

---

# Approaches to Operational Auditing

---

## DEFINITIONS OF “OPERATIONAL AUDITING”

Business processes often step across the frontiers between sections within a business, requiring high standards of coordination between different organisational parts. Control is often weaker where coordination is required between sections that are organisationally separate. Internal auditors are likely to be more productive if they focus considerable attention to the points of interface between organisational parts where coordination is required but is more difficult to achieve than within a single section of the business. Furthermore, internal auditors are likely to be more productive if a significant proportion of the audit engagements they perform are of natural business processes that step across the business's organisational frontiers. We state this up front as it is so important, and we shall explore this innovative audit approach in detail in Chapter 2 when we have established some fundamentals in this chapter.

The term “operational auditing” conjures up different images for internal auditors. It may be used to mean any of the following:

The audit of *operating units* such as manufacturing plants, depots, subsidiaries, overseas operating units, and so on. While the audit scope may cover only accounting, financial and administrative controls it may be broadened in scope to cover the administrative and operational controls, risk management and governance processes of the operating unit under review. To impose general scope limitations for internal audit activities is inconsistent with the global *Standards* of The Institute of Internal Auditors ([www.theiia.org](http://www.theiia.org)).

The audit is how the *functional areas of a business* (such as sales, marketing, production, distribution, HR, etc.) account for their activities and exercise financial control over them. This meaning of operational auditing acknowledges that the internal auditing activity should review all the operational areas of the business, but

too narrowly specialises in the audit of accounting and financial controls. It is likely to imply that the internal auditing activity is representing only the finance director or the chief accountant in providing assurance about accounting and financial control across the business.

The audit of *any part of the business* (operating unit, functional area, section, department or even business process, etc.) where the audit objective is to review the effectiveness, efficiency and economy with which management is achieving its own objectives. Depending upon how broadly one defines internal control, the approach to operational auditing goes further than a review of detailed internal control procedures since management's objectives are not achieved merely by adhering to satisfactory systems of internal control.

The classic management writers, Koontz, O'Donnell and Weihrich, endorsed this approach to operational auditing:

An effective tool of managerial control is the internal audit, or, as it is now coming to be called, the operational audit . . . Although often limited to the auditing of accounts, in its most useful aspect operational auditing involves appraisal of operations generally . . . Thus operational auditors, in addition to assuring themselves that accounts properly reflect the facts, also appraise policies, procedures, use of authority, quality of management, effectiveness of methods, special problems, and other phases of operations.

There is no persuasive reason why the concept of internal auditing should not be broadened in practice. Perhaps the only limiting factors are the ability of an enterprise to afford so broad an audit, the difficulty of obtaining people who can do a broad type of audit, and the very practical consideration that individuals may not like to be reported upon. While persons responsible for accounts and for the safeguarding of company assets have learned to accept audit, those who are responsible for far more valuable things—the execution of the plans, policies and procedures of a company—have not so readily learned to accept the idea.<sup>1</sup>

## SCOPE

A key issue for a business and its internal audit function to decide upon is whether the scope of internal audit work in an operational area of the business should be restricted to a review of the appropriateness of, and extent of compliance with, key internal controls or should be a more comprehensive review of the operation generally.

The Committee of Sponsoring Organizations (COSO) view of internal control rightly sees one of the three objectives of internal control as being to give “reasonable assurance” of “effectiveness and efficiency of operations”:

Internal control is broadly defined as a process, effected by the entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations.
- Reliability of financial reporting.
- Compliance with applicable laws and regulations.<sup>2</sup>

So COSO's broad view of internal control is that internal control (i.e. management control) is everything that management does in order that there is reasonable assurance the business will achieve all of its objectives. A narrower view of internal control is that it is only one of a number of facets of management—among others being planning, organising, staffing and leading. It is true that these facets overlap and an internal audit which intends to focus more narrowly on key internal controls is likely to need to address planning, organising, staffing and/or leadership issues to some extent, since deficiencies in these may weaken control. But there will be many aspects of planning, organising, staffing and leading which are neutral in their effect on the functioning of key controls but which contribute to providing reasonable assurance of the achievement of efficient and effective operations.

The important issue is whether internal audit may legitimately draw management's attention to deficiencies in planning, organising, staffing and leading which, while not weakening the design and operation of key controls, nevertheless impede the achievement of objectives more generally. In the past internal audit was often defined as *the independent appraisal of the effectiveness of internal control*. The Institute of Internal Auditors' current (2009) definition of internal auditing, subscribed to globally, is that:

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.<sup>3</sup>

So, should an enlightened enterprise restrict internal audit to narrow internal control matters, or should internal audit be encouraged to review and report on *any matters* which may be unsound? Differing positions are adopted in different enterprises. The middle-of-the-road approach is to encourage internal audit to interpret its mission as being the *appraisal of internal control* (in all its component parts,<sup>4</sup> in all operational areas of the business and at all levels of management). If during the course of audit work, other matters are noted which should be of management concern but do not directly have a control dimension, internal audit should be encouraged to report on them.

Beyond the consideration of the point of focus for audit reviews of operational areas, the audit function will have to define those aspects of the organisation which are to be subject to review. In practice, of course, this will vary considerably between organisations, and will be related directly to the nature of the business and the way the organisation is structured. For example, a multinational pharmaceutical company may have its principal manufacturing bases and research and development activities in only those few countries where the economic and commercial environments are most suitable, whereas sales and marketing operations (of varying scale) may exist in every country where there is a proven market for the products.

Although the focus of operational auditing is likely to be on those activities which are most strongly associated with the main commercial markets of the organisation (for example, production, sales, after sales support, service provision, etc.), it is likely that the supporting or infrastructure operations will also need to be reviewed

on the basis that they too contribute to the well-being of the organisation as a whole. At the top level, one possible categorisation of all these areas could be as follows (although this classification will not fit every business or service-provision scenario):

- management and administration
- financial and accounting
- personnel and human relations
- procurement
- stock and materials handling
- production/manufacturing
- marketing and sales
- after sales support
- research and development
- information technology
- contracting.

This particular top level classification would be appropriate for a large organisation involved in product development, manufacturing and sales activities. A modified model would emerge for an organisation (public or private) associated with providing a service (for example, a public health authority or a roadside vehicle repair service).

Below this level of categorisation, there would be specific or discrete activities or systems, each of which may be the subject of a separate operational audit review. The subsequent chapters of this book will predominantly examine operational areas from this systems/activities orientation. For each of the above classifications there will be a number of discrete functions, systems or activities which may be defined within a particular organisation and be subject to examination by the internal auditors. This breakdown of the organisation into a set of separate audit reviews could be said to form the *audit universe* of potential audit projects. For example, the top level classifications noted above could be broken into the constituent systems or activities listed below, each of which could be the subject of an audit review. In some cases the noted subjects may readily align with a department within the organisation (i.e. payroll, human resources, purchasing, etc.). Alternatively, the activities may require coordination between a number of departments or functions (for example, the development of a new product may involve, *inter alia*, the marketing, accounting and research functions). Each organisation will be different and the internal audit function will need to adopt the most suitable definition of their *universe* of potential review assignments in order to match the prevailing structure and style.

A breakdown of the above top level classification into constituent systems or activities is given below:

*Management and administration:*

- the control environment
- organisation (i.e. structure)
- management information
- planning
- risk management
- legal department

- quality management
- estates management and facilities
- environmental issues
- insurance
- security
- capital projects
- industry regulations and compliance
- media, public and external relations
- company secretarial department.

*Financial and accounting:*

- treasury
- payroll
- accounts payable
- accounts receivable
- general ledger/management accounts
- fixed assets (and capital charges)
- budgeting and monitoring
- bank accounts and banking arrangements
- sales tax (i.e. VAT) accounting
- taxation
- inventories
- product/project accounting
- petty cash and expenses
- financial information and reporting
- investments.

*Personnel/Human relations:*

- human resources department (including policies)
- recruitment
- manpower and succession planning
- staff training and development
- welfare
- pension scheme (and other benefits)
- health insurance
- staff appraisal and disciplinary matters
- health and safety
- labour relations
- company vehicles.

*Procurement (see also Contracting (below)):*

- purchasing
- contracting (NB: this subject may be further broken down into a number of discrete subsystems, such as tendering, controlling interim and final payments, etc. see below).

*Stock and materials handling:*

- stock control

- warehousing and storage
- distribution, transport and logistics.

*Production/manufacturing:*

- planning and production control
- facilities, plant and equipment
- personnel
- materials and energy
- quality control
- safety
- environmental issues
- law and regulatory compliance
- maintenance.

*Marketing and sales:*

- product development
- market research
- promotion and advertising
- pricing and discount policies
- sales management
- sales performance and monitoring
- distribution
- relationship with parent company (for overseas or subsidiary operations)
- agents
- order processing.

*After sales support:*

- warranty arrangements
- maintenance and servicing
- spare parts and supply.

*Research and development:*

- product development
- project appraisal and monitoring
- plant and equipment
- development project management
- legal and regulatory issues.

*Information Technology (IT):*

- Auditing Information Technology
- IT Strategic Planning
- IT Organisation
- IT Policy Framework
- Information Asset Register
- Capacity Management
- Information Management (IM)
- Records Management (RM)

- Knowledge Management (KM)
- IT Sites and Infrastructure (Including Physical Security)
- Processing Operations
- Back-up and Media Management
- Removable Media
- System and Operating Software (Including Patch Management)
- System Access Control (Logical Security)
- Personal Computers (Including Laptops and PDAs)
- Remote Working
- Email
- Internet Usage
- Software Maintenance (Including Change Management)
- Networks
- Databases
- Data Protection
- Freedom of Information
- Data Transfer and Sharing (Standards and Protocol)
- Legal Responsibilities
- Facilities Management
- System Development
- Software Selection
- Contingency Planning
- Human Resources Information Security
- Monitoring and Logging
- Information Security Incidents
- Data Retention and Disposal
- Electronic Data Interchange (EDI)
- Viruses
- User Support
- BACS
- Spreadsheet Design and Good Practice
- IT Health Checks
- IT Accounting

*Contracting:*

- the contract management environment
- project management framework
- project assessment and approval
- engaging, monitoring and paying consultants
- design
- assessing the viability/competence of contractors
- maintaining an approved list of contractors
- tendering procedures
- contract and tendering documentation
- insurance and bonding
- selection and letting of contracts
- management information and reporting

- performance monitoring
- arrangements for subcontractors and suppliers
- materials, plant and project assets
- valuing work for interim payments
- controlling price fluctuations
- monitoring and controlling variations
- extensions of time
- controlling contractual claims
- liquidations and bankruptcies
- contractor's final account
- recovery of damages
- review of project outturn and performance
- maintenance obligations.

*Governance, risk management, internal control:*

- internal governance processes
- the board
- external governance processes
- risk management processes
- issues for internal control.

For each of the above constituent activities there is available on the companion website a detailed standard audit programme guide (SAPG) in Word format, which readers can adapt to be more closely applicable to their business activities.<sup>5</sup> This is available on a password protected accompanying website. See Appendix 1 for details. The above list of constituent activities is by no means exhaustive, so we also provide a blank SAPG in Word format for readers to use to develop further business activities.

We also provide in Word format a set of 24 SAPGs relating to some of the activities within financial institutions and a set of 27 applicable to the health sector. The activities covered in these sector-specific sets are:

*Sector: Financial institutions*

- branch security
- branch operations
- management
- treasury dealing
- investments—new accounts
- investments—account maintenance
- investments—account statements
- secured personal loans
- unsecured loans
- commercial lending—new business
- commercial lending—account maintenance
- cheque accounts
- ATM services
- credit and debit cards



- new mortgage business
- mortgage account maintenance
- mortgage arrears
- mortgage possessions and sales
- mortgage mandates
- mortgage annual statements
- treasury environment
- staff accounts
- securities.

*Sector: Health*

- purchaser contracting
- provider contracting
- general practitioner fund holding
- charitable funds
- use of health centres
- private patients
- welfare foods
- residential accommodation
- joint finance
- residents' monies
- cashiers
- family health service authority
- road traffic accidents
- nursing homes
- trading agencies
- insurance products
- pharmacy stores
- risk management
- cash collection—car parks
- cash collection—telephones
- cash collection—prescriptions
- cash collection—shops/restaurants
- cash collection—staff meals
- cash collection—vending machines
- income generation
- staff expenses
- losses and compensations.

It is unwise to restrict one's thinking of these systems or activities as either existing or operating in isolation. This is rarely true. Any organisation will be formed from a number of interacting activities with points of interface. For example, in the case of ordering and receiving goods from external suppliers, there needs to be a coordinated flow of accurate information between the purchasing department, the stock warehouse and the accounts payable section. Whereas the control processes operating within a function or department may be well defined and applied, there is the potential for control weaknesses at the point of interface with other related

functions. There are alternative ways of dividing up the *audit universe* of activities within an organisation and Chapter 2 examines such approaches in some detail.

It is important to stress that the listing of possible systems and activities given above is but one example of the way in which an organisation can be defined for audit or review purposes. Not all the items will be appropriate in every organisation. Additionally, although a listed activity may be relevant to a particular scenario, the scale and significance of it will vary between organisations. This matter of degree should be taken into account when the audit function is determining its priorities for planning purposes.

When approaching the review of operational areas of the organisation, it is important that the auditor has an accurate appreciation of the related key issues. If necessary, prior research should be conducted in order to provide the auditor with an acceptable level of understanding. Beyond the auditor's self-interest in being able to tackle confidently the review project, there is also the matter of the auditor's credibility in the eyes of operational management. It is interesting to note that The Institute of Internal Auditors' *Standards* place even more stress on planning an audit engagement than on performing it, expending twice as many words on the former. Unless the auditor can readily demonstrate a pragmatic awareness of the critical issues and set these against the objectives of senior management for the area under review, any subsequent work and findings may be in danger of not being treated seriously by management due to inaccuracies, misinterpretations and an inappropriate focus. The auditing approach to be adopted during operational reviews needs to be both professional and practical, and these elements will need to be set into the context of the formal auditing procedures. The practical and behavioural aspects of auditing are beyond the scope of this book. However, unless management can be suitably assured that the reviews conducted by internal audit are objective, professional and based upon an accurate understanding of the issues, they may question the worth of such activities to the organisation.

## AUDIT APPROACH TO OPERATIONAL AUDITS

Auditors of operations should keep firmly in their mind the objectives of management for the operations being audited. At an early stage in planning the audit engagement, the audit team need to establish what are management's objectives. If management are unclear as to their objectives, then these objectives must be worked out with management before the audit engagement can process. During the planning phase of the audit engagement the audit objectives need to be established. "Audit objectives" are not synonymous with "management's objectives" as the audit objectives specify the particular focus that the auditors will have during the audit engagement. Even so, each audit objective must be determined because it will potentially add value in assisting management to achieve one or more of their objectives. No time should be expended during the audit engagement on issues which are immaterial to the achievement of management's objectives. Nothing should appear in the audit report of the engagement which is immaterial to the achievement of business objectives by management.

### **An audit approach which places management's objectives at its centre<sup>6</sup>**

The group internal audit department of a domestic products multinational company headquartered in London is undertaking an audit engagement of the multinational's operating unit in Tokyo. At an early point in the planning process of this engagement, the audit team establishes who has oversight responsibility for the Tokyo operating unit. Let us say that this is the production director located in London, to whom the head of the Tokyo operating unit reports.

In a real sense the audit engagement is being conducted for the production director. The production director has a number of direct reports spread across the world, with oversight responsibility for each. The production director needs to know that all is in order within each of these operating units. He or she can go and find out for himself or herself. But the production director will rarely find the time to do so, and would hardly know how to set about doing so effectively. Internal auditing has been defined as doing what management would do if management had the time and knew how to do it. Internal auditors are experts at auditing—which management usually is not. An internal audit function does, of course, have the time to audit. Internal audit looks round corners that management are unable easily to look round for themselves.

At a later stage, the emerging audit findings will be discussed with the head of the Tokyo operating unit, whose responses will be built into the final audit report; the audit report will be *addressed* to the production director in London who may be regarded as the main client of this particular audit engagement. The report will be *copied* to the head of the Tokyo operating unit. In this way, the audit findings will be addressed to the level of management that needs to know and that is capable of ensuring appropriate action on audit findings is taken. Should the production director fail to ensure this, the chief audit executive will then need to consider whether the audit results, together with reference to the CAE's view that insufficient action has been taken upon them, should be communicated to an even higher level.<sup>7</sup> However, the CAE may consider that the degree of importance of the audit findings, when matched to the seniority of the production director, means that escalation above the level of the production director is not warranted as it may be legitimate for the production director to decide whether to live with a level of risk identified during the audit engagement.

Meanwhile, early during the planning of the audit engagement, having established that the production director has oversight responsibility for the Tokyo operating unit, the audit team arrange to meet with the production director. Initially the auditors ask the production director to explain:

“What are your objectives for the Tokyo operation?”

As with all information offered to the audit team during the course of the audit engagement, the auditors will consider how they can independently

verify the validity of the statement of management's objectives that the team has been given. If the production director points out to the audit team that he or she has not thought much about the Tokyo operation for a while and cannot immediately recall whether there are any established objectives for Tokyo, then audit findings are already starting to emerge as clearly this is unsatisfactory. Nevertheless, the audit engagement cannot proceed further until the audit team has hammered out with the production director an agreed upon set of objectives for the Tokyo operation.

Next, in effect the audit team asks the production director the following question:

"OK, we are agreed on your objectives for the Tokyo operating unit. What information do you need to be receiving so that you know whether these objectives are being achieved?"

Again, if the production director is uncertain, then further provisional audit findings are starting to emerge—even though this discussion is taking place only during the planning phase of the audit engagement, before the audit team have left London for Tokyo. But planning the engagement cannot proceed further until the audit team has hammered out with the production director an agreement on the nature of the information he or she needs to be in receipt of in order to monitor whether management's objectives for the Tokyo operation are being achieved.

The next step is for the audit team to ask to see the information the production director is receiving:

"OK, we are agreed on the information you need to get from Tokyo to monitor that management's objectives for Tokyo are being achieved. Can you show us the information you are receiving about the Tokyo operation, please?"

When the audit team reviews this information they may discover that it is incomplete, unclear, inconsistent or untimely. So, further important provisional audit findings are starting to emerge. Nevertheless, the audit team endeavours to interpret the information so as to determine the most valuable focus for the audit fieldwork in Tokyo—that is, their audit objectives. They will discuss their proposed audit objectives with the production director with the intention of getting his "buy-in" to them. But being an assurance engagement, not the provision of a consulting service, it should be the decision of the chief audit executive what the audit objectives are to be: internal auditors do not subordinate their judgement on professional matters to that of others.<sup>8</sup>

Having determined the audit objectives for the engagement, the audit team are then able to draw up their audit programme which sets out how they plan to spend their fieldwork time in Tokyo. The approach they will take in Tokyo will include:

- confirming the reliability of the management information of importance submitted to the oversight function in London;

- undertaking audit fieldwork so as to develop audit recommendations on issues they are already aware of with respect to incompleteness, lack of clarity, inconsistency and untimeliness;
- determining whether other significant events are occurring in Tokyo which should be reported to the oversight function.

While this case study describes a slightly novel approach to operational auditing, it does illustrate the importance of being clear about management's objectives for the operation being audited, and how management's objectives are woven through the engagement from beginning to end. The case study interprets a classic article which defined internal auditing as:

"Internal auditing is the process of appraising the information flow to the monitoring function of a system for its quality and completeness. It is carried out by checking that the information is both self consistent and mutually consistent and by the irregular generation of test information flows."

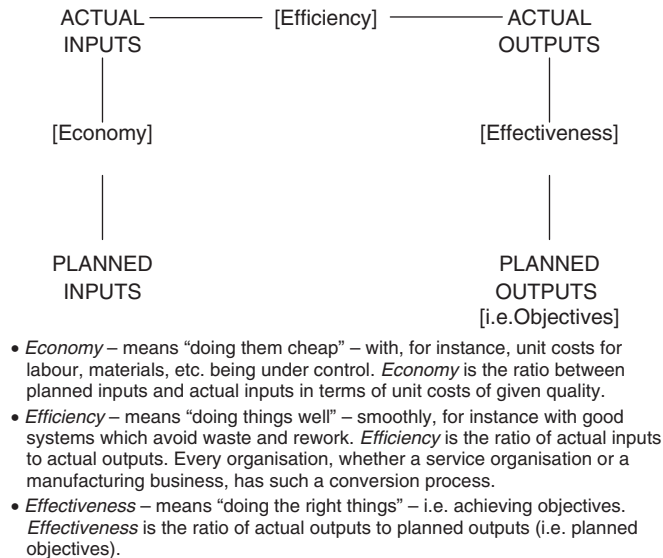
## Auditing for the Three and Six Es

Operational auditors are auditing for the "three Es"—effectiveness, efficiency and economy. They are looking for opportunities for business processes to be done differently so as to improve their effectiveness, efficiency and economy. At the very least they are intending to provide assurance to management and to the board that business processes *are* effective, efficient and economic. Too often auditors fail to appreciate the distinctiveness between each of these "three Es" with the risk that auditors fail to address all three separately. The COSO definition of internal control, given earlier in this Chapter, fails to highlight 'Economy' separately, choosing instead to subsume it within 'Efficiency'.

Figure 1.1 helpfully shows the distinctions, as well as the relationships, between the three. How *economic* we are is best considered in terms of the ratio between what we planned to spend on each unit of resource of given quality, and what we actually spent. Every organisation (whether a manufacturing or service entity), and every function or process within an organisation, has conversion processes that turn the actual inputs available into actual outputs. If staff are poorly trained, incompetent, poorly motivated or poorly supervised it will be likely that the ratio of usable outputs to the actual resources input into the conversion process will be unsatisfactory: in other words we do not have an adequately *efficient* (or smooth) conversion process. It is not just the quality of staff that contributes to efficiency: the design of processes, the quality of technology and so on are other factors. We are *effective* if our actual outputs correspond to the outputs we planned.

Figure 1.1 presumes that our economy, efficiency and effectiveness are each measured against economy, efficiency and effectiveness targets we set ourselves. If we are insufficiently demanding we may achieve 100 % outcomes against the modest targets we set ourselves. Clearly we need ways of avoiding falling into this trap by:

- benchmarking against other organisations for indications as to whether we are “economic enough”, “efficient enough” and “effective enough”;
- comparing with other parts of our organisation;
- measuring and interpreting trends over time;
- aiming for continuous improvement.



**Figure 1.1** The three Es

These three Es can be related to each other as shown in the model in Figure 1.1.

Internal auditors have now added a further “three Es” to their portfolio of matters of audit interest, particularly as a consequence of their role in the audit of governance processes as set out in Standards 2110 to 2110.C1 of The Institute of Internal Auditors:<sup>9</sup>

- *Equity*—avoidance of discrimination and unfairness; acceptance and promotion of diversity.
- *Environment*—acting in an environmentally responsible way.
- *Ethics*—legal and moral conduct by management and staff.

## RESOURCING THE INTERNAL AUDIT OF TECHNICAL ACTIVITIES

Standard 1210 of The Institute of Internal Auditors on “Proficiency” reads:

“Internal auditors must possess the knowledge, skills, and other competencies needed to perform their individual responsibilities. The internal audit activity collectively must possess or obtain the knowledge, skills, and other competencies needed to perform its responsibilities.”

and Standards 1210.A1 and 1210.C1<sup>10</sup> respectively read:

**“1210.A1**—The chief audit executive must obtain competent advice and assistance if the internal auditors lack the knowledge, skills, or other competencies needed to perform all or part of the engagement. . . .

**“1210.C1**—The chief audit executive must decline the consulting engagement or obtain competent advice and assistance if the internal auditors lack the knowledge, skills, or other competencies needed to perform all or part of the engagement.”

Business objectives are achieved through successful processes within the operational areas of the business. The internal audit scope should not be merely to explore how operations are accounted for and administered. Business operations often include elements which are highly technical and which are essential if operational objectives are to be achieved. To audit such operations successfully, the audit team must collectively possess an understanding of those technical activities. While this understanding generally need not be to the level of an expert, it must be sufficient for the audit team to be able to determine whether the governance processes, risk management and internal control give reasonable assurance of the achievement of objectives and, if not, what measures might be introduced to rectify the situation. Beyond that, it is not necessary for the internal auditor to be expert in the technicalities of the operation being audited. Indeed it can be counterproductive and unconvincing for the auditor to try to project an expert image in the technicalities of the operation under review. Operational management are the operational experts. Internal auditors are expert at conducting audits and have general expertise in the principles of governance processes, risk management and internal control.

Where there is an inadequate balance between the technical complexity of the operation to be audited and the available, relevant technical competence of the in-house internal auditors, a number of options are available to the chief audit executive.

One option is to decline to include the operation within the future audit plan, or to approach the engagement with a limited scope so as to skirt round the challenging technical aspects of the operation . . . Standards 1130 on “Impairment to Independence or Objectivity” requires that . . .

“If independence or objectivity is impaired in fact or appearance, the details of the impairment must be disclosed to appropriate parties . . .”

and the Interpretation to this Standard makes “scope limitations” one of these impairments. Standard 2020 on “Communication and Approval” requires that the chief audit executive communicate to senior management and to the board the impact of resource limitations.

Another option is to adjust the competencies of the internal audit function so that all the principal technical disciplines which are core to the operations of the business are represented within the audit team. This often requires foresight—long-range planning to adjust the complement of internal auditors to the future needs of the business. Modern internal auditing activities should be multidisciplinary. The bias towards accountancy expertise is largely a consequence of the accountancy profession being one of the few sources of recruits of staff who have been trained

in auditing. It is likely that the chief audit executive will favour recruiting internal auditors who are familiar with more than one of the requisite technical areas.

A further option is to buy-in temporarily the technical expertise to work alongside in-house internal auditors so as to build their competence to perform audits in particular technical areas. Such bought-in expertise may be sourced from outside the organisation or from technical areas within the entity but divorced from the particular operation to be audited. A similar but not identical approach was followed within British Petroleum for the internal audit of plant safety—of refineries, depots, terminals, pipelines and so on.

### **BP's approach after the Texas refinery explosion**

Non audit staff, selected by BP's process safety advisor for the refining business from technical staff who were external to the subject site but were almost always BP employees, were used to undertake these so-called gHSEr audits.<sup>11</sup> The role of BP's Group Internal Audit was to conduct internal reviews of this gHSEr process but generally not to undertake the audit engagements themselves. Following the explosion at BP's Texas refinery early in 2005, and pipeline spillage at Prudhoe Bay, Alaska at about the same time, BP's board asked James Baker, previously Secretary of State in George Bush Snr's Administration and previously an oil industry specialist, to enquire and report to the board. The Baker Panel's report<sup>12</sup> suggested that BP's approach to resourcing their gHSEr audits had led to an internalised view of how things were done in BP and that third-party reviews by a qualified outside party would offer a different level of assurance. BP's board accepted the Baker Panel's suggestion that the Panel be mandated by the board to appoint an external expert to undertake this audit work for at least a five-year period, reporting directly to the board of BP.<sup>13,14</sup>

Indeed, sometimes the approach is followed to outsource completely the audit of highly technical areas. IT auditing is often so outsourced. While it is a moot point whether the work done by an outside expert and his or her team (as with the BP example) is to be regarded as internal audit work, The Institute of Internal Auditors' *Standards* make it clear that overall responsibility remains with the chief audit executive even when entire parts of internal audit work have been outsourced:

The chief audit executive is responsible for all internal audit engagements, whether performed by or for the internal audit activity, and all significant professional judgements made throughout the engagement. The CAE also adopts suitable means to ensure this responsibility is met. Suitable means include policies and procedures designed to:

- minimize the risk that internal auditors or others performing work for the internal audit activity make professional judgements or take other actions that are inconsistent with the CAE's professional judgement such that the engagement is impacted adversely.
- Resolve differences in professional judgement between the CAE and internal audit staff over significant issues relating to the engagement. Such means may include



discussion of pertinent facts, further inquiry or research, and documentation and disposition of the differing viewpoints in engagement working papers. In instances of a difference in professional judgement over an ethical issue, suitable means may include referral of the issue to those individuals in the organization having responsibility over ethical matters.

Another approach to obtaining assurance about highly technical activities is to rely, to a greater or lesser extent, on a programme of control self assessment (CSA) by technical management and staff, most probably in the form of CSA workshops facilitated by internal audit. This is different from traditional internal auditing—in particular as it is a less independent, less objective self assessment by management and staff. It has the advantage that it taps into the technical expertise of management and staff active in running the technical operation. Furthermore, these staff are probably already aware of the deficiencies of the operation and will have their own ideas as to how to make rectification going forward. We address control self assessment in Chapter 10.

## PRODUCTIVITY AND PERFORMANCE MEASUREMENT SYSTEMS

### Overview

Organisations are likely to have in place a number of key performance measures, so as to, among other things, assess the achievement of their objectives and goals, assess their progress, and compare relative performance (for example, over time). The nature and form of such measures will, of course, vary between types of organisation and indeed specific specialised forms of measurement may apply in certain industries or sectors. However, there are a number of general measures of effectiveness, efficiency and economy which usually apply universally and we shall look at some examples later in this chapter.

Measurement methods can be applied in order to identify whether there is any initial potential for improvement, and then subsequently used to monitor that the required levels of performance are maintained. The need to apply effective and realistic performance measurement methods is often generated as a by-product of fundamental change processes where, for example, an organisation is refocusing its strategy and position.

### The Audit Implications for Measurement

During the course of a review of an operational area, the auditor is often faced with the need either to set the review findings into an appropriate context, or to indicate the performance of the area under review against the criteria previously established by management.

In most cases, it is preferable to utilise the measurement standards and criteria put in place by management as this results in the auditor using a common and compatible language when communicating results and points of concern. Conversely, if the auditor chooses to use a new, alternative or perhaps radical form of

performance measure, this may influence or jeopardise management's view of the auditor's findings. This is not to say that auditors should only adopt the prevailing measurement criteria established by management, as there may be a compelling reason for introducing another objective form of performance assessment in some cases. Whatever the form of measurement applied, its use must be founded on both accurate and reliable data and a proven method, otherwise the credibility of internal audit will suffer.

Although it is important to establish a reliable and meaningful vocabulary for the measurement of performance in key operations, auditors must not lose sight of the fact that such measures can only point to potential areas of improvement and do not of themselves offer solutions. Assuming that the conclusions drawn from the review of such criteria are accurate and relative, they can then be used to frame and support audit recommendations and the appropriate corrective action(s).

In their use of performance measurement, auditors should be careful not to supplant management's use and interpretation of the same criteria. On the one hand, it may be legitimate for an auditor to investigate further the lack of management response to an adverse measurement indicator, but this does not necessarily mean that management has abdicated their basic responsibility for monitoring and control. This underlines a basic truism, in that measurement data is provided for interpretation and unless there is a formal measurement protocol in place, there may be the potential for differing conclusions to be drawn from the same data. This stresses the importance of formally establishing, for the organisation, a performance measurement policy and framework so that all concerned are clear about the nature of the data and how to use it in practice. Additionally, the creation and communication of corporate targets and goals can remove (or at least contain) some of the ambiguity associated with the required level of performance and expected level of associated achievement.

Each operational audit review project will present the auditor with a challenge to identify the most appropriate and meaningful performance measures to utilise, whether or not such criteria are already applied within the organisation.

## **Example Performance Measures**

When establishing performance measures, it is logical to structure them on a hierarchical basis with the macro level indicators being broken into more detailed (micro level) measures relative to specific areas or subdivisions of either the operations or organisation. This should be borne in mind when considering the following example performance measures.<sup>15</sup>

### ***Workload/Demand Performance Measures***

Indicate the volume of output, whether services, products or other, and when linked to measures of input of resources, give useful information on quality or quantity matters.

Examples:

- Number of users

- Number of units produced
- Number of books in a library
- Percentage of first class degrees in a university.

### ***Economy Performance Measures***

These may highlight waste in the provision of resources indicating that the same resources may be provided more cheaply or that more enterprise may be conducted at the same cost.

Examples:

- Cost of actual input in comparison with planned input
- Cleaning costs per hour worked
- Maintenance costs per unit area
- Cost of the finance function per 100 staff
- Cost of the chief executive's department per 1000 clients.

### ***Efficiency Performance Measures***

These may highlight potential opportunities to convert given resources to end product with less waste. Many performance measures will point to either uneconomic or inefficient practices, or both. It is often not possible to distinguish between one and the other.

Examples:

- Ratio of actual input to actual output
- Breakdown per production day
- Accidents at work per 1000 personnel
- Degree success in comparison to school examination grades.

### ***Effectiveness Performance Measures***

These performance measures focus on how objectives are being achieved—regardless of economy, efficiency or equity (except where the objectives relate specifically to economy, efficiency and equity).

Examples:

- Actual output in comparison to planned output
- Degree success (in a college or university)
- Research output per 100 research staff
- Ratio of customer complaints to sales.

### ***Equity Performance Measures***

These performance measures draw attention to unfairness or potential social irresponsibility in terms of corporate policy and practice.

Examples:

- Departmental grant per member of staff
- Number of library books per category of user
- Proportion of female employees
- Proportion of disabled employees.

## VALUE FOR MONEY (VFM) AUDITING

Earlier in this chapter we gave the generally accepted definition of internal auditing to which internal auditing *Standards* require internal auditors to conform. The definition states that internal auditing is designed “to add value and improve an organization’s operations”. So, internal auditors should add value in all of their work. The Institute of Internal Auditors defines “add value” as:

Value is provided by improving opportunities to achieve organizational objectives, identifying operational improvement, and/or reducing risk exposure through both assurance and consulting services.<sup>16</sup>

A better definition of ‘add value’ would be:

The internal audit activity adds value when the organisation and its stakeholders benefit from the results of internal audit work. Benefit arises when the internal audit activity provides objective and relevant assurance, and contributes to the effectiveness and efficiency of governance, risk management and control processes.

Value for money auditing is sometimes used in a different context to refer to a style of operational auditing which makes extensive use of key performance indicators to explore the cost of achieving standards of efficiency and effectiveness and whether these costs represent good value.

Value for money auditing takes account of the three Es. It frequently makes extensive use of performance indicators in the form of ratios and other statistics to give an indication of value for money—especially when trends are explored in these performance indicators over time, or variations in performance are identified and explained between different operating units.

The term value for money is often applied to public sector spending in the UK, where there is an implied obligation placed on public bodies to ensure that they obtain and provide services on the most economic grounds. This process invariably involves elements of competition where cost comparisons are made between parties being invited to supply goods and services. For example, many services within UK local government have been put out to tender in order to obtain the “best deal”, and very often this tendering process has also included the internal department or function that had previously been supplying the service.

This striving for procurement on a *least cost* basis appears to be very logical and represent common sense, especially where the expenditure of public funds is involved. However, it is equally important to consider whether the potential service provider (or supplier or contractor) can meet the required quality and performance standards as well. Therefore, any consideration of value for money must take in

quality and performance achievement factors as well, as there may be serious commercial or operational implications if the relevant services/goods are not up to a given standard.

Value for money auditing will involve the assessment of an appropriate range of performance measurement criteria. It could be asked that unless management have clearly established their own basis for measuring and assessing the supply of goods and the provision of services, why did they embark on the process in first place? In other words, what was their driving motivation in either fulfilling the requirements or seeking alternatives?

In both the management and audit assessment of matters of value for money, the usual approach is to make comparisons with a range of options or possible solutions to the principal problem. These comparisons should be conducted as scientifically and objectively as possible and utilise appropriate measurement means. This part of the process begins with realistically identifying all the practical options and alternatives (perhaps including doing nothing at all).

In a more formal environment (for example, where acquiring new computing facilities) it may be necessary and desirable to go through a detailed feasibility study as part of an overall project appraisal process. This can then incorporate the appropriate cost and performance comparisons which underline the determination of value for money. In such scenarios, it is important that the auditor is content with the chosen assessment mechanism and measurement criteria so that, taken together, the appropriate reassurance can be derived that the process is sound and accurate. In some instances it may be necessary for the auditors to recommend improvements in these areas to add value to the process, whilst avoiding usurping management's ultimate responsibility for their system.

Whether or not a formal procedure is in place to determine generally the achievement of value for money, the internal audit function may be required (or indeed obliged) independently to assess such matters on behalf of management. Auditors should always avoid taking on activities which should, in the first place, be the responsibility of management. However, where internal audit has a legitimate role to play, auditors should endeavour to identify all the probable options and the most suitable basis on which they should be measured and assessed in value terms.

In order to avoid any potential problems at the conclusion of their assessment, auditors should consider discussing their proposed assessment and measurement criteria with management at the outset, and furthermore to obtain the agreement of management on the applied methodology. In certain sectors and industries, recognised criteria may already exist and so it may not be necessary for auditors to develop their own process.

## **BENCHMARKING**

Benchmarking can be defined simply as a comparison of one's own performance in a specific area with that applied by others in compatible circumstances. As a technique it is founded on the premise that there may be viable alternative ways of performing a process and fulfilling a requirement.

For a benchmarking exercise to be meaningful, it is necessary to understand fully the existing processes, systems and activities as a firm basis for subsequent

comparison with external points of reference (such as industry or professional standards). This process of realisation often incorporates the establishment of critical success factors for an operation (or part thereof). The principal objectives of benchmarking are likely to include:

- maintaining a competitive advantage in the appropriate market;
- establishing current methods, best practice and related trends;
- ensuring the future survival of the organisation;
- maintaining an awareness of customer expectations (and being able to address them);
- ensuring that the organisation has the appropriate approach to quality issues.

The focus of a benchmarking exercise can be varied in relation to the fundamental justification and objectives of the process. For example, if the objective was primarily to examine the existing processes within the organisation as a means of identifying common factors and best practices to apply throughout the company, the focus could be said to be downward and inward. Alternatively, if the organisation was seeking views on the strengths and weaknesses of competitors this is outward looking in nature, and could involve one-to-one competitor benchmarking, industry benchmarking or best-in-class benchmarking methods.

Internal audit departments can often benefit from participating in benchmark comparisons with other audit functions; such involvement can contribute to their understanding of:

- the internal auditing trends and practices as applied by the companies surveyed;
- the implications and potential of the findings for the participant's own organisation;
- the validity of the participant's own stance on internal auditing in relation to that apparent from the survey data.

Involvement in such exercises will enable participants to take a view of the need for change or review of their own organisation's approach to internal auditing in light of the survey data.

Of course, benchmarking is not an end in itself, but rather one platform used to identify and subsequently launch the required or necessary processes of change within a department, function, activity, process or organisation.

## NOTES

1. Koontz H., O'Donnell, C. and Weihrich, H. (1976) *Management*. 8th edition. McGraw-Hill, Singapore, pp. 670–671.
2. Committee of Sponsoring Organizations (COSO) (September 1992) *Internal Control–Integrated Framework*.
3. This generally accepted definition of internal auditing is to be found in the preamble to The Institute of Internal Auditors' (The IIA) Code of Ethics which is part of their International Professional Practices Framework (IPPF). Members and candidates for the professional certifications of The IIA commit to observing the Code of Ethics which, *inter alia*, requires conformance with their *Standards*.

The *Standards*, also part of the IPPF, make it clear in several places that conformance with the *Standards* requires that internal auditing corresponds to this Definition of Internal Auditing.

4. COSO *Internal Control—Integrated Framework* study (1992) identified the five components of internal control as being (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.
5. Word is a trademark of the Microsoft Corporation.
6. The example we give of the audit engagement of the Tokyo operating unit by a London-based group internal audit department team is based on a rather novel approach to internal auditing, as set out in a classic article by Dr Graham Hibbert and Margaret Graham, titled “The Boundaries of Internal Auditing” which appeared in *Accountancy* (the monthly journal of the Institute of Chartered Accountants in England & Wales) as long ago as September 1979, pp. 95–100. In that article they defined their style of internal auditing as follows:

Internal auditing is the process of appraising the information flow to the monitoring function of a system for its quality and completeness. It is carried out by checking that the information is both self consistent and mutually consistent and by the irregular generation of test information flows.

While this definition on its own is rather hard to understand, the example we give should make it clear.

7. Standard 2600 of The Institute of Internal Auditors reads:

**2600—Resolution of Senior Management’s Acceptance of Risks**

When the chief audit executive believes that senior management has accepted a level of residual risk that may be unacceptable to the organization, the chief audit executive must discuss the matter with senior management. If the decision regarding residual risk is not resolved, the chief audit executive must report the matter to the board for resolution.

8. The mandatory interpretation to The Institute of Internal Auditors’ Standard 1100 on “Independence and Objectivity” includes the words: “Objectivity requires that internal auditors do not subordinate their judgement on audit matters to others. Threats to objectivity must be managed at the individual auditor, engagement, functional, and organizational levels” and the *Standards*’ Glossary definition of “Objectivity” reads:

**Objectivity**

An unbiased mental attitude that allows internal auditors to perform engagements in such a manner that they have an honest belief in their work product and that no significant quality compromises are made. Objectivity requires internal auditors not to subordinate their judgement on audit matters to others.

9. **2110—Governance**

The internal audit activity must assess and make appropriate recommendations for improving the governance process in its accomplishment of the following objectives:

- Promoting appropriate ethics and values within the organization;
- Ensuring effective organizational performance management and accountability;
- Communicating risk and control information to appropriate areas of the organization; and
- Coordinating the activities of and communicating information among the board, external and internal auditors, and management.

2110.A1—The internal audit activity must evaluate the design, implementation, and effectiveness of the organization’s ethics-related objectives, programs, and activities.

2110.A2—The internal audit activity must assess whether the information technology governance of the organization sustains and supports the organization’s strategies and objectives.

2110.C1—Consulting engagement objectives must be consistent with the overall values and goals of the organization.

10. Standards with the alpha character “A” within the Standard number indicate a Standard relating to the internal audit *assurance* role. Those with “C” relate to the internal audit *consulting* role.
11. gHSEr—“getting Health, Safety and the Environment right”.
12. The Report of the BP U.S. Refineries Independent Safety Review Panel (“The Baker Report”), 2007, *vide*, in particular, pp. 14 and 211.
13. *Vide* Chambers, A. D. (2008) “The board’s black hole—filling their assurance vacuum: can internal audit rise to the challenge”, *Measuring Business Excellence*, Vol. 12, No. 1, pp. 47–63.
14. *Vide* Chambers, A. D. (April 2009) “The black hole of assurance”, *Internal Auditor*, Vol. 66, No. 2, pp. 28–29.
15. The examples in this section were drawn from Chambers, A. D., Selim, G. M. and Vinten, G. (1987, 1988 and 1990) *Internal Auditing*. Pitman Publishing, pp. 361–362.
16. Entry in the Glossary to the *Standards* of The Institute of Internal Auditors (2009).