Professional Accountants in Business Committee

Exposure Draft

June 2008

Comments are requested by September 23, 2008

International Good Practice Guidance

Costing to Drive Organizational Performance

International Federation of Accountants

REQUEST FOR COMMENTS

The Professional Accountants in Business Committee of the International Federation of Accountants (IFAC) approved this exposure draft, *Costing to Drive Organizational Performance*, for publication in June 2008.

Please submit your comments, preferably by email, so that they will be received by September 23, 2008. All comments will be considered a matter of public record (unless otherwise requested). Comments should be addressed to:

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Copies of this exposure draft may be downloaded free-of-charge from the IFAC website at http://www.ifac.org/PAIB.

INVITATION TO COMMENT

Guide for commentators

This International Good Practice Guidance (IGPG) follows recent guidance on Project Appraisal Using Discounted Cash Flow and Defining and Developing an Effective Code of Conduct for Organizations (web link), and also complements proposed guidance on Evaluating and Improving Governance. Its aim is to establish a benchmark for good practice in costing, and in particular to help the provision of useful cost information to support decision-making in organizations. A performance-based view of costing helps to ensure costing information supports both forward looking strategic and tactical decisions as well as providing feedback on historical performance.

In encapsulating good practice in eight fundamental principles, the emphasis of this International Good Practice Guidance, as is the case with the Committee's other IGPG, is to support professional accountants in business in a flexible way, therefore helping them to think about how to apply good practice rather than instructing on how actually to use specific costing methods. The principles, guidance supporting the application of the principles, and the associated definitions and summary of typical costing methods, are intended to sit above the myriad of costing terms used in organizations, academe and by consultants and to help professional accountants in business to differentiate between them.

The PAIB Committee would like to receive comments on all matters addressed in this proposed IGPG. Anyone offering comments should refer to specific paragraphs, include the reasons for the comments, and, where appropriate, make explicit suggestions for proposed changes to wording. The PAIB Committee is particularly interested in comments on the matters set out below:

The principles

1. Do the principles cover all the fundamental areas in thinking about costing and how it drives organizational performance?

The guidance

2. Is the application guidance for each principle adequate to guide good practice?
3. Is there national guidance on costing not already mentioned in appendix D that should be considered?

We also welcome feedback on further topic selection for PAIB Committee publications as International Good Practice Guidance in the area of costing and performance management.

IFAC PAIB COMMITTEE INTERNATIONAL
GOOD PRACTICE GUIDANCE

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Costing to Drive Organizational Performance

1. Why the Topic is Important

1.1 The creation, operation, alteration, and cessation of every action and function in an organization, whether within the private, public, or voluntary sector – all incur costs. Costing – the accumulating and assigning of costs to the organization's various activities – enables the organization's cost structure to be understood, explained and improved. Costing is therefore an important tool in assessing organizational performance in terms of shareholder and stakeholder value. It informs how profits and value are created, and how efficiently and effectively operational processes transform input into output. It includes product, process, and resource-related information covering the organization and its value chain. Costing information can be used to provide feedback on past performance, and should be used effectively to motivate future performance. It is most useful if it communicates not only what the costs are, but also how and why they are incurred.

1.2 This view of costing supplants the traditional view that led many organizations to use costing exclusively as a tool to value inventories and determine profit. Many organizations now use cost information to support a wide variety of decisions, which has led to the development and evolution of costing methods such as activity-based costing. The many costing methods and approaches to measuring costs often lead to confusion over (a) which costing methods might be useful in supporting decision-making in an organization, (b) in which contexts they are best implemented, and (c) how they are implemented. Too often, such costing methods and approaches are perceived as solutions to business problems, whereas their principal value is diagnostic. However, alternative costing approaches should not be seen as competing with each other, and elements of each can be effectively combined. For example, both activity-based costing and standard costing can be applied to job-order or process costing systems. This International Good Practice Guidance (IGPG) establishes eight fundamental costing principles that will help professional accountants in business and their organizations evaluate and improve their approach to costing, and to *benchmark* good practice in applying costing systems and methods and using costing information.

1.3 Good practice in costing involves improving costing systems and costing information to provide relevant cost and performance information with an objective of enabling organizations to deliver increased value to customers. Costing should therefore support a range of both regular and non-routine decisions when designing products and services to (a) meet customer expectations and profitability targets, (b) assist in continuous improvement, and (c) guide product mix and investment decisions.

1.4 To better support decision-making, costing establishes and interprets relationships between financial, operational, and other data. Therefore, selecting the most appropriate approach for costing information and analysis, and using their output, requires the exercise of careful professional judgment and sound logic. Costing is not an exact science, but the selected costing approach should be rigorously applied. The eight principles have been developed in a way that allows professional accountants in business to be flexible in developing

costing systems and methods best suited to decisions to be made in their organizations. Professional accountants in business should find this IGPG useful in explaining the role and purpose of costing to non-accounting colleagues.

The Role of the Professional Accountant in Business

1.5 Professional accountants in business draw on a broad base of capabilities in undertaking a variety of roles. They can be in a front-line business management role as a decision-taker or in a decision support role supporting the consumers of costing and operational information. Regardless of their perspective, professional accountants in business have important roles to play in (a) ensuring that cost data is 'fit for purpose', (b) clarifying decision requirements, and (c) deciding how best to present information and analysis (including method of delivery, e.g., paper, web-based portal, etc). Performing such roles usually requires the professional perspectives and skills of other disciplines, such as industrial engineers, operational managers, economists, and systems analysts who provide valuable insights.

1.6 In a decision support role, it is important to carefully identify who uses information and what decisions are based on it, in order to meet users' requirements. For example, to take a relatively simple situation at a local level, a plant manager is the customer of a particular piece of cost analysis developed by a plant controller to help the plant management team make decisions. In other situations, however, meeting users' requirements can become more complex when considering a range of internal customers with differing needs. For example, the customers of a financial forecast of a typical multinational, multi-operational company are the board, the corporate management team, and the operational management team – all with different levels of information requirement in terms of timeliness, accuracy, and precision.

1.7 In determining costs and cost drivers, professional accountants in business can be involved in designing, developing, improving, and using costing systems and techniques. The supplier of costing information should have a strong connection to preparing, analyzing, and interpreting cost information for users. Although the roles of information supply and design/implementation of costing systems can be separated, one cannot be done well without appropriate knowledge of the other. Users require advice on (a) identifying needed decisions, (b) what assumptions should apply to the inclusion/ exclusion of specific costs, and (c) how costs behave i.e. vary (or not) with activity. Supplying cost information involves both routine calculation of the cost of products, services, and other cost objects, and the supply of information that supports non-routine decisions such as "make or buy". Many professional accountants in business also undertake broader roles at a planning and performance evaluation level, where costing information supports the preparation of plans and budgets and the accomplishment of strategic objectives, and provides a benchmark for evaluating performance.

1.8 As both suppliers and consumers of costing information, many professional accountants in business now advise other parts of an organization on interpreting and analyzing relevant information for making decisions. This includes considering the relevance of revenue and

cost information, and the range of factors and issues relevant to a particular decision. Decisions can range from selecting which products to produce, where to produce them, and how to deliver them to market.

2. Key Principles That are Widely Accepted Features of Good Practice

The definitions at Appendix B help to explain the concepts used in all costing systems. They help to promote use of a consistent and reliable costing terminology to minimize confusion among professional accountants in business, and their organizations. Other cost definitions exist, some of which are included in references in the resources section at Appendix A. The elements of a basic costing system are set out in appendix C. Typical costing methods and approaches include:

2.1 **ABC**: is both a product costing method and a resource consumption model that can provide information useful in making decisions concerning product and process improvements. An ABC system typically involves four stages: (1) identifying activities performed to produce outputs, (2) assigning or mapping resources to the activities using resource drivers, (3) identifying outputs for which the activities are performed, and (4) assigning activity costs to the outputs. The sophistication of ABC systems varies between organizations. For example, greater sophistication can be associated with:

- A higher number of cost pools to better capture resource consumption by different products/services;
- A variety of cost drivers to more accurately measure resources consumed by cost objects;
- Directly assigning costs to cost pools or using a cause-and-effect resource drivers; and
- The extent to which transaction and duration drivers are used in the second stage allocation process (a transaction driver, like the number of setups, assumes the same quantity of resources is used every time an activity is performed, whereas a duration driver, like setup hours, represents the amount of time to perform an activity).

2.2 **Grenzplankostenrechnung (GPK)**: a costing method focused on marginal costing that is helpful to support short-term decisions, for example a production decision (a decision to accept or reject an additional order based on contribution margin information) or a pricing decision. GPK varies in complexity depending on an organization's history, culture, and requirements (which in turn are determined by the complexity of products and processes). In most instances, GPK combines both resource and activity analysis, and assigns resource costs to cost objects based on causality (as is the case in ABC systems).

2.3 **Lean accounting**: Lean accounting reports and methods support a lean organization or transformation to a lean organization. The financial and nonfinancial reporting in a lean accounting method reflects the overall value stream flow, not individual products, jobs, or processes. Implementing a lean approach, as exemplified by the Toyota Production System, focuses on delivering customer value without waste and this involves identifying value streams. Cost and profitability reporting is done using value stream costing, a summary of direct costing of value streams. Lean accounting principles ensure that lean

thinking is applied to efforts to reduce waste created during transaction processing, during report creation, and during other accounting steps in the organization. Lean accounting principles ensure that lean thinking is applied to waste reduction from the transaction processes, reports, and accounting methods throughout the organization. This recognizes that in a lean organization information required to control operations arises in the flow of work (rather than from outside accounting and production controls such as standard cost-variance budget reports), thus empowering those at the front-line to manage daily operations.

2.4 **Lifecycle costing**: Life-cycle costing involves estimating and accumulating costs over a product's or service's lifetime. The purpose of life-cycle costing, which is typically used during the product's planning phase, is to allow planners to anticipate a product's costs over each phase of its lifetime. The helps to avoid underestimating a product's total costs that is often the main cause of unprofitability. Life-cycle costing identifies and estimates the costs in all phases of the product/service life-cycle including planning and development, introduction and growth, maturity, decline and abandonment or renewal. It is particularly useful for products that create significant cost burdens at discrete points that need to be captured, such as significant planning and development costs and decommissioning costs. Therefore, it is often used to better understand the environmental performance of products and services, and to support sustainable development initiatives. Lifecycle costing is often used to support life cycle assessments to evaluate the environmental burdens associated with a product, process, or activity by identifying and quantifying energy and materials used and wastes released to the environment and to identify and evaluate opportunities to improve environmental performance. Lifecycle costing can also be used with other costing methods. For example, during the planning phase, target costing is used to drive the product and process design so that, at a given market price, the product will be profitable.

2.5 **Job order costing**: used to cost a distinct product or service and to help organizations calculate the total cost to produce a specific project. The cost object is a unit or multiple units of a distinct product or service called a job. Costs are traced to individual jobs to the extent economically feasible. A common approach (a) identifies direct costs of the job, then (b) determines a basis for allocating indirect costs, then (c) identifies indirect costs associated with each cost allocation base.

2.6 **Kaizen (continuous improvement) costing**: a cost management tool focusing on reducing the cost of an existing production process. Unlike target costing, which is a planning tool, Kaizen costing focuses on improving the existing production and performance of related activities to achieve target cost reductions.

2.7 **Process costing systems**: calculate the unit cost of a product or service by assigning total costs to many identical or similar products/services. Such systems separate costs into cost categories, according to when costs begin to be incurred in a process. Process costing is appropriate for production of products or services with the following characteristics: (a) the

production involves a regular process pattern, (b) its output consists of homogeneous units, and (c) all units are produced through the same or a similar process.

2.8 **Resource Consumption Accounting (RCA)**: a recent addition to cost management terminology used to promote the integration of cost management methods that have often been applied in isolation. Generally implemented at the same time as an Enterprise Resource Planning system, RCA is based on three pillars: (a) how resources are viewed, (b) the nature of cost, and (c) a quantity-based approach to cost modeling. Its resource focus ensures the capture of cost information at a low level, and involves identifying resource pools that include all resources, including costs that serve resources.

2.9 **Standard costing**: standard costs are constructed or predetermined costs that can be applied to activities, services, or products on a per unit basis. Standard costing supports a control technique that reports variances by comparing actual costs to pre-set cost standards (so actual information is compared with estimated standard rates). It (a) traces direct costs to output by multiplying the standard prices or rates by the standard quantities of inputs allowed for actual outputs produced, and (b) allocates overhead costs on the basis of the standard overhead-cost rates multiplied by the standard quantities allocated to produce the actual outputs.

2.10 **Target costing**: a demand-pull approach of cost management because of its focus on customer requirements for quality, cost, and time. It is often referred to as a strategic planning tool, because it attempts to link cost management to the value perceptions and requirements of customers. It therefore uses prospective and estimated cost information, starting when products/services and processes are designed. Its usefulness depends on involving all disciplines in bringing a product/service to market to ensure an appropriate gap between (a) the target cost, and (b) the estimate of the cost to build the product based on current processes, suppliers, productivity levels and materials.

The Key Principles in Costing to Drive Organizational Performance

2.11 The key principles underlying widely accepted good practice are:

A. The ability to measure, account for, analyze, interpret, and present costs is necessary for an informed understanding of the drivers of profit and value, and is therefore an essential part of good financial management and decision-making.

B. Cost information should be collected and analyzed systematically and consistently, whether in a routine information system, or for a specific application and/or purpose.

C. Costing systems and methods should be designed and maintained to reflect an organization's chosen strategy and business model, taking account of its structure, culture and competitive environment.

D. Cost information used to support strategic and operational decisions, performance management, or reporting should be appropriate for the specific purpose, context, and legal requirements.

E. The professional judgment used to (a) determine costing methods, and (b) specifically select cost information to support decision-making, including any limitations on its applicability, should be transparent, rational, and understandable by the user.

F. Definitions and sources of cost data, and the methods of calculation of costs, should be recorded and capable of review, risk analysis, and assurance.[1]

G. Cost information and costing assumptions should be periodically reviewed for their relevance, robustness, and susceptibility to change.

H. The design, implementation, and continuous improvement of costing methods, data collection, and systems should reflect a balance between the required level of accuracy and cost.

2.12 The principles apply to all organizations. In jurisdictions where special requirements relating to costing are laid down by law, compliance with them is a necessary part of local good practice, even if not specifically mentioned in this IGPG. Examples of specific arrangements are at appendix D.

3. Application Guidance on Implementing the Principles

PRINCIPLE A

The ability to measure, account for, analyze, interpret, and present costs is necessary for an informed understanding of the drivers of profit and value, and is therefore an essential part of good financial management and decision-making.

A.1 The first principle in IFAC's International Good Practice Guidance on *Evaluating and Improving Governance in Organizations* is The creation and optimization of stakeholder value should be the objective of governance (web link). Governing bodies of all organizations have a fiduciary responsibility to create and preserve stakeholder value. All organizations should take into account and may need to address the needs of a wide range of stakeholders. Companies, however, generally focus on increasing/maximizing shareholder value. In all organizations, enhancing value, whether it is for shareholders and/or a wider range of stakeholders, entails finding the optimal balance between revenue, cost, and risk.

A.2 Costing, and the many costing methodologies applied in organizations, measure the consumption of economic resources and support the accountability of business performance. Cost information helps users to determine relevant costs of specific activities, goods and services, and the cost of doing business and changes over time. It permits tracing of production costs to output. It can highlight issues of operational efficiency,

[1] The word "assurance" in this principle may be read to include "audit" in those jurisdictions in which cost audits are required (see appendix D).

pinpoint areas requiring management attention, and assist in measuring and rewarding performance.

A.3 Analysis and presentation of costs is best accomplished within a financial management system that (a) delivers both cost information and operational feedback for planning, budgeting, cost, and financial accounting purposes, and for operational improvement, (b) helps to ensure the fulfillment of external reporting and other compliance requirements, and (c) presents information clearly in a way that helps manage an organization. Appropriate understanding and analysis of costs is essential to operational management, increased efficiency, and productivity, understanding the impact of investment decisions, and evaluating pricing decisions and the profitability of products, services, and customers. Therefore, although costing has historically provided awareness of the cost of operations (what, when, and where), which allows an organization to manage costs, its greater value lies in its forward-looking perspective (how and why), to help planning and better-informed decision-making at a strategic and operational level.

A.4 The principle of cause-and-effect is vital to a rigorous approach to understanding the drivers of profit and value. A costing system should be designed so that it is complete in that it accounts for all costs, and it should be systematic so that it attributes a direct cost to the cost object that created the direct cost, and in that it allocates an indirect cost to a cost object in a way that reasonably reflects the cause and effect relationship between the cost object and the indirect cost. Therefore, identifying how products/services consume resources that create indirect costs requires an understanding of a cause-and-effect relationship between production and resource use. In supporting the process of organizational improvement, it is also necessary to identify cause-and-effect relationships between measures of process performance (such as product quality and customer service) and measures of performance on primary objectives (such as profits).

A.5 Because costing can support both regular reporting for accountability purposes and specific analyses in support of strategy, planning and general business decisions, the way it is presented can be as influential as the actual data. Care needs to be exercised in the selection of data and the way it is shown, in line with the normal principles of presentation such as relevance, completeness, inclusion of appropriate comparators and related non-financial information, and the use of charts, tables and commentary.

PRINCIPLE B

Cost information should be collected and analyzed systematically and consistently, whether in a routine information system, or for a specific application and/or purpose.

B.1 Costing systems provide a systematic process for accumulating and assigning costs to objects, either continuously or periodically as desired, so that cost information is available for decision-making on the acquisition, use, and consumption of an organization’s resources. Continuous reporting of costs will help users determine the ongoing costs of providing specific products, programs, projects, or activities, and the impact of changes in

the composition of these costs. Alternatively, some organizations may (a) choose to accumulate and report costs through periodic, ad hoc and targeted cost studies, and (b) use cost-finding tools, such as job order and process costing and cost allocation techniques, to determine the cost of producing costs and services. Whichever approach is adopted should be consistent, systematic, rigorously applied, and accessible.

B.2 Larger and more complex organizations (in terms of employee numbers, product and service lines, geographical spread, and complexity of processes) usually aim for a single costing system to develop reliable costing information to support both performance and conformance (against legal and regulatory requirements) decisions at both operational and strategic levels. Organizations with a single costing system typically derive cost data from a common data source to support the needs of both external users (investors, regulators, and tax authorities) and internal managers and employees. In manufacturing businesses, such an integrated system will allow (a) relevant costing and operational performance information to be provided to internal users, as well as (b) the valuation of inventory and measurement of cost of goods sold for financial reporting purposes. Working from a common data source (or a single set of sources) also helps to ensure that output reports for different audiences are reconcilable with each other.

B.3 An integrated information system is not necessarily a single, closed information system for cost measurement, and performance improvement. Operational feedback systems could source data from outside the costing system, but the information presented needs to be integrated where appropriate to support operational performance, because it promotes employee learning and improvement in activities and processes. Integrating databases and information systems can help to provide useful costing information more efficiently as well as reducing source data manipulation. A comprehensive enterprise information system typically (a) tracks daily expenses by account code, activity, and business process, and (b) measures performance information that supports feedback to operations, such as the cost of resource consumption, defects, throughput, and quality, in addition to cost information associated with products, customers, and activities.

B.4 The sophistication of the costing systems execution will need to take into account, and may be limited by:

- The degree of precision required from each of the system's outputs to effectively support decisions;
- The minimum frequency at which information is needed to support reliable decisions (frequency matters where special data collection methods outside routine reporting systems are required);
- The practicability of collecting or estimating the data required for specific cost computations; and
- The organization's overall information technology strategy, the extent of existing information systems, and the availability of funds to develop new ones.

B.5 In many cases costing systems rely on using non-financial information, which is likely to be originated by non-accountants. Where the reliability of costing outputs is dependent on such information, the aim should be as far as possible to apply expectations of consistent preparation and reliability to the non-financial information similar to that applied to financial sources of data. Practical considerations may cause the quality of important data to vary. Where this is the case, or where estimates have to be used, the effect on costing outputs should be evaluated and disclosed to users.

B.6 Dedicated supplementary cost studies may be required to support specific, one-off decisions. For example, costing information may be required when making non-routine decisions, such as whether to outsource, to build a new plant, to make or buy a product or component, to discontinue a product or service, to purchase a new machine, or to re-engineer a product/service or process. Investigating aspects of an organization's strategy and business environment may also require costing information. Non-routine decision analysis should include all relevant items such as:

(a) The value of all the incremental *revenue* effects of the decision over all the time periods affected by the decision; and

(b) The value of all the incremental *cost* effects of the decision over all the time periods affected by the decision.

In this kind of analysis, it may be appropriate to consider whether costs are avoidable. For example, reducing labor requirements through closing a production line could be affected by labor agreements or legislation protecting employment.

B.7 Small and/or less complex organizations will need cost information to manage their business operations. However, their requirements may involve costing systems with less formal procedures and methods, and these are likely to develop as a natural consequence of needing costing information. Such organizations should periodically consider the need for processes to report relevant and routine cost and operational information for management purposes. This will typically require a costing system and appropriate procedures to ensure that the necessary cost information is collected, measured, analyzed, and effectively communicated.

PRINCIPLE C

Costing systems and methods should be designed and maintained to reflect an organization's chosen strategy and business model, taking account of its structure, culture and competitive environment.

C.1 Costing systems should focus on helping an organization achieve its strategic objectives, and take into account the nature of an organization, its business model, its culture, structure and competitive environment. No one costing system is therefore appropriate for all organizations, and costing methods will vary from organization to organization. Costing systems should be designed to meet individual organizational needs, characteristics, and cost structure.

C.2 Costing system design will be driven by the specific use to which the resulting cost information will be put, which in turn will govern the choices to be made on four key interrelated elements, namely:

- What objects it measures;
- How the costing system measures the chosen objects;
- How it manipulates or aggregates the recorded measurements; and
- How it reports to decision-makers.

The design and scope of a costing system will generally depend on:

- The organization's business model – its sources of income, its supply chain(s), and ways of creating value;
- How the organization structures itself and holds its managers accountable;
- How an organization measures itself, taking into account its regulatory and/or market context, the jurisdiction(s) and industry(ies) in which it operates, and what its competitors and equivalent organizations do; and
- The specific requirements of the organization's managers for the purposes of organizational control and the exercise of informed judgment in making strategic and operational decisions (What questions is the system required to answer? Why are we doing this?);

C.3 When an organization designs a costing system, it is helpful to start by building one or more cost models. This will reflect the judgments made on matters in paragraph C.5, and should describe the organization and its cost and income flows and relationships as faithfully as possible, subject to materiality and affordability. The model(s) should be widely discussed and challenged, so that they are understood and agreed to be reasonable and suitable by those who will rely on their outputs. This will include agreeing on areas where relatively less precision is required, where estimates may be made, and where existing data sources may need to be improved or supplemented.

C.4 It is important to review and understand the underlying business model and its economic drivers when designing costing systems and allocating costs. For example, where products are being delivered via a network infrastructure, such is typically the case with transport and communications networks, it is advisable to ensure that costs reflect the primary products/services delivered on the network. This could involve investigating whether an apparently joint or common cost is truly attributable to all the products/services that share it. This is especially the case where a premium product which carries priority by its nature, or by strategic decision, causes cost (due to its priority status – for example the need for a new operating unit or shift) even when apparently incurred on or shared with a lower priority product/service. The underlying rationale could lead to the creation of a cost driver to assign process setup costs and premium surcharges to the priority output.

C.5 How costing systems support organizations, and how cost information is communicated and used to support decisions can vary widely. These variations usually relate to the 'management control' perspective adopted by an organization. Organizations with traditional management control systems often use a responsibility accounting system, where costs are usually accumulated by responsibility centers, revenue centers, or by revenues and costs in profit centers. The managers in these centers are accountable for specified activities (thereby supporting the notion that managers should only be accountable for those costs/revenues in their span of control), which might cover a number of products and services.

C.6 An organization converting to a new costing system and/or management control system should consider whether its strategy and culture supports a new approach, and whether a cost-benefit review might ensure a subsequent strategic benefit. For example, existing costing systems and organizational structures can act as a barrier in organizations undertaking a lean transformation. All organizational aspects (structure, culture, management philosophy, reward strategies, etc.) could require review, as could the way costing information will be supplied and used in support of the new approach may be radically different. Applying a lean philosophy often does not translate well into a command-and-control hierarchical environment. This should be considered in any effort to apply lean accounting to support a lean transformation.

C.7 The structuring of responsibility centers depends on their lines of responsibility and accountability, their outputs, and their funding sources. Responsibility centers could include a department, division, geographic territory, machine group, or operational process. Such segmentation often supports (a) organizational budgetary reporting, and (b) performance measurement where performance goals or targets are set for each center. However, a system designed around responsibility areas may make it hard to identify the underlying cause of costs that lie outside a manager's responsibility. It may be necessary to compare the organizational design with the business model to check for any non-alignment.

C.8 Increased information requirements driven by increasingly competitive markets and increased product diversity have led many organizations to refine their costing systems. Some organizations adapt their variance reporting system (a) to report on variables that are particularly important in their context, and (b) by replacing volume-based cost drivers with cost drivers that better reflect the causes of resource consumption. Another approach is to move to a costing system based on an ABC methodology, particularly where an organization's costs are not associated with direct labor and direct materials. ABC systems focus on activities and processes. They trace the direct and indirect costs of using resources (for example in a responsibility segment) to cost objects (pools), and tend to use a broader set of cost drivers to reflect variety and complexity in assigning activity costs to cost objects. An ABC system can calculate actual (historical) cost driver rates based on last period expenses for resources actually supplied and realized. It can also be used to estimate the costs of activities to be performed in the current period, and in future ones. In focusing on the drivers of activities and costs, ABC has the potential to foster a deeper understanding of cost causation.

PRINCIPLE D

Cost information used to support strategic and operational decisions, performance management, or reporting should be appropriate for the specific purpose, context, and legal requirements.

D.1 Analyzing and interpreting costing information underpins decision-making in organizations by supporting operational management and control, planning and budgeting, and a range of management decisions required to meet organization's goals, to manage an organization, and to provide value to customers. Cost information can help to address strategic challenges, such as how many and what products to produce, how many and what customers to supply, what will be the most effective supply chain, and how best to structure the organization. Forecasting costs supports both operational and strategic planning. Operational planning uses financial cost and operational information to help manage resources, including specific initiatives to determine product margins. Professional accountants in business who design, use, or collect cost information will typically work with other parts of an organization to analyze and interpret this information for decision-making. In most cases, they will need to delve below the level of detail recorded in the financial ledgers and required for financial reporting.

D.2 Organizations need to view their operations from different perspectives for these different purposes. An organization can be seen as a set of products, a group of facilities and departments, a collection of processes, etc. To support these different views, costs need to be measured, analyzed, and reported in various ways, and may only have meaning in the context of a specific intended purpose. For example, product costs are the sum of the costs assigned to a product for a specific purpose, and different measures of product cost will be required for different decisions. Pricing and product-mix decisions provide information on profitability of different products, and assign the costs incurred throughout the value chain to different products.

D.3 Professional accountants in business not only need to master these differences, but also to be able to explain how the use of different accounting bases, different measurement and recognition methods, and sources of data affect costing information. Crucially, a professional accountant in business therefore needs to understand the organization in terms of the cause-and-effect relationships that convert its inputs into outputs (see para A.3). In responsibility accounting, standard costing systems are popularly used in setting budgets, because standard costs of operations and products can be readily built up into total costs for any budgeted volume and product mix. The management control in responsibility accounting typically uses variance analysis to determine where, and by how much, an operation's costs deviate from standard. However, standard costs can mask the cause-and-effect relationships essential to the effective use of costing to support business decisions. It is inadvisable, therefore, to rely on those costs for that purpose, except in organizations whose activities consist of a series of repetitive operations with limited change, and who have only one or similar types of product or service.

D.4 The selection of cost objects will significantly affect subsequent decisions that can be made. A cost object is anything that is separately measured, whether it is a product, service, department, activity, or customer. Different costs can be assigned to the same cost object, depending on the purpose. For example, costs from all parts of the value chain could be assigned to a product for pricing decisions (although this information is not necessarily required for external financial reporting). Note also that the direct cost of one cost object might be the indirect cost of another cost object.

D.5 The materiality of a particular cost is important in classifying costs. The less significant a cost, the less likely will it need to be traced to a cost object. Cost-effective design of costing solutions will focus on understanding where most money is spent, and for many decisions, it may be adequate to estimate less significant costs. Irrespective of size, however, it is necessary to understand in greater detail any area of cost whose treatment may lead to a different decision.

D.6 The choice of costing methods determines how costs are assigned and measured. Most period costing methods involve assigning cost (expense data) sourced from transaction systems (such as payroll, purchasing, etc). Most costing methods trace consumption of expenses to a destination (usually a cost object). The difference in cost assignment is usually based on (a) the selected cost object, and (b) the assumptions on how to assign costs of expenditures. A costing method that arbitrarily allocates costs to cost objects (rather than on a direct or cause-and-effect basis) could possibly result in a less than adequate association of costs with a cost object, thus compromising costing accuracy.

D.7 A costing system should make appropriate classifications of costs as direct or indirect, because misclassifications can have significant implications. For example, when a direct cost is misclassified as indirect, the consequence can be to (a) undercost the cost object to which the direct cost rightfully belongs, and (b) overcost the cost objects that are improperly allocated some of this cost. Similarly, when an indirect cost is misclassified as a direct cost of some cost object, the resulting cost reported for that cost object can be overstated, and the cost of the other cost objects that use the resource (to which the indirect cost rightfully belongs) will be understated. The consequence of misclassifying costs is to taint the decisions made using those costs. Implications of classifying direct costs as indirect include:

(a) Products that are unprofitable appearing to be profitable, resulting in decisions to keep producing a product that should be abandoned;

(b) Failure to recover full costs in cost-based contracting;

(c) A cost-based transfer price that is set too low, resulting in a misallocation of taxes payable between the tax jurisdictions involved in the transfer of goods; and

(d) Failure to recover the full value of goods in insurance claims.

All of these errors can have significant economic impact and often lead to disputes over the adequacy of the costing system in computing costs.

D.8 These difficulties are less likely to be encountered, and challenges more easy to refute, where a costing system is based on well-researched cost models that reflect the underlying reality of the way the organization works, as closely as materiality and affordability allow. For example, a costing system that uses broad averaging for allocating the cost of resources to cost objects uniformly would not reflect the underlying reality if the products consumed resources unevenly, and would give misleading results. Costing methods that provide information on the activities that lead to costs, such as ABC, can therefore provide better information to support decision-making.

D.9 Developing costing and information systems to support managers in running an organization requires an understanding of managerial purposes and the types of decisions managers will make. This understanding will then drive the information required from a costing system. Decision-makers have a range of requirements and preferences for consuming cost information. Understanding the information requirements and financial data usage of managers and employees requires a dialogue on what aspects of costing reports they currently find useful, and then determining their information gaps. Discussions with users could be based on understanding (a) the kind of decisions they make, (b) how costing information supports decisions, and (c) how to improve cost data and presentation.

D.10 Outside of manufacturing, cost relationships may be more complex or less obvious, especially where the sources of income may not directly relate to specific cost objects (products, services, activities, etc). In some organizations, the analysis of costing for pricing may have a political dimension, for example in taxation-funded services and regulated monopoly utilities. In such cases, (a) the use of economic rather than accounting cost concepts may be needed (for example long-run marginal or incremental costs), and (b) the advice of economists on system design will be essential and may be required by government policy, mandate, or regulation.

PRINCIPLE E

The professional judgment used to (a) determine costing methods, and (b) specifically select cost information to support decision-making, including any limitations on its applicability, should be transparent, rational, and understandable by the user.

E.1 A costing system should have *integrity*, that is it should be complete, systematic, logical, consistent both internally and with other management information, and fairly and faithfully represent the underlying reality of the organization.

E.2 Costing information can be presented in a range of formats, all of which should be reconcilable to each other. For example, historical general purpose financial reports should be consistent with cost information reported to managers. A reconciliation between values generated from by a financial accounting system and a costing system can help to avoid confusion and provide costing information greater credibility. Therefore, a professional accountant in business should be able to interpret and explain the significance of the

costing information provided for decisions, and its limitations, and to explain the reasons for differences from the data used for legal purposes.

E.3 Applying costing systems and methodologies and measuring costs requires professional judgment. In turn, this requires transparency in (a) how decisions on selection of costing systems and methods are made, (b) how costs are defined, classified, and allocated, (c) how these choices are considered appropriate for users, and (d) any limitations of the costing information. Transparency can also help organizations better rationalize decisions, for example, choices of costing methods and how their application has been refined to suit particular circumstances and contexts.

E.4 Costing involves different methods and definitions, and some users may find this confusing, or hard to understand. Professional accountants in business can play a central role in educating users, including advising, for example, on the selection of costing methods, cost measurement, classification, allocation, and behavior. Professional accountants in business are also able to explain the different purposes and outputs of costing methods. For example, they might need to clarify that standard product costs reported for costs of goods sold and inventory valuation may differ from ABC-calculated product costs. Professional accountants in business might also (a) show why variance analysis based on the difference between budgeted and actual data may provide a view of efficiency that differs from operational performance information coming from a separate system, and (b) then go on to recommend how usefully to integrate these information sets.

E.5 Professional accountants in business should be aware that it is not necessary to choose one single costing method over others to support (a) achievement of an organization’s strategic objectives, and (b) all decision-making on planning, operational control, and reporting activities. Costing methods do not necessarily compete with each other. They can often be usefully combined, so long as the differences and relationships between them are made clear. For example, both ABC and standard costing can be applied to job-order or process costing systems. Also, many organizations will refine their costing systems and methods over time to support specific decision-making. Different types of decisions will require different cost information, and different considerations and adjustments to costing systems and methods. What considerations and adjustments may be necessary depend on a range of issues, such as cost behavior (fixed versus variable), level of data aggregation, precision versus accuracy, historic versus future data orientation, frequency of calculation, and planning horizons. In practice, for example, many variants of product costing may suit different decision requirements in areas such as inventory control, pricing, and make/buy/sell decisions.

E.6 Different costing methods could also produce different costs for the same item, activity, or entity, and this should be considered when reporting to users. For example, different inventory valuation methods will result in different net income calculations. It can be important to inform users of different choices in measuring, assigning, and allocating costs, and how they can be reconciled with previous methods. Where different methods are

possible, and give different results, the professional accountant in business should offer advice on the most appropriate one and encourage its consistent application.

E.7 Cost recognition and an understanding of cost behavior underlies all decisions that rely on cost information, and provides critical insights into forecasting costs during budgeting and estimating cash flow. Estimating costs, including assessing the accuracy and reliability of underlying data, requires professional judgment. Recognizing costs based on estimates can be reliable and fit for purpose if based on a rational and systematic method. Methods to estimate behavior underlying costs include the high-low method, the visual fit method, and the regression method. All require the application of professional judgment, although usually in differing measures. The chosen method should reflect the application of judgment relating to the sensitivity of the decision to the cost estimate. The more sensitive the decision is to the cost estimate, and the greater the risk and size of the potential loss from using an inappropriate cost estimate, the greater the value of using a formalized tool to estimate costs. Any tool that relies on recorded costs to estimate cost behavior is susceptible to errors arising from inaccurate cost recording. However, cost estimation is more important than no cost recognition at all, and in conjunction with principle F, is capable of review, risk analysis, and assurance.

E.8 Cost information should be accompanied by advice on the limitations of its accuracy and applicability, especially where statistical approaches and estimates have been applied. An ABC model can be forward-looking if it uses budgeted rather than historical expenses. Where forecasts of economic and market variables are used, the period of their validity will likely be limited – this should be made clear to users. And where forecast activity levels are used, it is important to consider the capacity of resources to support those levels. Advising on applicability could also include advising on cost behavior patterns, particularly where (a) correctly defining fixed and variable costs is crucial for deciding how to use (or whether to eliminate) capacity, and (b) individual costs could be reclassified as either variable or fixed. Advising on the potential outcomes and likely behaviors that result from choosing a costing approach could also be necessary. For example, the choice of activity cost drivers can send a particular message that influences subsequent employee behaviors.

PRINCIPLE F

Definitions and sources of cost data, and the methods of calculation of costs, should be recorded and capable of review, risk analysis, and assurance.

F.1 Costing systems that have been computerized may quickly take on the status of a “black box”, in that computations are invisible and the system can lead to criticism as users change. Even a thoroughly researched and widely agreed-upon cost model can lose its legitimacy and general acceptance over time, unless the owners (those accountable) of the system and its users are kept regularly informed about the model(s) underlying the system and any changes made to them.

F.2 Organizations should critically review their costing systems and methods periodically. Reviews require accurate and comprehensive records of earlier decisions. Decisions on (a) selection and design of costing systems and methods, and (b) cost measurement and allocation, require professional judgment and subsequent justification, review, and assurance that could benefit from regularly maintained records. As an organization evolves, it is difficult to trace back to earlier events without a record of both decisions and the logic and reasoning that supported them.

F.3 Part of the value of costing information depends on consistent calculation over time. Therefore, changes to cost assignment methods, cost drivers, etc., need to be applied consistently from the date of change, and at the point of change figures need to be produced on both the old and improved bases. Any material discontinuity in a pattern of costs resulting from such a change will need to be recorded and appropriately disclosed.

F.4 Documentation can cover the selection of a costing system and costing methodology, as well as all costing activities, processes, and procedures. Documentation could take the form of a manual or handbook, which should be reviewed periodically. Such a reference helps to clarify the scope of a costing system and method, including applicable processes and activities, and provides a centralized record on earlier decisions, for example on data definitions. It can provide appropriate instruction, and include where necessary the reasoning and logic behind (a) costing system and methodology selection, (b) design and measurement, (c) cost allocation, and (d) accountabilities. A manual could also include the list of cost accounts and subsidiary accounts related to the standard general ledger.

PRINCIPLE G

Cost information and costing assumptions should be periodically reviewed for their relevance, robustness, and susceptibility to change.

G.1 Organizations should critically review costing methodologies and techniques periodically, to ensure that they are fit for purpose. The purpose of periodic review should also be to support continuous improvement in the costing approach, and to allow the identification and implementation of change.

G.2 All assumptions formulated in preparing costing information should be periodically reviewed and updated. Ideally, a wider post-decision review should compare the actual resources consumed with earlier forecasts.

G.3 Using a standard costing system could require a frequent review and update of the standard costs to ensure that their use encourages improvements in efficiency and are attainable.

PRINCIPLE H

The design, implementation, and continuous improvement of costing methods, data collection, and systems should reflect a balance between the required level of accuracy and cost.

H.1 Designing and implementing costing methodologies and systems, and collecting data, can be costly. Cost information supplied to internal or external users should be reliable and useful, but avoid unnecessary detail and spurious precision.

H.2 The professional accountant in business should ensure that the board or other body charged with the governance of an organization is satisfied with any trade-offs made between (a) system cost and complexity, and (b) the potential accuracy of information to be produced.

H.3 Some cost data can be expensive to produce, because it involves collecting data from outside the accounting system. In such cases, the frequency of reporting is a key part of fitness for purpose. Not all cost information is required with the same regularity that is needed for budgetary control. Cost information needs only to be sufficiently current for the type of decision to be made. For example, if a service organization (for market, regulatory, or policy reasons) only adjusts its prices to consumers annually, monthly reporting of costs required to support pricing decisions may be an unnecessary expense.

H.4 The design, implementation, and continuous improvement of costing methodologies, data collection, and systems should be economically feasible and subject to cost-benefit analysis. For example, the economic feasibility of cost tracing and assignment methods requires a judgment on whether the benefits (i.e., producing information of value to users) of applying a costing method outweigh its costs.

H.5 Such an analysis should consider how closely a costing system needs to depict the underlying reality to support good quality decisions. Asking questions like: ‘Is it reasonable, relevant, and practical?’ can help the analysis. Allocating costs should be conducted on a reasonable and consistent basis. Testing reasonableness should take into account the purpose of the cost information and the economic feasibility of collecting it. Directly tracing costs might be a preferred approach when economically feasible, as this helps to ensure a greater accuracy in assigning costs, especially if it involves tracing all direct costs to various activities or outputs. Assigning costs on a cause-and-effect basis should be considered for costs that cannot be directly traced to outputs. However, a judgment needs to be made on the point when such cost allocation methods outweigh the benefits of the increased accuracy. It can be costly to assign supporting costs (such as general management and support costs) on a direct or cause-and-effect basis; such costs can be arbitrarily allocated using a common denominator such as number of employees. However, this kind of cost allocation can reduce costing accuracy and reliability. For those items that account for a substantial cost of an output, it is usually preferable to base cost allocation on a direct or cause-and-effect basis. Using either of these methods can greatly improve cost accuracy.

H.6 A cost-benefit test and analysis of a costing system to judge its usefulness for decisions on requirements for input measurement, inventory valuation method, cost accumulation, and cost assignment, will impact the cost of designing, implementing, and maintaining the system. This test and analysis can be applied at several levels, including when a new costing system and/or costing method is being implemented, or during a redesign or review of the existing system. For example, a costing system could be refined to improve product cost information. Rather than using "predetermined" costs, using actual costs might be considered. However, in this example an organization could usefully assess whether the improvement in the quality of the decisions based on that information is worth the additional cost. The additional cost of operating a system that uses actual costs is not always necessary, and costing systems that use budgeted data can be relatively economical.

H.7 A costing method can be redesigned in different ways. For example, a costing method can be refined to make it easier to implement and maintain, especially where absolute accuracy of cost information for internal decisions is perhaps not necessary. The trade-off between the cost of implementing and maintaining a costing system and the accuracy required of product costs should be considered. A simpler approach to establishing an ABC system, for example, could entail (a) defining a more limited range of activities (and hence cost drivers), or (b) combining smaller activities into larger ones, to avoid complexity. Using good estimates and cost drivers (e.g., the number of setups), which are more easily defined (but consume the same quantity of resources every time an activity is performed), can also help to reduce system complexity. However, if the amount of resources required to perform an activity varies considerably across products, more accurate (intensity- and duration-based) cost drivers could be required.

H.8 A cost-benefit analysis should factor in the full range of advantages and disadvantages of a particular approach. For example, the use of ABC in an overarching ABM approach can bring organization-wide benefits to the way an organization is managed. It does this by separating value-adding activities from non value-adding activities, resulting in greater strategic control. The result can be improved management of an organization, and delivery of greater value to customers. In a smaller organization, implementing a budgeting system can (a) help employees plan ahead, and (b) provide information for operational control, thereby allowing an organization to take timely corrective action. The implementation costs include initial investments in physical assets and training employees, and all the costs of ongoing operations. However, all the related benefits, including positive behavioral impacts, of changing to a new way of working should be factored into a cost-benefit analysis where possible.

H.9 The complexity of a costing system will depend on both (a) the nature of decisions and the demand from users, and (b) the required level of information detail. The perceived benefits of information transparency can be outweighed by the administrative costs of obtaining the information. A cost-benefit analysis might usefully refer to the level of complexity implicit in a particular costing system, and define this complexity in relation to several factors, including:

- The nature of an organization's operations;
- The precision and accuracy required and needed by users;
- Practicability of data collection and processing (and availability of information systems); and
- The cost of implementing and maintaining the costing system.

H.10 Some organizations may not require a sophisticated costing system to report costs regularly for external and internal purposes, but might use special cost studies to analyze costs and their causes at a particular time to support specific decision-making. This might involve using costing methods or cost accounting processes on a one-off rather than recurring basis. A cost study should also be subjected to a cost-benefit analysis to ensure that the cost of planning, implementing, and using the cost study does not outweigh the potential benefit to the organization.

Appendix A

Resources

This list of resources is not intended to be exhaustive. Use the IFAC KnowledgeNet at www.ifacnet.com to search IFAC and many of its member body websites.

Cooper R and Kaplan R S (1998), Cost and Effect: Using Integrated Cost Systems to Drive Profitability and Performance, Harvard Business School Press ISBN-13: 9780875847887

Friedl G, Küpper H and Pedell B (2005), Combining ABC with German Cost Accounting, Strategic Finance, Institute of Management Accountants

Horngren C T, Datar S M, Foster G (2007) Cost Accounting: A Managerial Emphasis, Prentice Hall ISBN-10: 0131495380

Kaplan R S and Anderson S R (2006), Time-Driven Activity-Based Costing, Harvard Business School [web link]

Krumwiede K R and Charles S L (2006), Finding the Right Mix: How to Match Strategy and Management Practices to Enhance Firm Performance, Strategic Finance, Institute of Management Accountants [web link]

Dr Manoj P K (2008), Cost Competitiveness and the Indian Economy: Significance of Mandatory Cost Audit in the Globalized Regime, The Management Accountant [web link]

Sharman P A and Vikas K (2004), Lessons from German Cost Accounting, Strategic Finance [web link]

Stenzel J (editor) (2007), Lean Accounting, Best Practices for Sustainable Integration, Wiley ISBN-10: 0470087285

ACCA (2000), The ABC of overhead allocation, Finance Matters Magazine [web link]

AICPA (2004), Best Practices in Cost Reduction, AICPA MAPs Conference [web link]

Chartered Accountants of Canada (1999), Costing Government Services for Improved Performance Measurement and Accountability, Executive Summary [web link]

Chartered Institute of Management Accountants (2005), Target Costing in the (UK) National Health Service, Reforming the NHS from within, CIMA discussion paper [web link]

Chartered Institute of Management Accountants (2001), Activity-Based Management, Technical Briefing [web link]

CMA Canada Management Accounting Practices [web link]

Institute of Management Accountants, Statement on Management Accounting (2006), Accounting for the Lean Enterprise: Major Changes to the Accounting Paradigm, Kennedy F A & Maskell B H [web link]

Institute of Management Accountants, Statement on Management Accounting (2000), Designing an Integrated Cost Management System for Driving Profit and Organizational Performance, with Arthur Andersen and the Consortium for Advanced Manufacturing-International [web link]

Institute of Management Accountants, Statement on Management Accounting (1998), Tools and Techniques for Implementing Target costing, with Arthur Andersen and the Consortium for Advanced Manufacturing-International [web link]

Institute of Management Accountants, Statement on Management Accounting (1998), Tools and Techniques for Implementing ABC/ABM, with Arthur Andersen and the Consortium for Advanced Manufacturing-International [web link]

International Federation of Accountants (2008), Project Appraisal Using Discounted Cash Flow, IGPG [web link]

International Federation of Accountants (2005), Environmental Management Accounting, International Guidance [web link]

International Federation of Accountants (2000), Perspectives on Cost Accounting for Government, International Public Sector Study [web link]

Management and Accounting Web [web link]

Statement of Federal Financial Accounting Standards (no.4 1995), Managerial Cost Accounting Concepts and Standards for the Federal Government [web link]

Appendix B

Definitions

- **(Full) Absorption costing**: method of inventory costing in which all variable and fixed manufacturing costs are included as inventoriable costs so that all manufacturing costs are capitalized in the inventory and therefore become assets.

- **Accounting system**: refers to the ledgers and the collection of financial information for financial reporting, supplemented by information needed for budgetary control. Costing systems draw on the same data, but require the additional ability to break particular ledger code outputs into smaller sums, usually by applying a factor derived from other ledger codes (for example, product revenues), payroll data (for example, timesheets), work study outputs, and sampling schemes, etc.

- **Activity**: an event, task, or unit of work with a specified purpose, such as designing products, preparing machines, operating machines, and distributing products.

- **Activity-based Management (ABM)**:
  - Operational ABM: actions, based on analysis of driver activity, that increase efficiency.
  - Strategic ABM: actions, based on activity-based cost analysis, that aim to change the demand for activities that improve profitability.

- **Actual costing**: traces direct costs to a cost object by multiplying the actual direct-cost rates by the actual quantities of the direct-cost inputs. Indirect costs are allocated based on multiplying the actual indirect-cost rates by the actual quantities of the cost allocation bases. Normal costing, although similar to actual costing, uses predetermined (budgeted) indirect-cost rates to estimate costs during a year.

- **Allocation method**: is used when the cost to trace costs to cost objects is greater than the benefits derived. Costs are allocated based on a common denominator such as direct labor hours. Absorption costing typically allocates costs to products on the basis of a production volume related measurement.

- **Avoidable cost**: the specific cost of an activity or sector of an organization that would be avoided if the activity or sector did not exist.

- **Batch costing**: form of specific order costing where costs are attributed to batches of product.

- **Business model**: describes how an organization takes resource inputs and generates value for stakeholders. It represents the way an organization undertakes it business. It consists of an organization’s objectives and revenue streams, its strategy, operations and its various other functions.

- **Cost**: the monetary value of resources used or sacrificed or liabilities incurred to achieve an objective, such as acquiring or producing a good or performing an activity or service.

- **Cost accounting**: the process (enabled by costing systems) of accumulating, measuring, analyzing, interpreting, and reporting cost information to both internal and external users. Cost accounting provides information for management accounting and financial accounting, although organizations typically use these terms interchangeably.

- **Cost allocation**: assigning a whole item of cost or revenue to a single cost unit, center, account, or time period.

- **Cost assignment**: encompasses (a) tracing accumulated costs that have a direct relationship to a cost object, and (b) allocating accumulated costs that have an indirect relationship to a cost object.

- **Cost behavior**: determining how input costs vary with activity. Cost may increase proportionately with increasing activity (the usual assumption with variable cost), or it may not change (a fixed cost). Some costs that have variable and fixed elements are called semi-variable.

- **Cost driver**: any factor that causes a change in the cost of an activity or output resulting in the activity consuming fewer or greater amounts of resources.

- **Cost finding**: a process of developing cost information used to aid decision-making.

- **Cost method**: costing methods such as job and process costing, standard costing, ABC, Grenzplankostenrechnung, are (period costing) methods of assigning costs (cost assignment). Life cycle costing and target costing are non-period costing methods. Defining the appropriate measurement, assignment, and allocation of cost for a given purpose and decision involves selecting the appropriate costing method(s).

- **Cost model**: the description of sources, drivers, classification, and organization of costs and the relationships between them, and the relationship between costs and income. The cost model therefore (a) explains an organization in dynamic financial terms, and (b) aggregates cost and contribution reports for an organization and its subdivisions (geographical, product, process, etc). A cost model can be used to design a technological solution that supports a costing system.

- **Cost object**: an activity, output, or item whose cost is to be measured, for example, an organizational division, a function, task, product, service, or customer.

- **Cost pool**: a grouping of individual cost items. It is often referred to as a grouping of costs relating to a particular activity in an ABC system.

- **Cost study**: is often used to refer to the development of cost information independently of (or in conjunction with) cost and accounting systems using cost estimates or cost projections.

- **Cost structure**: the pattern how costs are incurred and relate to each other in processes and locations to define an organization's expenditure in financial terms. This pattern, in combination with and relationship to its sources of income, can build a business model in financial terms of the way it works to deliver value.

- **Direct costs of a cost object**: costs that can be specifically identified with an output. Indirect (overhead) costs of a cost object are costs of resources that are jointly or commonly used to produce two or more types of outputs, but cannot be specifically identified with any of the outputs or traced to a given cost object in an economically feasible way.

- **Full Economic Costing**: is a methodology for determining the full costs of undertaking a project or activity. It normally involves calculating directly incurred costs, directly allocated costs and indirect costs, and therefore enabling opportunity costs to be fully considered.

- **Incremental cost**: the increase or decrease in total costs that would result from a decision to increase or decrease output level, to add a service or task, or to change any portion of operations.

- **Joint and common costs**: are the costs of a production process that yields multiple products simultaneously. For example, the distillation of coal, which yields coke, natural gas, and other products. The cost of the distillation is a joint cost. Joint costs are fundamentally allocated by (a) an allocation based on a measure of the number of units, weight, or volume of the joint product, or (b) an allocation based on the values attributed to the joint products. A common cost is a cost of operating a facility, activity, or like cost object that is shared by two or more users. The common cost is lower than the individual cost to each user. Common costs are usually allocated to each user in an equitable way on the basis of the individual costs of the cost object. Common costs provide a general capacity without committing the capacity to a particular product or mix of products. For example, a piece of fiber optic cable allows its owner to provide various services to customers while not committing the owner to provide a specific set of services.

- **Lean philosophy and management**: a management control system in which organizational learning is emphasized over control. This enables lean organizations, such as Toyota, to focus on eliminating waste and creating capacity to satisfy customer demand. The cultural shift in lean organizations extends to improving the consumption and use of costing information usually by integrating it with operational information to better serve operations. This approach typically emphasizes more real-time non-financial operational feedback performance information targeted at both front-line employees and managers. Operational performance information usually includes data on the cost of quality, throughput, defects, cycle time, and yields.

- **Marginal costing**: the segregation of costs between those that are fixed, and those that vary directly with volume. Therefore, only those costs that are a consequence of production of the product are assigned to a product.

- **Non-period costing**: the period for which costs are accumulated that are unique to the cost object, whether a specific product, service, customer, or delivery channel.

- **Opportunity cost**: the value of the benefit sacrificed when one course of action is chosen over an alternative. The opportunity cost is represented by the foregone potential benefit from the best rejected course of action that has a similar relevant risk profile. [*This is the definition used in IFAC PAIB Committee's IGPG on Project Appraisal Using Discounted Cash Flow* [web link].

- **Output**: any specific product or service generated from the consumption of resources.

- **Period costing**: the period for which costs are accumulated. These are fixed time intervals, such as a week, month, or year.

- **Responsibility accounting**: collection, summarization, and reporting of financial information about various decision responsibility centers.

- **Responsibility center**: an organizational unit responsible for its activities.

- **Strategic control**: tracking and responding to progress against strategic goals.

- **Value stream**: all the processes required to create value for the customer.

- **Variable costing**: a method of inventory costing in which all variable manufacturing costs are included as inventoriable costs. All fixed manufacturing costs are excluded, and are treated as costs of the period in which they were incurred.

Appendix C

Basic Costing System Elements

CMA Canada's Cost Concepts and Classification Strategic Management Accounting: Standard 2100, an extract

A costing system accumulates costs in cost pools. There are three types of cost pools – primary, intermediate, and final.

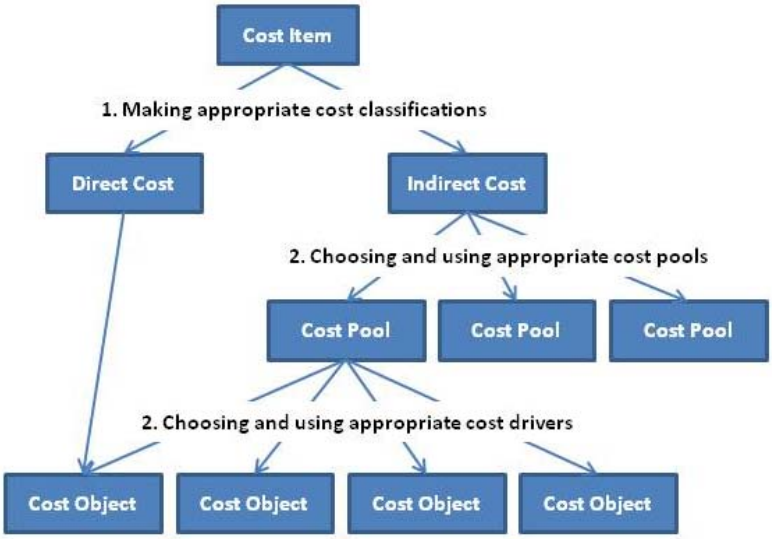
A primary cost pool is the initial account to which the cost is assigned. This account will usually correspond to an account in the financial accounting system's general ledger. For example, the wage paid to a worker whose job is factory maintenance might be assigned to the account "Wages – Factory Maintenance."

An intermediate cost pool accumulates costs pending their final disposition. An example of an intermediate cost pool is the cost of a particular activity, such as quality testing.

A final cost pool corresponds to the cost object. A cost pool that is final for one decision might be an intermediate cost pool in another decision. For example, in a "make or buy" decision, a decision-maker might consider the entire cost of a division. Therefore, the cost pool accumulating all the costs of the division is the final cost pool in that decision. However, in a decision that requires the cost of one of the division's products, the cost pools accumulating the costs of the division would be intermediate cost pools.

There are two characteristics that define the adequacy and potential accuracy of any costing system. Figure 2100-4 summarizes these characteristics.

Figure 2100-4



The two characteristics are:

- **A proper classification of every cost as direct or indirect.**
- **Proper handling of the cost, once classified.**

When the cost is classified as direct, the cost should be attributed to the cost pool associated with the cost object to which the cost belongs.

When the cost is classified as indirect, the cost should be assigned to an appropriate intermediate cost pool to accumulate that indirect cost. In general, the cost pools used to accumulate indirect costs should be designed so that they only accumulate costs with the same cost driver.

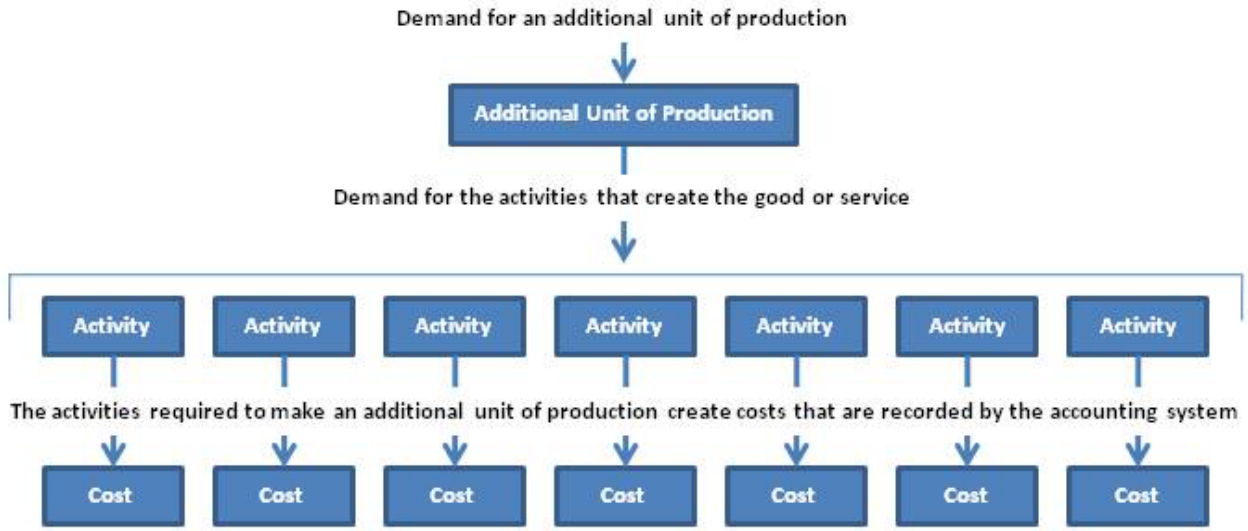
When costs are allocated from the intermediate cost pools to the final cost objects, the cost allocation basis should be the cost driver for that cost pool.

Broad Costing Principles

The appropriate principle for attributing or allocating costs to cost objects is cause-and-effect. That is a cost should be allocated to the cost object that caused the cost to be incurred. Figure 2100-1 depicts the cause-and-effect relationship between the demand for a good or service, the activities that are needed to make that good or service, and the costs that undertaking those activities create. The principle underlying Figure 2100-1 is that producing a good or service requires that the organization undertake certain activities. These activities consume resources. The organization incurs costs to acquire these resources, completing the cause-and-effect chain between the cost object (in this case a unit of production) and the cost. Therefore, the role of a costing system is to:

1. Identify the type and number of activities consumed by the cost object;
2. Develop an estimate of the cost of completing each of the identified activities; and
3. Assign a cost to the cost object by accumulating all the costs of all the activities consumed by the cost object.

Figure 2100-1



Appendix D

Specific Arrangements in Some Jurisdictions

The general principles of costing and the design of costing systems in this IGPG are generally applicable to all types of organization. For example, cost information is an equally important driver of performance information and reporting in public and not-for-profit organizations. However, some jurisdictions apply legislative expectations on performance. These legislative mandates require reporting entities to develop and report cost information on a consistent and regular basis. Rules in some jurisdictions prescribe the calculation of unit costs to (a) allow comparisons between public authorities, and (b) establish the performance of specific activities. Below are examples of jurisdictional obligations or guidelines:

- A number of South Asian countries, including India (since 1965), Pakistan (since 1990) and Bangladesh (since 1994) require a *cost audit*, which involves the audit of the cost accounts of many industries. In Sri Lanka and Nepal, a cost audit is not mandatory. Cost audits help to ascertain whether an organization's cost accounting records are so maintained as to give a true and fair view of the cost of production, processing, manufacturing, and mining of a product. Therefore, cost audits can be used in these countries to the benefit of management, consumers and shareholders by (a) helping to identify weaknesses in cost accounting systems, and (b) to help drive down costs by detecting wastage and inefficiencies. Cost audits are also of assistance to governments in helping to formulate tariff and taxation policies.
- Japan: while there are no legal requirements on costing in Japan, the Japanese Ministry of the Environment has produced guidelines on Environmental Accounting that define environmental protection/conservation costs and benefits. More than 800 companies in Japan have voluntarily introduced environmental accounting based on these guidelines, and disclose the results in environmental or sustainability reports.

The extent to which cost accounting is used within governments varies from country to country. In 2000, IFAC published *Perspectives on Cost Accounting for Governments, an International Public Sector Study* [web link]. This provided useful governmental perspectives on cost accounting.

In a public sector context it is important to note that using full cost information along with non-financial information on program outputs and outcomes can aid governments, managers, and other stakeholders to make decisions on service delivery. The full costing of public service programs (or the output of a responsibility center) generally involves compiling the sum of direct and indirect costs that contribute to the program or output. This compilation also includes the full costs of intermediate activities, processes, projects, or programs that need to be measured to calculate the full costs of their outputs. This can enable better evaluation of the merits of a public service policy or program (although program outcomes may require separate measurement). Examples of government requirements and guidelines for costing include:

- USA: The Chief Financial Officers (CFO) Act of 1990 was designed to improve federal management and accountability by gaining financial control of government operations. It

required (a) the development of cost information, and (b) agency CFOs to develop and maintain accounting and financial management systems that report cost information. To support CFOs, the Federal Accounting Standards Advisory Board (FASAB) issued Statement of Federal Financial Accounting Standards (SFFAS) No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*. This standard recognized the importance of information on full costs of programs and activities to allow proper evaluation of programs' outputs and outcomes.

- UK: for significant project proposals, the UK Government expects the use of Full Economic Costing as a more accurate way of helping to determine whether an activity or a project is worthwhile and sustainable. The UK Treasury's *Green Book, Appraisal and Evaluation in Central Government* [web link], applies to government departments although full economic costing is required in other public sector/non-for profit organizations such as in the University sector (from 1 September 2005 Research Councils pay 80 per cent of the Full Economic Costs of research in Higher Education Institutions). The Green Book states that for substantial proposals, relevant costs are likely to equate to the full economic cost of providing the associated goods and services. The Full Economic Cost should be calculated net of any expected revenues for each option.

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