need to redefine the role of the professional accountant.

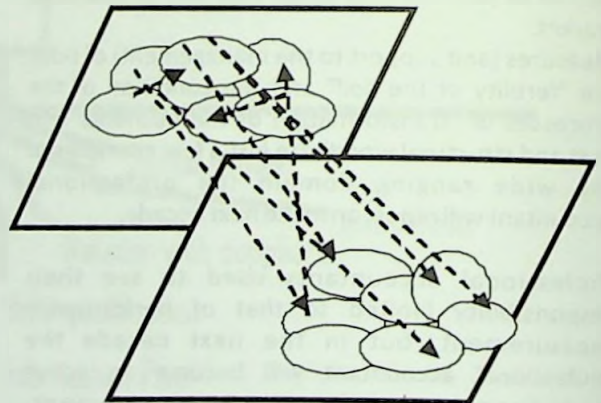
Flat organizations

The once sacrosanct hierarchical model of the organization is being challenged on all sides. Two important challengers in this area are flat team-based organizations and matrix organizations. Today, such high performing organizations as Alcatel, ICL Digital, IBM, and Saint Gobain, just to name a few, are

moving away from a strict hierarchical model and toward flat organizations. One of the best examples of flattening the organization has been observed at Digital. And in my country, Ghana, a sensational company in the mineral water business called **VOLTIC GHANA LTD.**

Digital sells solutions to its customers' problems. To do this, it develops and manufactures components for computers; develops and sells software for computers; and may make the computers themselves, if that would offer its customers better solutions than what is on the market. In each of these three business segments there are only three levels between the customer and the worker, between headquarters there are only three levels between the customer and the worker, between headquarters and the shop floor or the field sales branch. "Hierarchy" has essentially been "abolished" because the entire organization is defined around customer service and that gives meaning to everyone's actions at all times. Of course, there are supervisors and subordinates, but they are interrelated in such a complex matrix organization (see Figure 3) that the traditional hierarchy is essentially dead. Each domain of responsibility is defined by a circle that overlaps with others on the same plane, thus defining large areas of coresponsibility. Everyone must communicate with everyone else, within and between "planes," because everyone's close cooperation is required to serve the customer the Voltic Ghana Ltd Management concept and model.

Figure 3
An illustration of the new version of the matrix organization



In such a flat organization accounting is one of the linking elements that supports the creation of performance, because it offers the simplest, best-structured communication tools, 'information highways.' Clearly, in the context, measurement can no longer be limited to and by the border of responsibility centres. It must now focus on the processes that will satisfy the customers' expectations and demands.

Network organizations

Partnership agreements between customers, manufacturers, and suppliers are proliferating all over the globe. These partnership agreements change the data with which the professional accountant is working. When the automotive manufacturer Renault seeks a partner for the design of the front end of their city-car (sold in Europe under the name TWINGO). They are changing the relationship of the firm to the product, to the suppliers, and the customer beyond the simple problem of 'accounting' beyond the organizational borders.

For example, professional accountants will need to explore the causal models that determine the costs in the suppliers' process. They will have to look at the ways the customers are going to use the product because that will not only affect the cost to the user but also impact on the warranty and the after sales costs for the manufacturer. Another example of a network organization is ABB (this Swedish-Swiss electromechanical giant is the result of the merger between ASEA and Brown- Boveri). All units in ABB are both supplier and customer to other units in the organization worldwide. Although legally independent of one another, each shares information with units that have nothing to do with one another directly, but are part of the process of serving customers. The suppliers and customers as well are integrated in the design of the products. The marketing concept of "prosumer" or in my newly coined term "prosuser" (meaning the meeting of the minds and actions of producers, suppliers and consumers in creating a product)

In this kind of organization, the professional accountant needs to have an integrated view, from the supplier to the customer. He or she joins the team of managers involved in value chain management, across organizational boundaries. Most of the gains

in productivity and efficiency lie in the close coordination of the participant to the whole value chain. To meet these new challenges, professional accountants will have to leave their offices and their computers. They will have to go to the shop floor and sales floor; they will need to visit their customers and those of the firm, and understand their preoccupations.

Globalization

Globalization represents another major change in the context within which the professional accountant operates. The impact of globalization is so well known that not much time will be spent here elaborating on its impact. European firms are not just competing against one another; they are competing, among others, against America, Japanese, Asia and Korean firms, and against the subsidiaries these firms have built in the tax-free zone in China and elsewhere. Professional accountants must change to adapt to this situation. For example, they will have to understand how competitors produce and market their products and where they remain vulnerable. Professional accountants must go beyond competitive benchmarking and become analysts of the competition. They must also begin accounting for foreign currency fluctuations and for a variety of risks that were hitherto omitted from their mental representations and operational perspectives.

New technologies of communication and information technology

Developments in new technologies of communication and in information technology open up new possibilities to the professional accountant. The "bit" of information can be captured, stored and transmitted very cheaply today. One can communicate worldwide for not much more, and often less, than it used to cost only a few years ago to communicate with a plant or a branch a few miles away. Massive amounts of information can be transmitted almost instantly around the globe for little more than the cost of international postage for a simple letter. This technology allows the professional accountant to count in seconds or minutes what used to be counted in days or months.

It is generally accepted that transaction accounting, or ABC, would not have been possible if bar codes and electronic transmission of information had not been available. Professional accountants must

explore these new possibilities opening to them. The time has come to break through the "view of accounting and to develop creative ways and means to use new technologies to their fullest.

The increased importance of service activities

Another change in the environment of the professional accountant's work is the tilt to service activities. Any industrial firm is internally a service firm (or more exactly a network of service firms). Businesses are spending most of their resources (outside raw materials and energy) on support services that assist the manufacturing and selling activities. All organizations, in one way or another, are moving toward service activities.

In the Gulf War, the U.S. armed forces had ten support personnel for one in combat. The French armed forces, using another strategy in the field, had only four support personnel for one in combat. But even with different strategic approaches in both countries' forces, service activities dominated.

This development of the importance of services completely modifies the field of measurement and the ways by which to measure. Professional accountants on the cutting edge today are no longer focusing on the valuation of inventories (the zero stock policy and Just-in Time reduced the importance of such valuation), they are looking at the process of delivery of the many faceted services the customers require.

4. A NEW CONCEPT OF TIME AND OF TIME HORIZON

Not only is the environment changing, but the very notion of time is changing as well. At first, the words "accounting" and "retrospective" were viewed as almost synonymous. Then, in the 1930s when management accounting was born and budgeting took form, accounting became a way of structuring the future.

Today, businesses manage for the future; target cost, life cycle, anticipatory crisis management, and discontinuity of time are four topics that revolutionize the mission of the professional accountant, as per explanation below.

Target-cost management

Managers and engineers design products and processes for markets in which the price is a given

element. Instead of finding the price through a cost-plus approach, the manager must reverse the equation completely. Today, the price is given by the market (or by comparison with other products and by estimating what the different functions of the product are worth to the customer); the profit must be considered as a given that is required by the firm's long-term strategy; and, therefore the target cost is equal to "selling price minus profit margin." The manager's role is to design the product and the processes to fit the target cost. The professional accountant's role is to assist the manager in such a task, and that task begins well before there is any output to measure or any financial data to handle.

Just as in the case of performance management, the professional accountant's role starts very early in the process. As early as the design of the product, the accountant can make a contribution. Professional accountants have cost statistics about the past. Some of the most modern professional accountants may even have identified relations between costs and physical performance measures. The costs capture part of the past reality and allow for the identification of causal relationships; why do (and did) costs occur? While this causal view may not necessarily lead to the same understanding as that of engineers or salespeople, the accountant's vision is based on economic rationality and will contribute to the dialogue within the management team. Professional accountants who are involved as early as the design of the product help design engineers evaluate the cost of design or process proposals. Target-cost management simply reverses the scale of time. Instead of limiting the professional accountant to "after the product has been manufactured" the target-cost philosophy extends the scope of the job to start "before the product is even conceived".

Life-cycle thinking

Another aspect of the modification of the relationship to time encompasses the concept of a time horizon. The introduction of life-cycle thinking upsets the old annualized model. Professional accountants have long been ruled by the idea that they must slice time in periods of twelve months and that they must break these down even further. Professional accountants think they must calculate costs and results every so many days or every so many months. Professional accountants must get beyond these past habits.

Professional accountants should not worry about how to allocate costs of departments to product until they handle the fact that cost of development and of phasing out the product are essential part of the total life-cycle costs. And this is becoming even truer when we take into account the fact that, today, the life-cycle is getting shorter and shorter for many products. Consider the life cycle of a laptop computer; In 1992, the commercial life cycle was around nine (9) months, with a development cycle of about twelve (12) months, and this was thought to be very short. Today, the commercial life-cycle of such a product is in the area of six (6) months, with a development cycle of about nine (9) months; i.e, a producer of laptop computers, notebooks, or powerbooks has to come up with a new product every six (6) months (possibly three months by 2015) in order to keep its market share.

Instead of just thinking about manufacturing and selling costs, professional accountants will increasingly need to think in terms of product development costs, market development costs, and cost, of product or facility phase-out. The phase-out costs are often surprisingly important, particularly with all the new attitudes toward pollution and recycling. The omission of such costs from the product launch decision has definitely affected past managerial choices that might not have gone in the same direction had these costs been included.

Anticipatory crisis management

The degree of uncertainty about the future is increasing greatly. Professional accountants have to change the questions they are accustomed to asking and answering. They are used to asking, for example, "What are we going to do?" The answers used to come from budgeting and planning, using large simulation models, which is too often mathematical, that allowed extrapolations of ideas about what the organization was going to do. But it is common knowledge that such computer generated budgets were and are obsolete the minute they are printed. Many firms are now turning away from the "sacred" full-year budgeting exercise and are turning to frequent and reactive rolling forecasts. In fact we are evolving from a budget process that asks "what are we going to do (to master our environment)?" to a process that asks "What are we going to do if this or that happens?" (i.e anticipatory reactivity).

Figure 4 shows that as the turbulence of the future increases, the effectiveness of the "routine management tools (generally based on ex post control) diminishes to the point of being useless. As the old tools lose effectiveness, the managerial techniques used to "condition the organization" for the uncertain situations it will face become more effective. It is a switch from ex post control not even to ex ante control, but to creating conditions in which everyone, managers and workers alike, will know how to react in all situations.

In this regard, the professional accountant is not only contributing to goal congruence, but he or she is involved in exploring various possible scenarios that will help condition the organization to be responsive. Professional accountants have much to learn here from experts in crisis management in such areas as emergency medical services, disaster relief, or even air traffic control.

Discontinuity of time

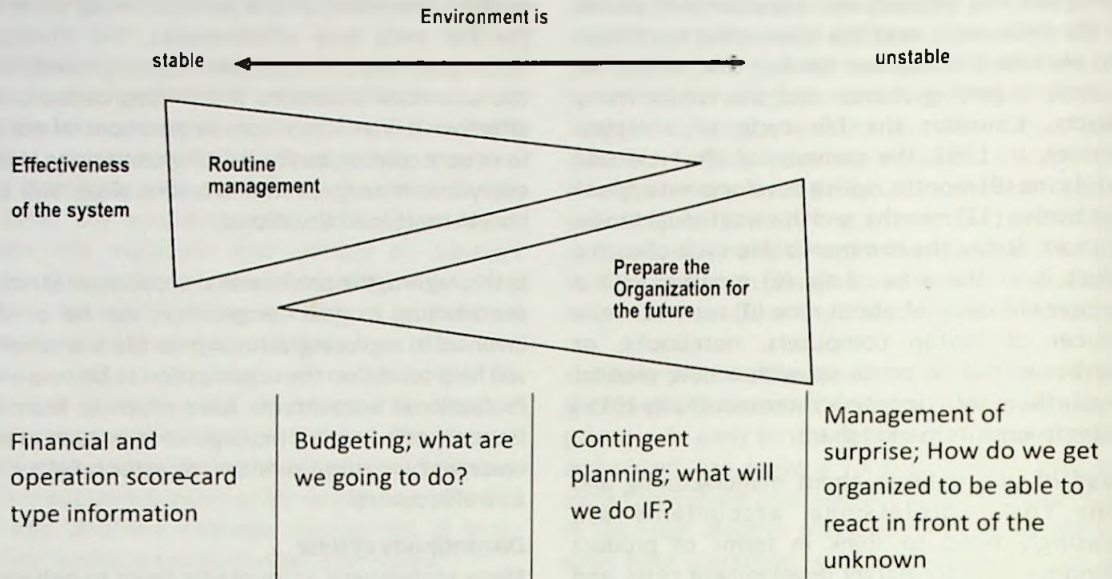
Many professional accountants seem to behave as if time were continuous and all annual or monthly time slices were equivalent. However, customer contracts happen at random. New techniques and new processes are introduced at various times, essentially when they become available or when the organization feels it has mastered them. All the events in the life of a firm do not happen conveniently on January 1st or on June 30th. In addition, events in the life of a firm have consequences well beyond the fiscal year time horizon. It would be absurd for professional accountants to remain focused, as they have been for so many years, on a "magical" twelve (12) month cycle, or even on a one month or one-week periodicity.

It is the cycle time of product and technological innovation that defines the time horizon and time should be sliced according to the phases of the life cycle of the "projects" that compose the firm. Since each project has its own time horizon and cycle time, professional accountants must be able to handle multiple time horizons simultaneously. They must invent information systems that allow for such flexibility while continuing providing the annual legal aggregation of "results."

To be Continued

Figure 4

The managerial tools lose effectiveness with increased uncertainty, so preparing the organization for anticipatory crisis management is crucial when turbulence is increasing.



REFERENCES

AAA (1971)' Report of the Committee on the Behavioral Science Context of the Accounting Curriculum' Accounting Review supplement, 46

Andre Cibert (1964) *Le Plan comptable Commence; de la comptabilite analytique a la gestion budgetaire, une monographic d'entreprise* (Paris; Foucher) 3.
Andre Cibert (1968) *Comptabilite Analytique* (Paris; Dunod)

Arnold G (2002) *Corporate Financial Management* 2nd Ed., FT Prentice Hall, Pearson Education Ltd UK 361 - 364

Arnold J, Hope.I(1990) *Accounting for Management Decisions*, 2nd Ed. Prentice Hall International UK. 376 - 378

Bergen S.A (1986) *Project Management -An Introduction to Issues in Industrial Research and Development* 1st Ed., Blackwell Ltd. UK 275- 296
CAM-I/Europe, 1993

Charles T Hongren (1962) *Cost Accounting; A Managerial Emphasis* (Englewood Cliffs; Prentice-Hall, NJ) 231 -232

Currie D, (2006) *Developing and Applying Skills*, 1st Ed., CIPD UK 117 -120 10. Douglas Mcbeth (1993) U.K Management Accounting Research Group Annual Meeting London School of Economics, London April 10. Farnham D, (2006) *Managing in a Strategic Business Context*, 2nd Ed, CIPD UK 244-246

ABOUT THE AUTHOR

Professor Kwame Boasiako Omane -Antwi, Chartered Accountant and College of Teachers' Professor in Accounting and Financial Education, is the Vice Rector and Dean of the Faculty of Business Administration, Pentecost University College, Accra, Ghana

Contact: omane@dslghana.com
+233(0)2443204481/(0) 202011775.