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Business and training needs analysis in post conflict and developing countries: a guide

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Acknowledgements

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Summary

The British Geological Survey (BGS) has a long history of capacity building in geological surveys and energy/mines ministries and departments in the developing world and post conflict situations. In recent research involving business and training needs analysis (BTNA), the relationships between such public sector bodies, their stakeholders, and large aid donors, has been studied in detail, particularly in countries of central Asia, southeast Asia and the Pacific (Stephenson *et al.* 2002, Stephenson 2003, Stephenson & Penn 2003). The methodology and aims of this analysis are presented here as a guide for BGS personnel that may be working in a training capacity overseas or who might be writing a bid or proposal for training in developing or post conflict countries. This is followed by a discussion of the wider context of capacity building in which this work is carried out.

The purpose of business analysis is to understand the business of the organisation and its relationship with its external stakeholders. Data are collected internally by researching relevant literature including business plans, corporate organograms, training plans, mission statements and job descriptions, and by interview with senior managers. External data are gathered by discussing the organisation with a representative sample of its clients, through a series of structured interviews. Appendices 1 and 2 present questionnaires that may be adapted for use in business analysis.

Training needs analysis takes stock of the current skills and knowledge of employees and places it against the required skills and knowledge, gained from the business analysis. Data are collected in the form of staff lists, job descriptions, employment histories, training records and information from staff appraisal. Structured interviews are also conducted with all staff. Appendices 3 and 4 present questionnaires that may be adapted for use in training needs analysis.

A typical BTNA 'solution' will comprise a training plan that will solve present skills shortage problems in line with business need. This is likely to focus as much on transferable skills, such as information technology and writing/presentation, as on science. It will also probably contain a 'sustainable training system', which is installed to ensure that all training activities are undertaken as part of a cycle of action, review and modification to allow continual adjustment of training to the changing business of the organisation.

Business and training needs analysis takes place in a wider context of capacity building which is often funded by donor and lending organisations like the World Bank, DFID and the Asian Development Bank (ADB). The influence of such organisations is often not as good as it might be, partly because aid of this kind tends to be a compromise between what the recipient organisation needs and what the aid donor wants to give, and partly because the integration and management of large aid projects is often not done primarily with the recipient organisation's needs in mind. In such cases a sound understanding of the aid donors' agendas and projects is needed, and strategies must be developed to mitigate and develop these in line with the needs of the organisation.

1 Introduction

The British Geological Survey (BGS) has a long history of capacity building in geological surveys and energy/mines ministries and departments in the developing world and post conflict situations. In recent research involving business and training needs analysis (BTNA), the relationships between such public sector bodies, their stakeholders, and large aid donors, has been studied in detail, particularly in countries of central Asia, southeast Asia and the Pacific (Stephenson *et al.* 2002, Stephenson 2003, Stephenson & Penn 2003). The methodology and aims of these analyses are presented here as a guide for BGS personnel that may be working in a training or managerial capacity overseas or who might be writing a bid or proposal for training or other projects in developing countries. This is followed by a discussion of the wider context of capacity building in which this work is carried out.

2 Theory

The theory of BTNA is that the business of the organisation now and in the short-term future must first be understood before training and development can be suggested to remedy problems. A detailed survey of the organisation must be conducted to assess what new development and training is needed. Specifically the survey is designed to:

1. understand the business of the organisation so that the training requirements of individuals can be put into context; this primarily involves understanding the relationship between the institution and its stakeholders (**Business Analysis**);

2. survey the present skills and knowledge of employees in relation to the business of the organisation, and suggest solutions to any shortfall in skills (**Training Needs Analysis**);

3. suggest new management systems to help the organisation adapt to change.

The first two processes are effectively data gathering and interpretation exercises, while the third involves synthesis of all information.

The quality of data collected, and therefore the accuracy of assessments and interpretations are affected by a number of factors including:

- absenteeism during the interview and data gathering process;

- lack of communication between functional groups within some organisations. This means that some staff or managers have a poor understanding of the needs of the business and the staff;

- inaccurate human resource records for staff members, for example inaccurate records of courses attended; appraisals conducted and academic qualifications obtained.

A complication to take into account is the fact that many organisations in developing and post conflict situations are in partnership with aid donors such as the World Bank and the Asian Development Bank (ADB), and may be in receipt of aid in the form of projects that involve capacity building and training. The way aid is applied is often not as good as it might be, partly because it tends to be a compromise between what the organisation needs and what the aid donor wants to give, and partly because the integration and management of large aid projects is not done primarily with the organisation's needs in mind. In such cases a sound understanding of the aid donors' agendas and projects is needed, and strategies must be developed to mitigate and develop these in line with the needs of the organisation.

A typical BTNA 'solution' will comprise a training plan that will solve present skills shortage problems in line with business need. This is likely to focus as much on transferable skills such as information technology and writing/presentation as on science. It will also likely contain a 'sustainable business and training system', which will be installed to ensure that all business, project and training activities are undertaken as part of a cycle of action, review and modification to allow continual adjustment to the changing business of the organisation. Local aid project co-ordination is usually recommended as part of a solution, since this is the most effective method of maintaining an aid portfolio that is beneficial to the organisation. For this and other positions that may be recommended, it may necessary to recruit specialist staff.

3 Investigating relationships with external stakeholders

Geological surveys and energy/mines ministries serve a wide range of external stakeholders including government departments at national, regional, local and international scales, NGOs, environmental, industrial and regulatory organisations, natural resource-based private industry and hazard mitigation bodies (Reedman et al. 1996, Findlay 1997). Within government, the organisation's key role is in advising other departments, and developing policy on economic, social and environmental issues. The key role in relation to private sector clients including mining, hydrocarbon, civil engineering, construction and privatised utilities companies (Reedman et al. 1996, Findlay 1997) is to develop information packages that inform on resource priorities, promote resource wealth, and attract sustainable inward investment. The organisation may also play a crucial role in negotiations between government, industry and landowners with the objective of maximising economic and social benefits to as wide a stakeholder community as possible (e.g. Power & Hagen 1996). Mining and hydrocarbon activity is undertaken within licence blocks that are granted, processed and monitored by the organisation. It must therefore deal with the numerous applications, renewals, adjustments and queries that occur in the day-to-day operation of the commercial sector. Specialist personnel in the organisation may advise on policy for natural resource development and large-scale construction, or may be responsible for maintaining occupational health/safety and environmental standards on mine, oil and gas installations, and construction sites.

Geological surveys and energy/mines ministries also play a crucial role in investigating and assessing natural hazards (Reedman et al. 1996), and developing hazard mitigation plans. Such plans have to be distributed amongst poor people often with little education and understanding of geological hazards, who are at risk. The information may be in the form of booklets, seminars, worksheets and talks and contain advice on personal and family protection, building and agriculture, and escape in hazardous conditions. Other direct contact with poor rural people involves provision of technical training and safety advice in small-scale artisanal mining. In many areas of the South Pacific and Africa, this is an important subsistence level activity for large numbers of rural people.

3.1   METHODOLOGY OF INVESTIGATION

The purpose of the investigation is to understand the relationship between the organisation and its external stakeholders, and its strengths and weaknesses as perceived by external stakeholders, and internally by senior managers. Data are collected internally by researching relevant literature including business plans, corporate organograms, training plans, mission statements and job descriptions, and by interview with senior managers. External data are gathered by discussing the organisation's performance and structure with a representative sample of its clients. Interviews within the organisation are undertaken to determine whether senior managers understand the business needs of their clients, while interviews with clients are designed to determine how well the organisation serves them. The interviews focus on the following areas:

1. current state of the mining/energy sector and likely future developments;

2. functions of the organisation;

3. organisation's relationship with its clients;

4. types and levels of products/services delivered to clients;

5. level of internal and external awareness of the organisation's corporate plan and objectives; and

6. types of training required.

Appendices 1 and 2 give guidelines for interviews of external stakeholders and senior managers respectively.

Information from this study builds a comprehensive picture of the organisation's strengths and weaknesses, and informs the training needs analysis and internal stakeholder analysis that follows.

3.2 RESULTS OF PREVIOUS INVESTIGATIONS: EXTERNAL STAKEHOLDERS' VIEWS

It is not within the scope of this report to discuss details of individual organisations, however research has shown a number of themes common to several organisations in developing countries and post conflict situations. Private sector companies want improvements in the day-to-day management of the resource sector, and are critical of the lack of timely delivery of data or decisions, as well as a perceived old-fashioned civil service culture not used to the demands of the commercial world. An example is tenement and licence block management in minerals and hydrocarbons development. Companies need to make numerous and frequent applications, renewals, adjustments and queries in their day-to-day operations, but these take too long to process, often because there is no computerised system. Exploration decisions may be delayed by lack of geological mapping data available quickly enough or in appropriate form. Companies also greatly value the co-ordination and liaison service between mining/energy companies, local landowners, and local government, which is vital to the smooth operation of the sector (e.g. Power & Hagen 1996). Insufficient budget or relevant training for staff leads to decline in this service, and introduces significant project risk. Similarly insufficient budgets reduce a public sector organisation's ability to carry out occupational health and safety surveys on mine and well sites. In some cases the company being inspected is obliged to finance inspections, which may compromise the independence and impartiality of inspectors.

Natural resource development has an impact on the economic and social development of most post conflict countries and as a result, the geological survey or mines/energy department regularly interacts with other government agencies. These agencies echo some of the concerns of the private sector since accurate and timely delivery of data is required by policy, environment, treasury and finance departments of the government in their regulatory, planning and promotion activities with major mining/hydrocarbons companies as well as the small scale artisanal mining sector. Despite the importance of the mining/energy sector in developing and post conflict economies, many geological surveys and mines/energy departments are regarded as having a low profile within government. Often government clients are unaware of the organisation's business plan or mission statement. This insularity sometimes leads to a perception in other parts of government that the organisation is more accountable to the interests of the private sector than to citizens.

The general public receives hazard mitigation information from geological surveys and mines/energy departments, and may be represented by them during closure negotiations over mines and oil/gas installations. The theme of poor communication is taken up here also. Local geohazard and hydrogeological information is often not easily accessible or is in hard copy

format. Perhaps more important is that there is a generally poor understanding of the geological survey and mines/energy department role in the natural resources sector. Many citizens are not aware of the importance of the mining/energy sector to the economy. Often they regard the sector as being controlled by expatriate companies exploiting the country's natural wealth, which may lead to poor relations between investors and citizens directly affected by development. Many organisations therefore need to demonstrate their role as administrator of the sector on behalf of the people, in publications, meetings and national fora.

In summary, a survey of external stakeholders' views indicates that many public sector organisations in the natural resource sector do not have the manpower and skills to cope with the volume and complexity of their task. They are unlikely to have a digital system of records to allow swift retrieval and transfer of data, which will allow, for example, facilitation of licensing of blocks for oil exploration. In addition, many staff, coming from a traditional civil service background, have little understanding of the motives and working practices of modern international mining, hydrocarbons or construction companies. Moreover, due to English being their second language, they may be poorly equipped to communicate scientific and technical information to customers or simple information on geohazard mitigation.

4 Relationships with internal stakeholders

4.1 METHODOLOGY OF INVESTIGATION

Internal stakeholders of geological surveys and mines/energy departments comprise all employees from management, scientific staff, information technologists, human resource staff, to ancillary and support staff. The chief method of gathering data on internal relationships is training needs analysis and study of managerial methods and structures. Prior to training needs analysis, personnel data in the form of staff lists, job descriptions, employment histories, training records and information from staff appraisal is collected. Information gathered is used to design a questionnaire, which forms the basis of interviews with all staff. The main purpose of the questionnaire is to (1) guide the interview process (2) elicit training needs from each staff member, and (3) determine the position of the staff member within the managerial structure. Different forms of questionnaire are used for non-managerial and managerial staff; this allows views of training needs and business methods from different perspectives. All information gathered is treated as confidential, and interviewees are encouraged to 'speak their mind'.

The purpose of interviews is to:

1. Develop a relationship with the interviewee and gather information beyond the guide questionnaire;

2. understand learners' needs, backgrounds, preferences and abilities;

3. assess factors such as education, age, gender, and mother tongue and how they affect potential for learning;

4. determine levels of previous training (gained within or without the organisation);

5. obtain a detailed job description for each employee and compare the documented skills and abilities against requirements of the job;

6. explain the rationale for, and instil a feeling of ownership in, the training plan;

7. determine a range of training needs outside the technical including workplace skills, confidence, assertiveness, skills in written and oral expression.

Interviews are conducted by a training/business expert with relevant specialism; a human resources specialist is required for interview of non-technical, clerical and managerial staff, while a geological, mining or oil/gas specialist is required for interviews with scientific and technical staff. Training needs can be compiled for each individual, by 'functional group' (branch or division of the organisation), and then corporately, depending on circumstances. In the event of comprehensive corporate re-organisation, which is sometimes the object of large-scale aid programmes, a training plan cannot be linked with individuals, since their jobs may change or be discontinued.

Appendices 3 and 4 give guidelines for interviews of non-managerial staff and managers respectively.

4.2   RESULTS OF INVESTIGATIONS: INTERNAL STAKEHOLDERS

As well as difficulties relating to their outward facing nature, public sector organisations need to address the concerns of their internal stakeholders. Research showed a number of common themes including inappropriate managerial and communication methods, business structures or cultures, which prevent efficient function. For example, few organisations have business plans and clear business goals. They may also have only a relatively poor understanding of the links between institutional function, actual and required skills, stakeholder relationships, and developing strategies for evolving institutional function to meet changing demands.

Apart from the organisation's formal structure, its corporate culture may be counterproductive, being a product of a colonial past, modified by piecemeal introduction of later developments, reflecting contact with more modern organisations. The result, as a whole, is a patchwork of old and new practices typical of public sector organisations in transition. Such organisations contain a group of graduate professional and technical experts who are supported by an administrative class, who administer the specialist training required by the experts. Training and business development tends to be sporadic, inconsistent with business need, and heavily weighted towards science and technical matters. Expatriate scientists and technicians are liable to leave, taking their expertise with them. They may be replaced, through localisation policy, by national officers not yet able to operate at a higher level; or the skills deficit is remedied by costly overseas scientific training. The latter is expensive in terms of fees to be paid, but also in terms of staff time lost. In addition many overseas-trained officers leave by finding jobs in the private sector.

A worldwide requirement for all geological surveys and mines/energy departments is the ability to work in a more commercial environment where staff take risks, make commercial decisions and respond more effectively to external stakeholder requirements. A serious bureaucratic impediment to such staff development is the rigidly fixed nature of job descriptions in many organisations. This makes poor business sense because it assumes jobs are fixed or even permanent and encourages employees to think that a job 'is for life'.

5 The context of business and training needs analysis in donor-driven capacity building

Business and training needs analysis takes place in a wider context of capacity building. Preparatory to capacity building, economic and sector analysis is carried out by donor and lending organisations like the World Bank, DFID and the Asian Development Bank (ADB), to define the nature and scope of projects and to ensure that aid recipients (or borrowers) have a strong sense of ownership of projects (e.g. World Bank 1998). However, preparatory analytical work is often not done 'in country' or in partnership with other donors and, most importantly with institutions of the recipient country (World Bank 1998); similarly it is often based on

models of best practice rather than on the particular cultural or business setting of the organisation. World Bank experience has shown that amongst recipients with weak project ownership, there is a perception that projects are driven by donors and that final project decisions rest with donors and not with the recipient government (see also Kogbe 1991).

Weak project ownership and integration, has led to 'project proliferation', where a large number of donor agencies at work in a particular sector increase demands on recipients' budgets for local and recurrent costs, and form a burden on the weak administrative capacities of recipients (e.g. Carlsson *et al.* 1998). Tanzania is said to have had some 2,000 projects from some 40 donors operating in the 1990s (see World Bank 1998). There is a growing perception that co-ordination of development aid is therefore essential (UK Government White Paper 1997), so that the development agenda is designed and circumscribed properly, and so that its implementation can be monitored.

BGS experience in geological surveys and mines/energy departments reflects some of the concerns documented by the World Bank and DFID, particularly in the poor integration of projects. An example is the aid project portfolio for the Ministry of Mines and Industries (MMI) in Afghanistan. A small team from BGS visited the MMI in November 2002, to study the present plan for capacity building in the MMI, and to suggest other areas for development and funding. The areas of major donor support as of November 2002 are shown in Table 1; consideration of these and of the likely business needs of the organisation indicated that a number of critical development areas were not provided for. These included: mineral evaluation and geological mapping, a comprehensive digital information system, and groundwater scoping studies. Perhaps the most important area for development was in human resources. The lack of projects developing the managerial, training and organisational aspects of the institution reflects a bias seen in other capacity building elsewhere in the developing world, where most aid is concerned with technical and scientific areas. BGS has noted similar aid projects which allowed for hugely increased training budgets destined for a tiny proportion of technical and scientific employees in an the environment where skills across the board were required for all employees at various levels.

Table 1. Major areas of donor support, as of November 2002, for the Ministry of Mines and Industries (MMI) in Afghanistan.

Funding source	Activities to be supported	Outcomes
World Bank	• Policy and legislation • Institution building	• New petroleum/mining sector policy; • New petroleum/mine law; • Model investment contract; • New taxation regime for mining/petroleum; • Institutional restructuring plans.
GTZ	Various IT projects and training projects, and rebuilding/refurbishment of the MMI building.	No detailed information on outcomes.
Asian Development Bank	Establish gas regulatory framework	Effective regulatory system for the gas sector in Afghanistan to ensure efficient development and utilization of natural gas as the domestic market expands.
USGS	Assessment of Afghanistan oil and gas resources	• Review of geochemical, seismic, tectonic exploration and production data from domestic and international sources; • Characterisation of petroleum geology, illustrated as a GIS; • Assessment of undiscovered oil and gas; • Dissemination of results via USGS web and meetings in Afghanistan.
AACA	Basic IT and English language training	No detailed information on outcomes.
JICA	• Consultancy study of analytical geoscience laboratory equipment needs • Contingency funding of acquisition , installation and training for some laboratory equipment	No detailed information on outcomes.

Finally, inflexible or conditional funding, which is often a characteristic of aid, may be counterproductive. Funds destined for the procurement, running and maintenance of highly technical equipment (for example seismological monitoring equipment) are sometimes made ineffective because more basic equipment, for example generators or air-conditioning, on which the technical equipment relies, cannot be claimed legitimately through aid budgets. In these circumstances it is possible to have rooms full of 'state of the art' scientific equipment that cannot be used because there is no electricity.

In conclusion, the haphazard nature of the aid effort in public sector organisations in some developing countries does not come about by wilful neglect in the development process, but rather reflects the way that aid is a compromise between what the donor wants to provide for its own policy and strategy reasons, and what the recipient country/institution requires. It also probably reflects the lack of local co-ordination between aid projects on the ground, the lack of 'project ownership' in the recipient organisation, and the onerous responsibility of administering complex multidonor aid projects. However, this disorganisation is clearly counterproductive and wasteful of funds, and needs to be remedied.

6 Holistic capacity building: addressing the problems

The foregoing has described a number of the problems that face public sector organisations, both from the way that aid is applied in capacity building and from the difficulties within

organisations, and between organisations and their external stakeholders. These problems are summarised in Fig. 1; the diagram shows that to be effective, capacity building must act on aid projects and on the organisation.

Fig. 1. Relationships between the institution, external stakeholders and the development aid community

Mining, hydrocarbon, engineering companies	Rural communities in hazardous areas	Nat. & Local Government, NGOs	**CUSTOMERS & EXTERNAL STAKEHOLDERS**

Problems:
Poor communication of regulatory, planning, environmental protection and policy advice
Old style corporate culture, not commercially orientated

Acquisition, interpretation and storage of data	Hazard advice and mitigation	Monitoring and regulation of exploitation, policy advice	**INSTITUTION**	**Holistic capacity building**

Problems:
Weak project ownership, 'Project proliferation',
Weak project integration

Large single or multi-donor institutional strengthening projects	**DEVELOPMENT AID**

6.1   STAKEHOLDERS

The methodology described here allows the business and capabilities of organisations to be assessed and measured. In response to this, a snapshot holistic training plan is developed to solve 'present' problems. This will constitute a detailed training plan for each 'job' or employee within the organisation, which is linked to a branch or division training plan, and an overall training strategy for the whole organisation.

A training plan takes the training need and schedules it against the business need at individual, branch and corporate levels. Since both the business needs of an organisation and its personnel continually change, the organisation's training needs and consequent training plan are subject also to continual change. The plan has therefore to be continuously monitored and changed by a local training co-ordinator who understands the business needs of the organization as well the training solutions required to service the business. The training co-ordinator may also, for the life of an aid project, act as a project co-ordinator (see below), responsible for liasing with aid donors and integrating projects.

For an individual, a training plan will be a list of his or her training needs, ordered by the date at which they are to be met. Ideally the ordering of attendance will be such that training is supplied in sufficient time for the individual to be appropriately skilled to carry out his or her work. The branch or division manager will hold a branch/division training plan which will be a table

comprising each of the several ordered lists of his or her individual staff. The manager's priority will be to ensure that every member of staff is sufficiently trained to service the various projects that constitute his or her business. Divisional and corporate plans will be correspondingly more complicated.

The simplest solution to meeting such needs in a timely way is for the branch/division manager to hold branch training funds and spend those in a timely way to service the business of the branch. Few organisations are sufficiently wealthy to maintain this model of training delivery since it inevitably leads to duplicate costs where the same training is required across several branches. Neither is it generally cost-effective in organisations much larger than branch size, since the benefit of the reduction in unit training costs which arise when several staff require the same training from a supplier cannot be a readily realized unit. The rise of the importance of transferable IT skills, the rise of multi-disciplinary team working requiring team members from different branches, and the rise of short-term contracts leading to staff redeployment (with consequent retraining) have all combined to lead to the corporate centralisation of training planning and delivery. As a result the training plans held by individuals and managers are generally subsets of the corporate plan. This has the benefit of leaving the manager free to concentrate on identifying need and attending to staff performance, but may erode the timeliness of training delivery since corporate business need (which may be crudely financial) may take precedence over individual or branch need.

Thus, any organisational training plan needs to be dynamic and, because of the variables involved in internal project planning and the imponderables deriving from the activities of external training suppliers, it cannot be planned in individual detail too far ahead. In fact experience has shown that, for a large organization (>500 employees) it will not be possible to plan comprehensively for all individuals much more than three or four months ahead. It is possible, however, to set out critical milestones governing training delivery to dates much further ahead than this, leaving the detail to be completed as the various milestones approach.

6.2   THE WAY AID IS GIVEN

A local aid project coordinator is required to ensure that aid projects are designed and circumscribed properly and so that their implementation can be monitored. This will lead to 'home-grown' capacity building, by fostering local ownership of projects. A project co-ordinator might have the following roles and responsibilities:

1. Understand the theoretical need, scope, duration aims, outcomes and deliverables for each project;

2. Be capable of modifying 'terms of reference' for projects, with agreement from the aid donor;

3. Meet regularly with project managers and project personnel responsible for training, procurement and liaison.

It has been stated that donor organisations define the nature and scope of capacity building projects, but that preparatory analytical work is often not done 'in country' or in partnership with other donors and, most importantly with institutions of the recipient country. Similarly the aims, outcomes and scope of projects may not be known to middle managerial and junior staff within a recipient organisation, because corporate 'vertical communication' between senior managers and staff is poor. Thus, senior management should appraise staff members of the need for the proposed project; and the benefits of the project to the organisation, the country as a whole, and to the individual employee. They might also arrange to have meetings at which staff are invited to comment on proposed projects with a view to improving them.

The aim of sustainability in the context of capacity building is to allow the organisation to build itself, and become independent of the 'aid machine'. In practical terms this means that the

organisation must be able to monitor and change with business requirements without significant help from outside. To do this an organisation must commit to the concept that all business activities must be undertaken as part of a cycle of action, review and modification (Fig. 2).

Fig. 2. The business cycle. All business activities should be undertaken as part of a cycle of action, review and modification.
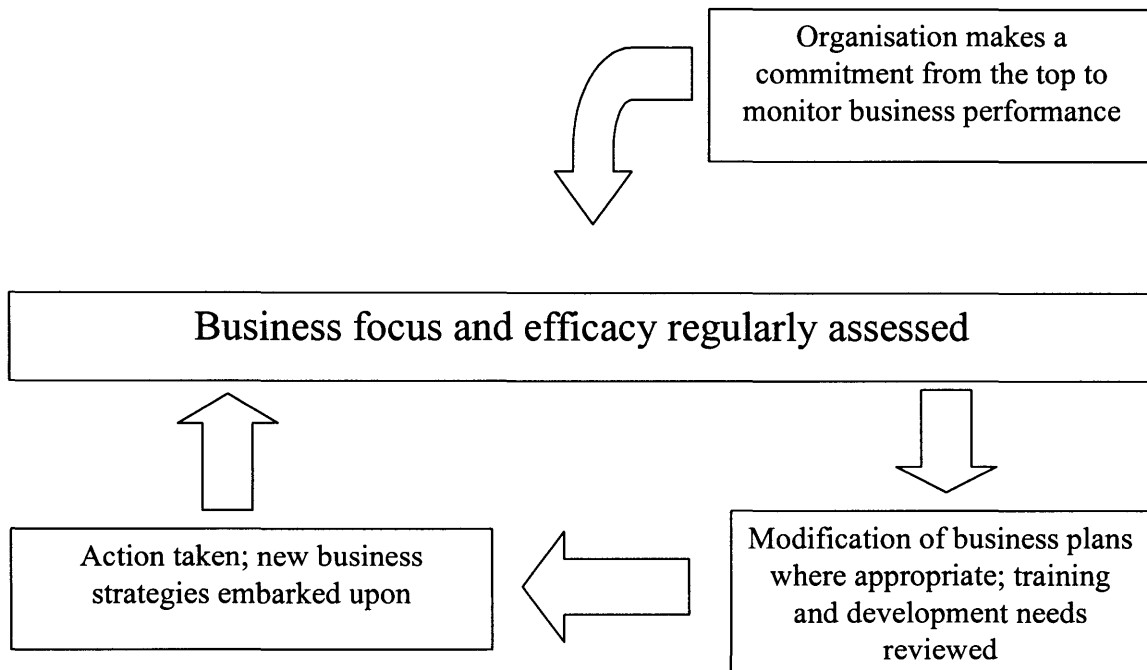
An example of how this concept may be put into practice is through the operation of a training system (Fig. 3), though this methodology is applicable to project and business management of all types. In all organisations training is continuously required, since business continually changes. In the training system shown in Fig. 3, the 'nucleus' comprises the employee requiring training and his/her and branch/division manager who are in continuous dialogue over the employee's training and development needs. The employee and branch/division manager are responsible for the conception, design and preparation of a bid for training, and must be sure, primarily, that a good business case is made before the bid is passed on to a training committee. Such a training proposal might be a course in database construction, hydrological well testing or an MSc in geophysics. The employee and the branch manager are expected to use their in-depth knowledge of the job, its business aim, and its context within the branch, to construct a business case that makes clear that the training is indispensable. The branch manager will also have formed a view as to the suitability for training of the particular applicant based on the prospective trainee's experience, training record and ability. By virtue of his position in the hierarchy, the branch manager will also know the mind of the director of the organisation as to the context of the training bid within the division's priorities. The training co-ordinator will advise in the process of training bid preparation and may also advise on the creation of training projects that are appropriate to the organisation's requirement. Thus, a training bid is submitted to the training committee who will be the decision-making body, and have a key role in balancing the corporate

requirement across the various divisions. Following approval training will take place. Evaluation of the training closes the loop: commitment, planning, action, evaluation. It informs the parties whether the training and development has benefited the person and the organization. Such evaluation should consist of two parts: evaluation of (1) outcomes and (2) impact.

Fig. 3. An example of how the business cycle can apply to training provision.
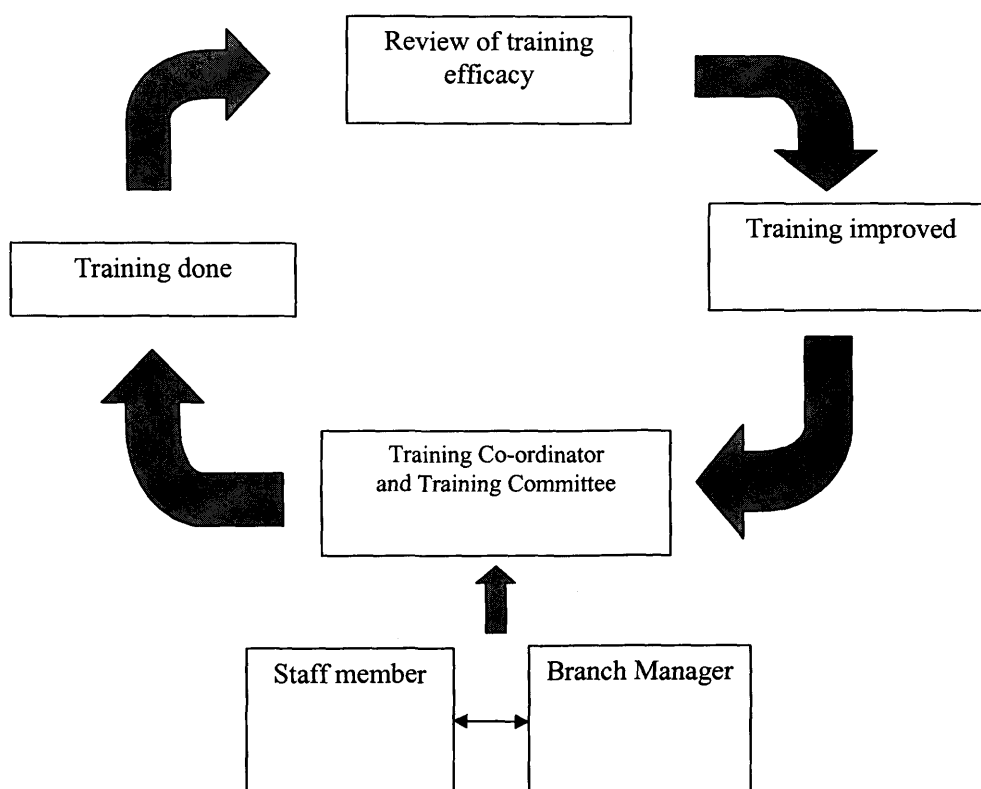
Training outcomes record what has actually resulted from an individual's participation in a training event. This is the most important stage of evaluation since it seeks to measure primarily the effect that the training has had on the member of staff and his or her work. Evaluation of outcomes is made some time after the training event and when the trainee has had time to put what has been learned into practice. This may take place six months or a year subsequent to the event and should be assessed together by trainee and manager. It may be found useful, however, for each to make a separate assessment before discussing the matter, since differences of assessment may uncover valuable differences of perspective of the job performance. Several such individual's evaluations showing the effect of the same training event upon staff performance are a powerful tool with which to judge the significance of the training. Actual outcomes may be many and varied. Usually an improvement in performance is anticipated; on the other hand the evaluation may reveal that further training is required, that a person is unsuited to a particular form of work or that the training was inappropriate or substandard.

Evaluation of training impact is a function of management and is more difficult. It seeks to relate the value to the business of particular training activities. It derives from the business plan of the particular manager who will want to show that the performance of his business has improved as a result of the training of his or her staff that are delivering the business products or services. At its most convincing, such an evaluation will show that income or profit has been generated at a

cost outstripping that of the cost of the training. To do so requires the manager to cost the effect of staff 'down-time' whilst staff are engaged in training against the improved service, performance or product resulting from that training.

In conclusion, the premise of evaluation, whether it be of training, operation of individual projects or of general business, lies in bringing outside assessment to bear on its efficacy, measured by its effect on the employee or the department's business. Essentially, improvements in the organisation's ability to do business come about because of shortcomings identified in evaluation. A system that continually monitors the efficacy of an institution's work and allows it to change with changing business, can help an institution to adapt to change. Such a 'sustainable business system' with strong local ownership should allow independence from the 'aid machine' and encourage 'home-grown' capacity building.

7 Conclusions

A comprehensive view of how well an institution interacts with its internal and external stakeholders, its capacity in terms of human and physical resources, and how to proceed to holistic capacity building, is gained from the methodology outlined in this report. Amongst the crucial shortcoming of geological surveys and mines/energy departments are poor communication of regulatory, planning, environmental protection and policy advice and an old fashioned corporate culture, which is not commercially orientated. Amongst the difficulties identified in the way that aid is given (or loaned) are weak project ownership, 'project proliferation', and poor project integration.

Holistic capacity building through training needs analysis forms a training plan that will solve present skills shortage problems in line with business need. This will focus as much on transferable skills such as information technology and writing/presentation as on science. Part of the holistic capacity building programme is to install a local project co-ordinator who will be responsible for project formulation, in consultation with aid donors, and for co-ordinating projects once they start. Finally a 'sustainable business system' will be installed with strong local ownership, which will ensure that all business activities are undertaken as part of a cycle of action, review and modification to allow speedy independence from the 'aid machine'.

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9 Appendix 1 Business needs analysis, external stakeholders interview guidelines

General

- What business are you in?
- What is your business relationship with the Organisation?

Mining/energy sector

- Describe current state of the sector internationally and the critical issues facing the organisation.

Opinion of the organisation

- Does the organisation understand your business and your business needs?
- What products/services currently supplied by the organisation?
- What services/products do you value the most?
- Is service/product satisfactory?
- Are current and future needs being met?
- What services/products would you ideally like to receive from the organisation?
- Describe interaction with the organisation? Consultation process?
- Have you ever completed a Joint Programme with the organisation? Result?

Public Awareness

- Are you aware of the organisation's strategy/corporate plan/work programme?
- Has it completed the plan? How well does it function under each of the categories below?
- How do your contemporaries perceive the organisation?
- How does the public perceive the organisation?

Training

- In general terms, what training do you think the the organisation needs?

Have you any other comments that you'd like to be recorded?

10 Appendix 2 Business needs analysis, senior manager interview guidelines

General

- What is the business of your division/dept.?
- Description of areas of responsibility
- Description of functions carried out by division/dept?

Strategy

- Are you aware of the organisation's strategy, corporate plan, mission and vision statements ?
- How does this link with mission /vision for your own division/dept?
- Policy/strategic objectives for your dept/division?
- Looking forward over next 3 years, what are critical problems that need to be addressed?

Clients

- Who are your clients (internal, external) or people/organisation you attempt to serve at present?
- What do you currently supply to each?
- Are services/products satisfactory?
- What skills and technologies are used to satisfy them?
- What products/services do your clients value the most?
- What would you ideally like to supply to clients?
- Contact with clients?
- What are the future needs of your clients?

Inter-relationships

- Do you have links with other departments/divisions?
- Do you have links with outside institutions like universities?
- Do you have links with international organisations?

Other

Have you any other comments that you'd like to be recorded?

11 Appendix 3 Training needs analysis, questionnaire for non-managerial staff

This questionnaire is a guide only, to be used at the discretion of the interviewer

Data (factual) to be entered before interview

From personnel

Surname

Other names

Employment Number

Department

Division

Branch

Substantive position number

Date joined Department of Mining

No. years in service

Public service status

Highest educational qualification

Training courses attended

Previous employers (if any)

Development requirements (Training Needs) from the most recent Performance Appraisal

Other

Designation/Classification

Professional qualifications

How long in present job?

Job description

Marker: full text not to be included here, but find out whether available in electronic format

Interviewer to assess, **afterwards**, whether qualifications match 'Position and Person Specifications' in Job Description?

Yes/No. If no, specify discrepancy

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Interviewer introduces purpose of project

What is the main purpose of your job? *

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What are your major duties? *

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└─────────────────────────────────────────────────────────┘
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What are your 'products'? Give details. Who do you produce them for – your clients? Internal/External

'Product'	Client

Which other entities do you have a working relationship with? What is nature of this relationship?

Entity	Relationship

What do you think are the skills necessary for your job?

Checklist
Managerial
Planning and organisation
Report writing
Public speaking
Other presentational skills
IT skills
Technical
Training
Negotiation
Other (specify)

Which aspects of your job are the most difficult?

Checklist

Managing yourself / being personally effective

Managing other people

Managing other kinds of resources (finance, equipment, materials, etc.)

Paperwork

Spoken communication

Handling information and data

Using professional / technical qualifications / skills

Policy / legal

Working within the government system

Other aspects (specify)

Why are these aspects more difficult?

Checklist

nature of tasks

conditions under which tasks are done

constraints (rules about how done, standards, etc.)

lack of preparation / training etc.

Other aspects (specify)

What would help you to do these tasks more effectively?

```
Checklist

more experience

help and guidance from boss

reading books, manuals

more formal training

networking

other forms of distance learning
```

Training received

What induction training were you given when you joined the Department? Was it adequate / appropriate

(a) in preparing you to do your job?

(b) in giving you an understanding of the entire organisational context?

How did you learn to do your present job? (If 'on-the-job', please be more specific.) Was this satisfactory?

Describe training received (formal and informal) (Interviewer to compare with personnel records). How effective was this training?

When was your last professional progress review / appraisal. Was it based on a face-to-face contact?

What sort of a dialogue have you had with your manager about training?

Was there any evaluation of training undergone by you or those you are responsible for? – self-evaluation?   did it result in an improvement in the quality of work performed? If so, how?

Perceived training needs

Do you think you need any further training to enable you/enhance your ability to do your job?

Checklist

IT skills

    Word processing (Word)

    Spreadsheet (Excel)

    Database (Access)

    Outlook

    e-mail

    Searching the worldwide web

    Other (specify)

Managerial / workplace skills

    Managing people

    Negotiating skills

    Planning and organisational skills

    Time management

    Personal and professional development

    Media skills

    Networking skills

    Presentation, public speaking

    Written English

    Other (specify)

Technical

    Please specify

Interviewer should check whether response corresponds to 'Development requirements' in latest staff review?

Do you have a training function (i.e. to train or arrange training) within the organisation? *

Yes/No

For those with an explicit training function

What are your training duties?

What has this meant in practice in the last two years: type of training, to whom, by whom? How effective was this training?

How effective/valid do you consider the training programme generally?

Assessment of certain attributes of interviewee by interviewer

	1 (very poor)	2	3	4	5 (very good)
Command of spoken English					
Ability to give appropriate answers to questions					
Thoughtfulness					
Cooperative disposition					
Confidence/assertiveness					

12 Appendix 4 Training needs analysis, questionnaire for managers

This questionnaire is a guide only, to be used at the discretion of the interviewer

Data (factual) to be entered before interview

From personnel

Surname

Other names

Employment Number

Department

Division

Branch

Substantive position number

Date joined Department of Mining

No. years in service

Public service status

Highest educational qualification

Training courses attended

Previous employers (if any)

Development requirements (Training Needs) from the most recent Performance Appraisal

Other

Designation/Classification

Professional qualifications

How long in present job?

Job description

Marker: full text not to be included here, but find out whether available in electronic format

Interviewer to assess, **afterwards**, whether qualifications match 'Position and Person Specifications' in Job Description?

Yes/No. If no, specify discrepancy

For completion during interview

Interviewer introduces purpose of project

What is the main purpose of your department? *

What are the major duties of people in your Branch? *

What are your 'products'? Give details. Who do you produce them for – your clients? Internal/External

'Product'	Client

Which other entities do you have a working relationship with? What is nature of this relationship?

Entity	Relationship

What do you think are the skills necessary for the Branch jobs?

Checklist
Managerial
Planning and organisation
Report writing
Public speaking
Other presentational skills
IT skills
Technical
Training
Negotiation
Other (specify)

Which aspects of the job do your staff find the most difficult?

Checklist

Managing yourself / being personally effective

Managing other people

Managing other kinds of resources (finance, equipment, materials, etc.)

Paperwork

Spoken communication

Handling information and data

Using professional / technical qualifications / skills

Policy / legal

Working within the government system

Other aspects (specify)

Why are these aspects more difficult?

Checklist

nature of tasks

conditions under which tasks are done

constraints (rules about how done, standards, etc.)

lack of preparation / training etc.

Other aspects (specify)

What would help them to do these tasks more effectively?

Checklist

more experience

help and guidance from boss

reading books, manuals

more formal training

networking

other forms of distance learning

Training received

What induction training is given to joiners

How do new staff learn to do their job? (If 'on-the-job', please be more specific.) Do you consider this satisfactory?

What sort of a dialogue have you with your staff about training?

Is any evaluation of training undergone by your staff undertaken? – self-evaluation?   does it result in an improvement in the quality of work performed? If so, how?

Perceived training needs

Do you think you need any further training to enable you/enhance your ability to do your job?

Checklist

IT skills

       Word processing (Word)

       Spreadsheet (Excel)

       Database (Access)

       Outlook

       e-mail

       Searching the worldwide web

       Other (specify)

Managerial / workplace skills

       Managing people

       Negotiating skills

       Planning and organisational skills

       Time management

       Personal and professional development

       Media skills

       Networking skills

       Presentation, public speaking

       Written English

       Other (specify)

Technical

       Please specify

Interviewer should check whether response corresponds to 'Development requirements' in latest staff review?

How effective/valid do you consider the training programme generally?

Assessment of certain attributes of interviewee by interviewer

	1 (very poor)	2	3	4	5 (very good)
Command of spoken English					
Ability to give appropriate answers to questions					
Thoughtfulness					
Cooperative disposition					
Confidence/assertiveness					