AN INTEGRATED SKILLS DEVELOPMENT MODEL FOR EMERGING CONSTRUCTION CONTRACTORS IN THE EASTERN CAPE

By

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Submitted in partial fulfillment of the requirements for the degree of

Master in Business Administration

Port Elizabeth Technikon

Promoter: Professor AC Hauptfleisch

February 2005
01 February 2005

TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

This work is of strategic importance.

It would be appreciated if the contents of this research paper remain confidential and not be circulated for a period of three years.

Sincerely

S. Lazarus
I, Spencer Lazarus, declare that:

- This work has not been previously accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

- The dissertation is result of my own independent work as the Project Leader for emerging contractor development programme at the Eastern Cape Development Corporation (ECDC) with the support of Mr Sihle Dlungwana of the Council for Scientific and Industrial Research (CSIR), Mr Cannon Noyana of Noyana’s Management Consultancy (Pty) Ltd and Professor Dries Hauptfleisch of Ecospan Projects cc/Free State University.

- All sources used or referred have been documented and recognised.

Signed: ___________________________ Date: ___________________________

(Spencer Lazarus 9645998)

Opinions expressed and conclusions arrived at, are those of the researcher and are not necessarily attributed to the Eastern Cape Development Corporation.
I would like to thank the following people/organisations for their support and effort:

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ABSTRACT

One of the challenges faced by many government decision-makers today relates to the need for a construction development programme that comprehensively addresses the challenges faced in delivery of building and infrastructure projects. Investment into such programmes should be justified and measured by increased contractor capacity to execute projects and grow their businesses.

The Eastern Cape Development Corporation (ECDC) intends to develop and pilot an emerging contractor development programme with the assistance of the Council for Scientific and Industrial Research (CSIR). In implementing the project, the CSIR and the ECDC will assume the role of the project managers, responsible for planning, executing and coordinating the entire training and mentorship programme. Suitably qualified training providers and mentors have been sourced from private enterprises and individuals. Sixty contractors throughout the province will be selected to form part of the program. Training providers and mentors will provide high quality inputs to enable a group of selected contractors to be assessed and accredited by the Construction Education and Training Authority (CETA) in terms of the National Qualifications Framework (NQF).

This dissertation addresses the requirements that an integrated development model needs to be effective in terms of emerging contractors’ further development and sustainable growth.
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LIST OF ABBREVIATIONS

ABE    Affirmative Business Enterprise
BCI    Black Construction Industry
BEE    Black Economic Empowerment
CETA   Construction Education Training Authority
CIDB   Construction Industry Development Board
CSIR   Council for Industrial and Scientific Research
DBSA   Development Bank of South Africa
EC     Emerging Contractor
ECDC   Eastern Cape Development Corporation
EDS    Enterprise Development Services Unit
EPWP   Expanded Public Works Programme
HDI    Historically Disadvantaged
NQF    National Qualifications Framework
PMBOK  Project Management Book of Knowledge
PPPFA  Public Preferential Procurement Framework Act
SAFCEC South African Federation of Civil Engineering Contractors
SAQA   South African Quality Assurance body
SETA   Sector Education Training Authority
SMME   Small Medium and Micro Enterprise
RPL    Recognition of Prior Learning
PART 1 INTRODUCTION AND PROJECT OVERVIEW

CHAPTER 1: INTRODUCTION

1.10 Introduction and problem statement

The Eastern Cape Development Corporation (ECDC) aims to put in place a sustainable programme that provides capacity and capability to emerging contractors and service providers in order to deliver provincial infrastructure. The programme should therefore ensure that contractor’s businesses grow into sustainable enterprises.

The potential for small and medium construction businesses to contribute significantly to employment creation and economic growth is well recognised. However, emerging contractors remain weak and operate in a manner that is unsustainable because current opportunities lack the necessary planning and continuity for the development of contractor capabilities.

Many strategies for emerging contractor development that are based on instruments such as targeted procurement, have generally failed to empower emerging contractors because they are implemented without well-defined skills transfer frameworks. The sector continues to be regarded by construction clients and suppliers as a high commercial risk and this presents further barriers to meaningful participation. Related to this is the lack of clear policy targets against which to measure the effectiveness of contractor support programmes. Furthermore, the majority of current support initiatives lack an integrated programme coordination strategy.

Interventions tend to be characterised by inadequate preparations, poor needs assessments and an inadequate understanding of the development needs of emerging contractors. This is evidenced by discontinuances, unstructured training approaches, ad-hoc mentorship and inadequate monitoring and evaluation that promotes unsustainable skills transfer. The ECDC intends to put in place an effective training program that would result in the development of emerging contractors into sustainable business enterprises.

Factors that need to be assessed are the:

- Quality of training programmes available.
• Identifying the key stakeholders and
• The requirements of the stakeholders for the effective training of emerging contractors.

The aforementioned factors identified lead to the following problem that will be addressed by this research:

**The establishment of an integrated skills development model for the creation of sustainable emerging contractors supported by the ECDC.**

1.11 Sub-problems

One of the challenges faced by many government decision-makers today relates to the need for a construction development programme that comprehensively addresses the challenges faced in delivery of infrastructure projects. Investment into such programmes should be justified and measured by increased contractor capacity to execute projects and grow their businesses.

When investigating the effectiveness of the development model, several key questions arise. These are dealt with as sub-problems to the main problem. The following areas warrant detailed research in order to solve the main problem. They are:

• Development of an effective model to improve the management skills of the emerging contractors, and
The creation of quality assurance mechanisms to enhance the elements of the development model in order to satisfy the ECDC objectives.

1.12 Hypotheses

- Previous research has failed to identify an integrated approach for the development of emerging contractors as well as quality assurance for the model.
- There is sufficient information available to develop an integrated model.
- The impact of the integrated model for the emerging construction sector will require additional research beyond the scope of this dissertation which focuses only on the development of an integrated model.

1.13 Demarcation of research

1.13.1 Geographical demarcation

The empirical component of the study will be limited to organisations in the Eastern Cape Province. The centres for training will be Port Elizabeth, East London, Umtata and Queenstown.

1.13.2 Size of organisation

The study will be limited to 60 emerging construction companies in the Eastern Cape province who are on the ECDC database of emerging contractors, which have the capacity to handle projects up to R5 million rand. The staff component of the construction companies will consist of general workers, semi-skilled workers, artisans, general foreman and site agents.
1.13.3 Management level

The study will be project managed by the ECDC’s Enterprise Development Services (EDS) unit, with the technical support of the University of the Free State, the CSIR and Noyana Management Consultants.

1.13.4 Subject of assessment

The subject of assessment is the establishment of an effective integrated skills development model by the ECDC for developing emerging contractors in the Eastern Cape Province. The approach adopted is generic in nature and should have wider application.

1.13.5 Basis for the model

The basis for the model is to develop effective best development methods for the emerging construction sector in the Eastern Cape. This will be achieved by studying related literature, and analysing the results of previously implemented skills development programmes.
1.14 Key assumptions

The primary objective of the emerging contractor development programme is to contribute to the empowerment of previously disadvantaged communities by providing opportunities to existing contractors as well as entrepreneurs entering the construction industry to become successful, independent contractors over time. Previous initiatives failed to recognise post-award interventions.

The programme seeks to enable emerging contractors, through the development of their entrepreneurial, business, and in a real project environment, contract management skills, to access opportunities created by the Public Preferential Procurement Framework Act (PPPFA). This will help contractors overcome the challenges resulting from apartheid and consolidate their growth and development.

1.15 Importance of the research

The research is important because of its strategic intent and its synergy with government mandate which is to implement interventions that:

- address the supply constraints so that more emerging contractors can access the opportunities presented by the PPPFA, for example, affordable sureties, appropriate contractor's "All Risks" insurance;
- enable emerging contractors to overcome the challenges as a result of apartheid;
- provide support to qualifying contractors performing at prime and subcontract levels across the full spectrum of the construction industry whilst ensuring that balanced development takes place in all sub-sectors. Support could range from third party management support at the lowest level, through mentorship to the "buy-in" of business and management support services by the better-developed contractors;
• facilitate access to information, advice, mentoring, finance and credit and support integrated skills formation (entrepreneurial, business and contract related management skills) based on clear verifiable outcomes;

• enable emerging contractors to mature through the execution of public sector construction contracts (engineering and building) so that there are no identifying disparities between these contractors and non-emerging contractors operating in the same markets. Continuous and appropriately packaged workflow accompanied by appropriate and support depending on the contractor development profile are essential;

• encourage and reinforce private sector initiatives; avoid reliance on the public sector which cannot substitute or replace existing finance, training and buying and marketing infrastructure, all of which should enable the contractor to develop a sound financial and credit record;

• balance the objectives of the promotion of the emerging sector with community employment and training objectives;

• enable emerging contractors to successfully compete for and secure profitable public and private sector contracts and to execute such contracts efficiently and competently and;
• reinforce other development initiatives (commitment to working together and sharing information)

The research is of importance because an integrated model will be developed and implemented for the first time. The results of this study are of importance to the key stakeholders such as CSIR, Department of Public Works (DPW), CETA, Industrial Development Corporation (IDC), East London Industrial Development Zone (ELIDZ), CIDB, Department of Trade and Industry (DTI) and the Department of Labour (DOL).

1.16 Definition of selected concepts

The following concepts have been identified as the key components which require assessment for a project of this nature. Any project requires planning, phasing and implementation. The project has to be coordinated and monitored, project management plays a significant role in the development of the integrated model. In order to develop a model for the development of emerging contractors, one needs to understand what an emerging contractor is and why the government is promoting skills development and Black Economic Empowerment (BEE).

Key stakeholders such as CETA, Construction Industry Development Board (CIDB) need to be defined in terms their goals and methods of operation. The construction mentor is a key component of the integrated model and is defined in terms of the role he/she plays in the emerging contractor development process.

1.16.1 Project management

Project management as defined by Duncan (1996:6) is “the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder’s needs and expectations”. Modern project management generally encompasses the integration of nine functional areas.
These include the four core or constraint functions of scope, quality, time and cost, and five integrative and interactive functions of risk, human resources, contract/procurement, information/communications management and integration management.

Each function requires a separate skill set, so that on a larger project, or in the larger project management organisation, responsibilities tend to be grouped accordingly for their proper conduct. Consequently, the investigative format of a project management appraisal more readily follows these functional descriptions.

Sabol (2000:1) states that the purpose of project management is to achieve successful project completion with the resources available. A successful project is one which:

- has been finished on time;
- is within its cost budget; and
- performs to a technical/performance standard which satisfies the end stakeholders.

### 1.16.2 Project integration

The bringing together of diverse organisations, groups or parts of groups to form a cohesive whole to successfully achieve project objectives.

### 1.16.3 Emerging contractor

For the purposes of this report, a definition of an emerging contractor (EC) has been outlined according to the standard definition used by the National Department of Public Works. The terms Affirmable Business Enterprise (ABE) and emerging contractor (EC) are used interchangeably in this report.
The definition of a small-scale contractor varies according to who is defining it. Even within government, it is difficult to find a standard definition for a small-scale contractor. A widely used definition, developed by the National Department of Public Works, is:

An Affirmable Business Enterprise (ABE) is a sole trader, partnership or legal entity which adheres to statutory labour practices, is registered with the South African Revenue Service and is a continuing and independent enterprise for profit, providing a commercially useful function and:

- which is at least two-thirds owned by one or more previously disadvantaged individuals or, in the case of a company, at least-two thirds of the shares are owned by one or more previously disadvantaged individuals; and

- whose management and daily business operation are in the control of one or more of the previously disadvantaged individuals who effectively own it: provided, however, the annual average turnover excluding value added tax (VAT) and any turnover generated in respect of work performed by others in a joint venture or consortium, of the business during the lesser period for which the business has been operating, or the previous three financial years, does not exceed:

  i. R25 million in respect of contractors who generate more than 75 per cent of their turnover as prime contractors;
  ii. R10 million in respect of contractors who generate more than 25 per cent of their turnover as prime contractors;
  iii. R2.5 million in respect of labour-only sub-contractors;
  iv. R10 million in respect of manufacturers;
  v. R15 million in respect of suppliers;
vi. R2.5 million in respect of professional service providers (exclusive of any turnover generated in respect of outsourced activities which the enterprise does not have the in-house competence or expertise to perform);

vii. R2.5 million in respect of other service providers, for example transporters;

and the sum of the average turnovers over the same period of all the business concerns which are under the control of the previously disadvantaged individuals within the business entity or Affiliated Entities does not exceed one and a half times the maximum allowable annual average turnover for the particular category of enterprise seeking ABE status.

1.16.4 Mentor

A mentor is a trusted and respected advisor. Construction mentors, based on their knowledge gained through practical experience in the construction industry, are able, through their prior learnt skills and experience, to:

- guide and advise emerging contractors in the areas in which they need to improve their competencies;

- develop the managerial skills of the key staff members in the business in functional areas of admin/IT, public relations, procurement, finance, human resources, marketing and technical skills; and

- set up business systems within emerging companies.

1.16.5 Construction Education and Training Authority
The Construction Education and Training Authority (CETA) was established in April 2000 by way of the Skills Development Act. Its primary objective is to strategically influence the course of training and skills development by ensuring that all training reflects current sectoral needs and requirements of the construction sector. Various skills projects and learnerships aim to develop a pool of skilled and motivated construction workforce whose skills are recognised and valued in terms of the National Qualifications Framework (NQF).

### 1.16.6 Construction Industry Development Board

The Construction Industry Development Board (CIDB) is: a Schedule 3a public entity, established to provide leadership to stakeholders and to stimulate sustainable growth, reform and improvement of the construction sector for effective delivery and the industry's enhanced role in the country's economy. In terms of the Public Finance Management Act (PFMA) it is an accounting authority, responsible to the Minister of Public Works as the executive authority. The Board submits its annual business plan and report to the Minister.

### 1.16.7 Black Economic Empowerment

The BEE Commission defined Black Economic Empowerment (BEE) as a strategy aimed at substantially increasing black participation at all levels in the economy. BEE aims to redress the imbalances of the past by seeking to substantially and equitably transfer ownership, management and proportionate control of South Africa's financial and
economic resources to the majority of its citizens. It also aims to ensure broader and meaningful participation in the economy by black people.

A black company is 50.1 per cent owned by black persons who have substantial management control. Ownership refers to economic interest while management refers to the membership of any board or similar governing body of the enterprise.

A black empowered company is at least 25.1 per cent owned by black persons who have substantial management control. Ownership refers to economic interests. Management refers to executive directors.

1.17 Research Methodology

1.17.1 Literature survey

A literature survey will be conducted to determine what best practices are available. This would indicate the requirements for the successful implementation of the model and the required objectives. The literature survey will review past programmes and provide and assess their outcomes. The literature survey will focus on initiatives by government and the reasons why skills development is an integral part of South Africa’s economic growth.

1.17.2 Empirical study

The study will comprise:
- developing assessment tools to evaluate emerging contractor, mentor and service provider performance;
- developing a mentor training programme; and
- conducting regular interviews with trainers, mentors and the project management team.
1.17.3 Development of an integrated model

An integrated model will be developed, addressing the issues of mentoring, training, financing and comprehensive quality assurance for emerging contractor development.

1.18 Dissertation structure

Part 1: Introduction and project overview

CHAPTER 1: Introduction

Part 2: Literature review

CHAPTER 2: Project management
CHAPTER 3: Black Economic Empowerment
CHAPTER 4: Emerging contractors and skills development

Part 3: Emerging Contractor Development Model

CHAPTER 5: Design and implementation of the integrated model
CHAPTER 6: Quality assurance for an integrated model

Part 4: Conclusion
PART 2  LITERATURE REVIEW

CHAPTER 2: PROJECT MANAGEMENT

2.1 Introduction

According to Murch (2000:25), rarely has a professional field evolved as rapidly as project management. It is totally different from what it was 10 years ago. The struggle to stay abreast of new and rapidly evolving technologies, to deal with accumulated development and maintenance backlogs, and to cope with people issues has become a treadmill race as software groups work hard just to maintain the pace.

A best practice development model for emerging contractors requires effective project management from a project team who is skilled in the design, coordination and implementation of a project of this nature. Project team members need to understand their roles and responsibilities as project managers, as well as the risk and permutations of any one project. This chapter focuses on the requirements of the project team and key project management concepts related to a project of this nature. The objectives of ECDC’s project team are:

- To assure that the project, when initially conceived and authorised, supports the organisation’s approved higher level strategic objectives and contains acceptable risks regarding the project’s objectives:

- To plan, control and lead the project simultaneously with all other projects, effectively and efficiently, so that each will achieve its approved objectives:
Kiser (2000) states that the project management plan, when implemented correctly, gives the project team up-front senior management support, clear strategic direction and the right tools to manage a project to its desired conclusion.

Gido and Clements (2003:4) state that a project is an endeavor to accomplish a specific objective through a unique set of interrelated tasks and the effective utilisation of resources. Cominos and Frigneti (2002:9) define project management as a process by which a project achieves its stated objectives.

2.2 Requirements of effective project managers

Project managers are a very special breed of people states Murch (2000:13). They are in much demand and will be increasingly so as the need for effective technologists continues to soar. Good technology project managers are trained, not born. They develop skills through experience and education. They become better project managers each time they successfully deliver a project. They learn new techniques and apply them on their projects. They learn lessons sometimes the hard way in order to be better managers in the future.

According to Archibald (2000:6), the project manager role is more operational in nature compared to the more strategic role of the project sponsor. The project manager plans and directs the execution of the project to meet the time, cost, and performance objectives as established by the project sponsor. Archibald (2000:7) states that the project manager integrates the efforts of all persons and organisations contributing to the project, primarily working through the various functional project leaders. According to Sabol (2000:3), the effectiveness of project management is critical in assuring the success of any substantial undertaking.

Areas of responsibility for the project manager include planning, control and implementation. A project should be initiated with a feasibility study, where clear goals and ultimate benefits need to be established. Senior manager’s support for projects is important so as to ensure authority and direction throughout the
project's progress, it also ensures that the goals of the organisation are effectively achieved within this process. The particular form of support given can influence the degree of resistance the project encounters. Knowledge, skills, goals and personalities are all factors that need to be considered within project management. Sabol (2000:3) states that the project manager and his/her team should collectively possess the necessary and requisite interpersonal and technical skills to facilitate control over the various activities within the project.

According to Murch (2000:15), project managers must be able to motivate and sustain people. Project team members will look to the project manager to solve problems and help with removing obstacles. Project managers must be able to address and solve problems within the team, as well as those that occur outside the team. Project managers need a wide range of skills, over and above the technical skills to lead and deliver on projects successfully. A good project manager needs to understand the business aspects of running a project, so in organisation, communication, finance, and human resources are also required.

2.3 Project risk management

Project risk management is a broad concept that can be approached in different ways. Two standards have emerged that provide project teams with useful guidance of managing risk (Frame 2002:83). One is the Australia/New Zealand standard 4360:1999 and the other is the standard promoted by the Project Management Institute in its Guide to the Project Management Body of Knowledge (PMBOK).

The PMBOK guide sees managing risk as made up of six processes:

- risk management planning;
- risk identification, qualitative risk analysis, quantitative risk analysis; and
- risk response planning and risk monitoring and control.
The concept of risk for the report to be presented relates to the project management objectives of time, cost and specifications, as well as the business objectives of the project. Risk management forms an integrated part of business management and project management.

Risk management planning, if it is going to be managed effectively must have a conscious planning to deal with it. When planning the overall project, time must be set aside to deal specifically with a risk management plan (Frame 2002:83). Risk management is more than just the management of project risks, it is also the management of the risks that the project may place on the business. For example, if a project replaces a key system that supports service provision to an agency’s clients, failure of the project could severely affect the agency’s operations and service delivery capabilities. Effective management of risk will often require a substantial investment of resources. Therefore, a key goal for risk management is to cultivate support amongst senior management, and other stakeholders and participants in the project, for the actions or program that are needed to reduce or mitigate risks.

Risk management is an essential component in the successful management of any project. It is a process that must start from the inception of the project and continue until the project is completed and its expected benefits have been realised. Risk management must focus on the areas of highest risk within the project, and continuously monitor other areas of the project in order to identify any new or escalating risks. The development of an integrated model requires risk assessments to be performed prior, during and post model development risk assessments comprise three key elements:
• **Identify uncertainties**

Explore the entire project plan and look for areas of uncertainty.

• **Analyse risks**

Specify how those areas of uncertainty can impact on the performance of the project, either in duration, cost or meeting the user’s requirements.

• **Prioritise risks**

Establish which risks should be eliminated completely because of potential extreme impact, which should have regular management attention and which are sufficiently minor to avoid detailed management attention.

In the same way, risk control comprises three elements:

• **Mitigate risks**

Take whatever actions are possible, in advance, to reduce the effect of risk. It is better to spend money on mitigation than for contingencies.

• **Plan for emergencies.**

For all those risks which are deemed to be significant, have an emergency plan in place before it happens.

• **Measure and control**

Track the effects of the risks identified and manage them to a successful conclusion.

2.4 **Project quality management**
Project quality management provides the tools to ensure projects meet the required objectives. It prescribes an important role in project planning and establishes the major functions of the project manager during project execution. The goal of project quality management is to ensure that the design and construction of a project meets the quality requirements established by an organisation. To accomplish this goal, the project management team should perform the following functions for the project team in order to ensure the desired quality of the constructed project:

- establish requirements;
- build teamwork;
- supply resources; and
- evaluate performance

A project quality management plan should include the following:

- quality management planning and implementing policies, procedures, and requirements;
- quality control to ensure that work is being performed and that work is being checked prior to its acceptance;
- quality assurance to verify that quality control tasks are being performed; and
- continuous quality improvement: to continuously pursue improvement in the quality of the project process.
- quality costs redoing a project item even when this increases the item's cost.
During or upon completion of each project phase and upon total project completion, members of the project team should evaluate the team's performance as a whole. In evaluating a project for quality, the project team should:

- define expectations;
- define problems;
- determine what is needed to rectify problems;
- estimate needed resources; and
- determine if the project cost or programme needs refining.

Duncan (1996:83) defines project quality management as “the processes required to ensure that the project will satisfy the needs for which it was undertaken”.

Quality Management Plan – Methodology

- identify the customer’s quality objectives;
- help customers express quality expectations in objective, quantitative terms;
- balance needs and expectations of customers and stakeholders with cost, schedule, and professional standards;
- evaluate the costs and benefits of selected quality objectives and the processes to be used to achieve objectives;
- develop an effective plan and processes, including quality assurance and quality control procedures, to achieve objectives;
- consider risk/hazard factors and complexity of the project and adapt processes to provide the requisite level of quality;
• document in the risk management plan any project variations from the local quality management plan requirements;
• develop performance measure thresholds to ensure agreement on the definition of success relative to quality objectives; and
• ensure customer endorsement of all quality objectives included in the quality management plan.

Quality planning

Quality planning involves:

• reviewing of organisational policy;
• the complexity and uniqueness of the project, and available quality templates to identify quality standards and measurements that are relevant to the project and if not incorporated will result in low quality results creating significant risk to the project. In addition to identifying these quality standards, the plan will determine how to satisfy each quality standard via the project schedule, resourcing and internal procedures.

Quality assurance
Quality assurance includes periodic executive review and evaluation of the overall project performance to provide confidence that the project will satisfy the relevant quality standards. Quality assurance will evaluate, identify, and recommend adjustments to the project activities or tasks (and associated resources) in order to provide confidence that the project will satisfy the relevant quality standards.

Quality control

Quality control includes monitoring specific project results and deliverables to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance. Quality control involves monitoring the process and products, in order to determine if the project is meeting the quality standards and identifying ways to mitigate risk or eliminate causes of unsatisfactory results.

2.5 Conclusion

By reviewing the related literature on project management, it is apparent that all projects undertaken require some form of project management. The development of the model requires a stringent project management process, as described in the literature. The entire project together with emerging contractors, construction mentors and service providers need to be managed in terms of their roles and responsibilities. The project carries a degree of risk and this needs to be managed in order to ensure quality assurance, efficiency and that the project delivers on the agreed upon objectives.

A key goal of disciplined project managers is to avoid the unforeseen surprises that can occur, these surprises almost always lead to bad news: cancelled projects, late delivery, cost overruns, dissatisfied customers, outsourcing, termination, and unemployment. Careful consideration is therefore required by ECDC in selecting efficient project managers to manage the interest of the corporation.
CHAPTER 3: BLACK ECONOMIC EMPOWERMENT

3.1 Introduction

This chapter focuses on BEE in South Africa, the strategy government has put in place to address the issue of BEE. To address BEE in the construction industry, one needs to study the challenges faced by emerging contractors. Skills development programmes are purely an empowerment exercise in addressing the lack of opportunities afforded to non-white South Africans in the past. According to Chege et al (2004:1), South Africa’s socio-economic history is characterised by exclusion. Ever since the establishment of the Dutch settlement at the Cape, successive governments have taken a narrow and sectionalist approach to governance. The litany of exclusionary legislation of the past century is well-known to all South Africans. It culminated in the official policy of apartheid (separate development) of the National Party government, which was implemented as a national objective from 1948 onwards.

The historical and deliberate exclusion of black South Africans from participating freely in the economy resulted in a society, marked by vast discrepancies and disparities. Government’s BEE policy aims to
further strengthen South Africa’s shared economy that meets the needs of all the people of South Africa and significantly reduces the gulf between black and white in terms of skills and opportunities in the shortest possible time.

Nonetheless, the slow pace of transformation has generated much frustration among historically disadvantaged South Africans at the apparent lack of commitment to BEE by government and the private sector, many argue that the market system, if left to its own devices, would not undo the damage wreaked by colonialism and apartheid. Government, in its view, had to intervene. The construction industry has suffered the same challenges and hence the need to fast track BEE in the construction industry.

Chege et al (2004:1) state that the call for government intervention is worth closer scrutiny, many political commentators argue that established business is not committed to BEE and would prefer to continue doing business in the way it has always done. Chege et al (2004:1) refer to the Grant Thornton International Business Owners’ survey, published in 2004, that states that three-quarters of South Africa’s medium-sized companies indicated that they do not care about supplier’s empowerment profiles and over a third did not feel empowerment was an issue when it came to winning business. The survey concluded: “White males still run the economy almost a decade after the African National Congress (ANC) came to power with a pledge to transform the apartheid economy. Black people run the public sector, while white people run the private sector – the engine of the economy.” Whites still fill 80 per cent of all top management positions, though they represent significantly less than 20 per cent of the workforce. In addition, the 1,9 million employed whites command most of the 780 000 jobs that pay more than R8 000 a month.

3.2 What is Black Economic Empowerment
The broad-based Black Economic Empowerment Act of 2003 defines "black people" as a generic term that includes "africans, coloureds and indians". According to the act, "broad based black economic empowerment" – with an emphasis on 'broad-based' - refers to the economic empowerment of all black people including women, workers, youth, people with disabilities and people living in rural areas.

The socio-economic strategies envisaged include:

- increasing black ownership and management of businesses;

- facilitating community and worker ownership of "enterprises and productive assets";

- skills development;

- issues around equal representation in the workplace; and

- preferential procurement; and investment in businesses that are owned by black people.

Currently there are two categories for empowerment as it relates to company ownership:

- 'Empowering companies' have 26 per cent black ownership; and

- 'Empowerment companies' have 50 per cent black ownership.

This is currently being revised and will entail black ownership of 50.1%.

The issue of empowerment is slightly different for government tender. State tenders make reference to Historically Disadvantaged Individuals (HDI). This category carries 25 per
cent weighting in tender proposals. The empowerment measurement relates to black ownership and managerial empowerment levels in a business and includes white women.

3.3 Government’s broad based Black Economic Empowerment strategy

Government’s response was to introduce a strategy for broad-based BEE that redressed past imbalances. It positioned BEE as a powerful tool to broaden the country’s economic base and accelerate growth, job creation and poverty eradication.

President Mbeki’s address at the opening of parliament in February 2003 included a reference to the tabling of an Empowerment Act and the establishment of a Black Economic Empowerment Advisory Council. Included in his speech was the notion of ‘charters’ in certain sectors of the economy. In November 2003, the Minister of Public Works, Minister Stella Sigcau, announced that the Department of Public Works was refining a transformation framework that would culminate in a transformation charter for the construction industry in South Africa. The South African Federation of Civil Engineering Contractors (SAFCEC) has also embarked on a process of preparing a charter for the construction industry.

The broad-based BEE strategy is a necessary government intervention to address the systematic exclusion of the majority of South Africans from full participation in the economy. The defining feature of apartheid was the use of race to restrict and severely control access to the economy by black persons. The accumulation process was one of restricted wealth creation and imposed underdevelopment on black communities to ensure that they were, in the main, suppliers of cheap labour.

The underdevelopment of black South Africans took the form of a progressive destruction of productive assets, deliberate denial of access to skills and jobs, and, the undermining of self-employment and entrepreneurship. In combination these policies restricted and suppressed wealth and skill endowments in black communities, thereby structurally inhibiting their participation in a legislatively race-based economy.
Black communities had little access to technical and scientific teaching and learning and this further exacerbated the obstacles in the rapidly developing industrialization process. It is a testimony to the vitality of black society that so much has been achieved in so short a space of time.

3.4 Black economic empowerment in the South African construction industry

BEE within the construction industry has been slow: Empowerdex rated the empowerment risk profile of the listed construction companies as high, since their BEE status is below the required BEE levels. This risk is based in all market and sector-specific risks. It has noted that some of the listed entities have extensive african/offshore income that mitigates their empowerment risk. It argues that the sector will have to improve its status through improved targeted procurement, as well as increasing BEE ownership and control.

3.5 Problems facing emerging contractors

The key constraints facing emerging contractors in the South African construction industry are no different to the problems encountered by emerging contractors in other developing countries. It may be argued, however, that when compared to other small, medium and micro enterprises (SMME) in the South African construction sector, the problems confronting emerging contractors are more acute. Significant research has been conducted, internationally and locally, on the problems facing emerging contractors. Ofori (1995), in a report prepared for the United Nations Centre for Human Settlements (UNCHS) on policies and measures for small contractor development, identified a range of problems confronting SMMEs.

Dlungwana and Rwelamila (2003) state that contractors can be distinguished from each other by variables such as the size of annual turnover, capacity and capability. The challenges facing small and medium-sized contractors can be distinguished between those that affect small-scale contractors and those that affect medium-sized contractors. Some key features of small-scale contractors are that they are largely unregistered, operate in the informal sector of the economy and have very little formal business systems.
The small-scale sector comprises the largest percentage of total contractors, although they employ very few permanent staff, usually less than ten employees.

The medium-sized contractors are usually registered businesses that have formal business systems in place, operate in the formal sector of the economy. These contractors employ a relatively larger number of employees, of approximately between 40 and 100, on a permanent basis. While many challenges are faced by small, medium sized contractors, throughout the world, contractors in developing countries have additional problems to those experienced by their counterparts in the developed countries states Ofori (1991).

The conditions in developing countries present additional challenges which include, amongst others, the lack of resources for training contractors, such as funds, poor construction procurement systems and lack of management capacity and resources to equip managers to operate their business enterprises effectively and efficiently. Contractors have to meet the traditional project measures of cost, time and quality. In addition to these measures, sustainability issues, such as environment and social responsibilities, have recently come to the fore.

Several researchers have analysed problems confronting emerging contractors such as Atkins and Milne (1996) and Hodgson and Gwqagwa (1997). The most recent undertaken was by the affected sector, represented by the Black Construction Industry (BCI).

### 3.6 Financial support from government for black economic empowerment
South Africa’s economic transformation: A strategy for broad-based BEE states that government has also reoriented many of its incentives and enterprise support measures to promote broad-based black economic empowerment. Special efforts were made to increase public awareness of available incentives and enterprise support. The decentralisation of resources was expedited through the active participation of local and provincial government.

A total of R2.2 billion was allocated to fund BEE initiatives for the 2002/2003 financial year. Included in this support were offerings from:

- Department of Trade and Industry (DTI) and its various agencies, including Ntsika, Khula and the Industrial Development Corporation (IDC);
- Land Bank, the Development Bank of Southern Africa (DBSA) and other financial development institutions; and
- the Isibaya Fund contributed an amount of R321 million and the Umsombomvu Fund contributed R461 million.

In addition, the DBSA contributed R1.4 billion to the revenue of low income households between 2000 and 2002. There is little doubt that these measures have leveraged private sector funds to support BEE. This is an important point in that quite clearly it cannot and will not be the state alone that finances BEE. The bulk of the funding is likely to come from the private sector, with the state funds acting as facilitator.

3.7 Conclusion

After reviewing the related literature on BEE, it is assumed that BEE, like economic growth, is unsustainable unless it is shared. Therefore BEE should be seen as an important element of the far-reaching restructuring of the economy that aims to accelerate growth, redistribution and employment creation. A narrow approach to BEE will ultimately create a conflict of interest between those who
want to use the state to profit themselves and their allies, and the majority of poor communities who are desperate for affordable services and job creation.

To ensure meaningful BEE for all, it will be necessary to formulate clear guidelines to ensure that measures, to increase the representivity of capital, do not come at the cost of poor communities, users of government services, or of workers. Otherwise, efforts to empower black people by supporting black business will be self-defeating.

The model to be developed and BEE is closely interrelated; the purpose of the model is to address the issue of the lack of BEE in the construction industry and targets individuals from a historical disadvantaged background in the construction industry and seeks to promote BEE in the construction industry. This contributes to the government overall BEE goals.

CHAPTER 4: EMERGING CONTRACTORS AND SKILLS DEVELOPMENT

4.1 Introduction

This chapter focuses on emerging contractors and the interventions that are in place to develop the skills of black contractors in South Africa. Previous initiatives to develop the skills of emerging contractors will be reviewed in order to develop a “best practice” model.
McCutcheon states that unemployment remains one of South Africa's most pressing problems. At the same time, there is a great need for physical infrastructure in urban and rural areas. Concurrently, there is also a lack of individual skills and institutional capacity. From a theoretical perspective, substantiated by large scale experience elsewhere in Africa, there are reasons for advocating the establishment of carefully formulated, long-term programmes using employment-intensive methods for the construction and maintenance of the required infrastructure.

These programmes have also improved institutional capacities and developed individual skills. It can be financially competitive with conventional (equipment-based) construction and can produce the same quality of product within the same time. From a development perspective there are additional socio-economic benefits to be gained such as the development of individual skills and institutional capacities, and the alleviation of poverty.

During 2001, skills development was clearly stated as a national priority. Twenty-five Sector Education and Training Authorities (SETAs), covering all aspects of economic activity, are now entering their fifth year of existence. All SETAs are expected to make specific contributions to the National Skills Development Strategy. Specific projects initiated by different SETAs include training domestic workers, training people to work in national parks, and enhancing the skills of micro-lenders.

By the end of 2002, over 23 000 learners had participated or were participating in SETA training programmes ranging from entry-level programmes to professional level and post-professional training across the entire spectrum of occupations and sectors. To increase access to these programmes by the unemployed, government will take the lead in bringing more of these into its own training programmes, encouraging the private sector to do the same.
The Skills Development Act provides an institutional framework to devise and implement national, sector and workplace strategies to develop and improve the skills of the South African workforce, (Engdahl and Hauki, 2001:62). The purpose of the act is to:

- increase the levels of investment in education and training of the labour force;
- to improve the employment prospects of persons previously disadvantaged by unfair discrimination; and
- to redress the disadvantages through training and education.

Employers are:

- encouraged to use the workplace as an active learning environment;
- to provide the employees with the opportunities to acquire new skills;
- to provide opportunities for new entrants to the labour market to gain work experience; and
- to employ persons who find it difficult to find employment.

Engdahl and Hauki (2001:62) state that the definition of an employee in this act is the same as in the Employment Equity Act. A worker is defined as an employee, an unemployed person or a work-seeker. The act established the National Skills Authority and the National Skills Fund and provided for the establishment of Sector Education and Training Authorities (SETAs). The functions of the National Skills Authority are, amongst others:

- to advise the Minister of Labour (the minister) on regulations to be made
- to liaise with SETA on different skills development policies and strategies;
- to conduct investigations; and
- report on the progress made in the implementation of the national skills development strategy.

Members of the authority are appointed by the minister to represent interests from
labour, business, the community and development interests as well as the state. There are 24 Sector Education and Training Authorities. They focus on specific economic sectors, determined by the education and training needs of employers and employees in similar categories of businesses. The potential for coherent occupational structures and career planning, as well as the financial and organisational ability of the proposed sector to support a SETA, are other issues taken into consideration.

The function of SETAs are:

- to develop and implement a sector skills plan by establishing learnerships;
- approve workplace skills plans, allocate grants to employees, employers and education and training providers; and
- monitor education and training in the sector.

Furthermore, they are to collect and disburse the skills development levies in their sector. The SETAs liaise with the national skills authority and report to the Director General of Labour. Every SETA consists of representatives from labour, employers and relevant government departments and might also include other interested parties if the Minister of Labour considers it appropriate, (Engdahl and Hauki, 2001:63).

Employers may develop a skills programme for their workforce and can thereafter apply to their SETA for a grant or the Director General of Labour for a subsidy.

A skills Programme is defined as:

- a programme that is occupationally based, will constitute a credit towards a qualification registered in terms of the National Qualification Framework when completed, uses a training provider accredited by a body contemplated in the South African Qualifications Authority Act or complies with the prescribed requirements.

4.3 The role of the Construction Education and Training Authority
In April 2000, the Construction Education and Training Authority (CETA) took over the responsibility for all education and training within the construction sector, which includes all building, civil engineering and related activities (which are performed in an office, on site, in a workshop or factory) associated with the design of, planning for, preparation for, and the building, construction, erection, fitting, completion, maintenance and repair of buildings, structures, factories, dam walls, weirs, reservoirs, pipelines, canals, tunnels, roads, runways, driveways and parking areas, as well as building and civil infrastructure.

One of the tasks of the CETA is to ensure that a skilled and motivated construction sector workforce is developed, and that the skills are recognised and valued in terms of the National Qualifications Framework (NQF). It is also in the interest of the CETA that people who have acquired skills but do not have qualifications are put through the Recognition of Prior Learning (RPL) assessment process so as to ensure that they can compete on an equal footing for those jobs that require some form of qualification.

In addition to carrying out the functions listed above, the CETA is also accredited by the South African Quality Assurance body (SAQA) to provide an Education and Training Quality Assurance (ETQA) role to the industry, ensuring that standards of training are rigorously adhered to. The CETA is funded from the levies paid by employers, with 70 per cent of the total levies paid being available to be claimed as grants. Twenty per cent of the levies go to the National Skills Fund.

In order to ensure adequacy of representation, the CETA has been formed with three sub-sectors:

- construction (the contractors);
- consultants (engineers, architects, quantity surveyors);
• town planners and landscape architects; and

• the manufacturers and suppliers of construction materials.

Each of these sub-sectors has a standing committee reporting directly to the authority members on matters particular to its sub-sector.

4.4 The role of the Construction Industry Development Board

The Construction Industry Development Board (CIDB) was established by parliament (Act 38 of 2000) as a statutory body to provide leadership to stakeholders and to stimulate sustainable growth, reform and improvement of the construction sector for effective delivery and the industry’s enhanced role in the country’s economy.

The board, which is responsible to the Minister of Public Works, comprises private and public sector individuals appointed by the minister on the basis of their individual knowledge and expertise. The board is supported by a professional and knowledge-based organisation, structured to drive the strategic objectives of the CIDB.

The CIDB’s mandate is to provide:

• strategic leadership;

• promote sustainable growth;

• promote improved performance and best practice; and

• promote improved procurement and delivery management, and develop methods for monitoring and regulating the performance and registration of projects and contractors.
4.5 The Emerging Contractor Development Programme

In 1997, the Department of Public Works set up the Emerging Contractor Development Programme (ECDP) to help fast-track the involvement of black-owned construction businesses in the sector. The programme has brought about the management of 50 000 construction projects by black-owned companies, generating R431 million, but the slump in the industry in the 1990s starved many of these companies of business states Neveling (2003). The ECDP is a positive start in training and capacity building.

Training should be developed for different levels of emerging contractors, including contract-specific training to prepare entrepreneurs for work appropriate to their size and stage of development.

4.6 The Expanded Public Works Programme

Van Wyk (2003:15) explains that the Expanded Public Works Programme (EPWP) over the next five years will spend at least R15 billion of R45 billion on work that lends itself to labour intensive jobs. This includes the upgrading of rural and municipal roads (37,416 km), pipelines (31,000 km), stormwater drains (1,500 km) and urban sidewalks (150 km). The programme is intended to create employment, enhance service and infrastructure delivery, and provide skills and training.

The programme is to be effected by the private sector, which will be invited to tender for infrastructure projects earmarked as labour intensive. The role of the public sector will be to manage procurement, select projects and provide project management. The EPWP has received widespread support because public
works projects are seen as more beneficial than a basic income grant, in that they target the poor more effectively, create infrastructure that is more widely useful to society and provide for on-the-job training and skills development.

Economists and policy analysts, however, fear that the programme may be severely impeded by the lack of capacity within government to roll out the necessary projects. The private sector is to be asked to second skilled project managers to work in some municipalities to assist with the management of the projects. Concern has also been expressed that placing the EPWP in the Department of Public Works may undermine the programme, as the department is severely overloaded. It is likely that the EPWP projects will be more attractive to smaller contractors than the larger contractors which tend to make greater use of capital-intensive construction methods. Utilising smaller contractors will, by contrast, result in greater job creation.

4.7 Analysis of previous research on development programmes

This section focuses on previous skills development programmes undertaken in South Africa. The programmes will be reviewed and the outcomes analysed in an attempt to source the positive aspects and incorporate these into the integrated model to be developed.

A case study conducted by English (2002) on 200 workers revealed that the easy entrance into construction labour and the lack of barriers due to informal employment practices have meant that there is a low level of ability. Another study of 200 construction workers, conducted in 2001, in Cape Town showed that the majority of labourers, over 40 per cent, have low levels of education and no particular skills. The trend of outsourcing has resulted in a drastically reduced formal labour force available for formal training. Most workers in the informal sector (over 50 per cent of the sample) are casually employed and nearly 50 per cent of the sample had not worked for the current employer for more than a year. Workers in impermanent positions do not have the opportunity to develop skills and hence 76 per cent of the sample were working in their original role of labourer and had not progressed into other roles.
Workers’ principal opportunity to improve skills appears to be on-site. English (2002) found that given the low education level of the sample, it is unsurprising that few showed interest in acquiring skills other than building ones pertinent to their jobs. However, the workers were also asked to assess their language skills. Shared language is an important factor in effective communication. Almost half the sample said they would like to improve their language skills, with English the most favored choice.

Workers were asked how they had acquired their skills. Thirty-four per cent of those who answered this question said they had acquired their skills formally and were in the older age bracket. Sixty-six per cent had acquired them informally.

English (2002) also found that training is vital to the future skill requirements of the construction industry. The government has affirmed this with its creation of SETAs for different sectors with CETA being the SETA for the construction industry. The major task of CETA is to develop a skilled and motivated construction sector workforce. A feature of this skills improvement programme will be the Recognition of Prior Learning (RPL), a process of assessment for people who have acquired skills but who do not have qualifications but who have developed in the informal sector. Given the predominance illustrated by the sample of workers without qualifications but with skills acquired on the job, this is a topical approach. CETA has committed to certain agreed targets in terms of training and is to develop learnerships in construction. These learnerships replace the apprenticeship system.

Merrifield states that research on programmes, designed to support small-scale contractors in the low income housing sector in the pre-1994, period indicated that many of these programmes did not equip the builders with the skills of “risk management” that would enable them to survive in a competitive market. While the programmes provided managerial support, they restricted builder operations to a level which did not guarantee them sufficiency. Since 1994, support is less emphasised and providing work opportunities has received more emphasis.
To some extent, support programmes have been replaced by joint venture contracts between black (small under-resourced) and white (large well-resourced) contractors. In many cases, these joint ventures have developed small contractor skills and increased their exposure to larger contracts. However they do not have “risk management” experience necessary to become competitive in the market.

Larcher (2001) states that there is no definitive answer to the design of a contractor development programme. Experience in designing programmes is currently fragmented and poorly documented. The Department for International Development (formally the Overseas Development Administration) recognised the need to gather and collate existing experience with its support of the Management of Appropriate Road Technology (MART) initiative.

McCutcheon and Croswell found that small contractor development, in relation to employment-intensive rural road programmes in sub-Saharan Africa and other types of work in South Africa, must introduce the main lessons from employment-intensive work. One of the main lessons is to adopt a long-term, programme approach as opposed to an ad hoc project approach. The adoption of such an approach, combined with the recognition and acceptance of the extremely poor educational base, lack of individual skills and institutional capacity, must lead to the formal linking of a comprehensive training programme with a construction programme.

Miller et al (2002), report that most of the previous work, in terms of the development of contractors in developing countries concentrate on the small contractors and conclude that the process of contractor development is extensive and must include a wide range of initiatives targeted at:

- the enterprises themselves;
- the employees and proprietors of these companies;
- the resources which these companies require;
- the rest of the construction industry, such as the designers; and
- the operating environment of the contractors.
Van Wyk (2003:16) states that the Department of Public Works has, since 1996, increased the share of value of its capital projects to 43 per cent in favour of emerging contractors, compared to the four per cent in 1994. It has also registered more than 3,300 emerging contractor firms, of which 290 are women-owned, on its database. Emerging contractors have been the recipients of about 50,000 contracts of varying sizes, with a value in excess of R400 million, whilst women contractors executed 79 construction-related projects with a value of R188 million between 2001 and 2003.

### 4.8 Conclusion

The literature reveals that government has put many interventions in place to address the problems faced by emerging contractors, such as the CETA, CIDB, ECDP, EPWP which are proof of the initiatives taken by government to ensure viability and sustainability of black contractors in the construction industry. By reviewing the skills development initiatives, it becomes apparent that an integrated model, combining the three key areas of development that are financing, mentoring and CETA learnerships should be introduced. Emerging contractors vary in size and capacity. Therefore, skills development programmes need to be flexible in terms of content adjustment, methods of implementation and accessibility.
CHAPTER 5: DESIGN AND IMPLEMENTATION OF THE INTEGRATED MODEL

5.1 Introduction

The primary objective of the integrated model is to contribute to the empowerment of disadvantaged communities by providing opportunities to existing contractors as well as entrepreneurs entering the construction industry to become successful and independent.

The programme seeks to enable emerging contractors, through the development of their entrepreneurial, business, contract management skills, and in a real project environment, to access opportunities created by the Public Preferential Procurement Framework Act (PPPFA). It aims to overcome the impediments which they face arising from the legacy of apartheid and consolidate their growth and development.

The three key components of the integrated model-mentorship, skills development programmes and financing- will be discussed in this chapter. The chapter will then explore the functioning of the model, followed by the design of the integrated model.

5.2 Mentorship in the construction industry

According to the Department of Public Works manual for mentorship, mentorship has been in existence in the construction industry for centuries, in one form or another. In South Africa, mentorship has been identified as a means of developing capacity in new entrants to the construction sector and overcoming business impediments in existing firms arising from the legacy of apartheid, through the
Mentorship involves the transfer of knowledge and experience, but excludes the performance of essential daily contracting functions on behalf of the mentored contractor. Mentorship is essential to accelerate the process of empowerment. It affords emerging contractors, who are awarded contracts, the benefit of the experience of those individuals who have extensive experience in the construction industry. This exposure is designed to address many of the common shortcomings encountered by emerging contractors such as poor pricing structures, the winning of non-profitable tenders, late starts to contracts, late submissions of payment claims, late commissioning and hand over of contracts.

5.2.1 The Eastern Cape Development Corporation mentoring programme

The ECDC mentoring programme was implemented in December 2003 to address the constraints faced by emerging contractors. Mentors are encouraged to follow the mentor accreditation programme offered by the University of the Free State. The mentor will play a crucial role in the success of the integrated model. Mentors are industry professionals such as quantity surveyors, civil engineers and construction managers.

The essence of mentorship, as part of skill formation, would be to assist emerging contractors or construction workers to solve specific and immediate problems encountered and, in the process, gain productive skills and competencies. As mentorship and management/implementation support are meant to support ongoing performance, a systematic approach, with clear practical competency outcomes, will be a cornerstone for effective skill formation. Furthermore, a holistic range of mentorship services is required to support contract specific operations, and the general operations of emerging contractors.
Therefore it is essential to promote mentorship which is based on specific terms of reference and focused on practical competency outcomes with regard to the provision of holistic business/technical support. This should be done in a manner that encourages emerging contractors to gradually accept the responsibility for proper management and the provision of related support services.

5.2.2 Mentor accreditation and development

The mentor accreditation and development process forms part of the quality assurance programme for the integrated model. A model of this nature would require strict quality control measures and a rigid project management team. Mentors are selected on to the programme after successfully passing the mentor accreditation examination. The examination was developed by the Free State University and is compulsory for all mentors on the programme. The examination tests the mentor's ability to transfer skills to emerging contractors and their knowledge of the construction industry. The examination comprises a three hour written paper, a psychometric evaluation and an interview with a psychologist.

*See Annexure 1: Mentor accreditation examination paper*

5.3 Construction Education Training Authority Skills Programmes

5.3.2 Recognition of Prior Learning

The Recognition of Prior Learning (RPL) is a process of evaluating and crediting a person's prior learning and experience, no matter where, when or how that learning was obtained, by assessing the value of such learning against national registered Unit Standards or Qualifications, using Qualified Assessment Practitioners within the National Qualification Framework (NQF).

The overall objective of the project is to increase employment opportunities and productivity within the building and construction sector. The purpose of the project is to develop an efficient, sustainable nationwide system of RPL for the building trades, linked to the NQF.
5.3.3 National Certificate in Construction Contracting

- Rationale of the qualification

As a result of past legacies, many practitioners within the building construction sector were denied career advancement and possible recognition as qualified contractors. This was as a direct result of poor educational opportunities at some schools, leading to a lack of entry to formal training institutions. The introduction of a National Certificate in Construction Contracting, based on unit standards, will allow learners to reach their full potential of advancement through RPL. The sector skills plan, developed by the CETA, showed a definite need for entrepreneurial and management personnel in the emerging sector in order to develop smaller construction contracting businesses.

- Purpose of the qualification

The qualification has been developed to assist with standardisation across the building industry. This will allow persons to register as a construction contractor and use it as foundation for future career advancement across similar Small Medium and Micro Enterprises (SMME) programmes in other sectors as well as to supervisory and management qualifications within the construction sector.

5.4 The ECDC contractors finance scheme

ECDC has a unit offering quantity surveyors, civil engineers, accounting and financial services to contractors throughout the province. The Fundisa programme is jointly coordinated from the Enterprise Finance unit in conjunction with the Enterprise Development Services (EDS) unit. The technical staff provide advice to contractors and the EDS unit coordinates a mentorship programme for contractors. In addition, the EDS unit links contractors to institutions which offer
training support. The Fundisa programme finances emerging contractors up to an amount of R 3 million in bridging finance and R 3 million in performance guarantees.

5.5 Strategic objectives of the model

Integrated long-term management of developmental issues, the key objective of the proposed model, is the platform for a holistic and sustainable enabling environment applied to a range of opportunities.

(Dlugwana, Noyana, Oloo; 2004:16) state that integrated coordination through the model would provide:

- **for access to work opportunities** - unbundling or the identification of packages of work suited to the undertaking by emerging contractors, tied to the objectives of a wider contractor development programme, which provides for a defined developmental path and incremental enterprise growth according to a development framework;

- **for training and skills development** - formulating and managing defined mentorship and management support for contractors to undertake contracts successfully as well as provide a basis for ongoing competency development;

- **for institutional support arrangements** - facilitating for the addressing of entry barriers to participation such as waiver on guarantee requirements. Through the Affirmative Procurement Policies and Targeted Procurement, many clients are increasingly reducing barriers to entry;
• **for access to finance** - financial institutions are starting to emerge with innovative schemes such as mentorship-linked access to bridging finance and construction guarantees that are designed to manage the perceived risks.

The overall objective is, therefore, to transform the emerging sector into a sustainable growth-oriented sector with good commercial credentials that allows for the sector’s integration into the mainstream commercial practices.

### 5.6 Generic principles of the model

The following generic principles of the contractor development programme should be adopted in order to ensure an effective development programme:

- Support should be provided to enterprises, which make best use of the support provided;

- as a programme, it must not perpetuate the division in the construction industry i.e. a relatively well-resourced formal sector on the one hand with an unregistered, poorly resourced informal sector on the other;

- the criteria for the provision and discontinuation of support must be clearly stated and made known to interested parties;
• the performance of emerging contractors should be systematically monitored and evaluated, using a database/register, which creates, inter-alia, a track record;

• clients should pay contractors promptly;

• enabling programmes must endeavour to maximise the use of uniform, user-friendly and standard procurements documents, practices and procedures. Standard targeting strategies and uniform preferential procurement policies, which are based on those developed at a national level with minimal locality/organisational specific amendments, should be used;

• strategies for enabling programmes must be based on the Public Finance Management Act; Act 1 of 1999 amended by Act 29 of 1999;

• the principles of the National Qualifications Framework as outlined in the South African Qualifications Act, Act 58 of 1995, should form the basis of any managerial and skills development;

• training should promote career progression;

• interventions should not promote dependency on the programme.
5.7 The structure and functioning of the model
Source: Dlungwana et al (2004:36)

Figure 1: Basic structure of the emerging contractor development model

The model shown in figure 1 is characterised by the two main features:

- the grading levels indicating the level of contractor performance capacity and capability; and
• the criteria that assesses the capacity, capability and growth.

The model provides a growth path that enables a contractor to move from an entry-level stage category 1 to category 5 stage where a contractor achieves full capability to execute contracts without hand-holding. The model thus ensures that a contractor is taken on a continuous improvement path, in a series of capacity development steps, so that they learn the basic management principles as their businesses grows into bigger enterprises.

It is important to begin the development process by determining the contractor's performance. This level is achieved by carrying out a performance assessment which determines the category in which a contractor must be allocated. The category determines the type of training and mentorship support required. Contractors on the programme will enter at level 1 and exit at level 5.

The model is structured to address the following key development challenges:

• facilitation of a suitable plan for the creation of an enabling environment and facilitate linkages between the contractors and other regional and national programmes and stakeholders;

• facilitation of an appropriate training, mentorship and other relevant support programme;
• facilitation of access to financing and credit; and

• monitoring, control line and evaluation of the development programme so as to ensure that the required outcomes are achieved and contractors can progress to the level where they can execute relatively high-risk projects.

The model has two stages through which contractors progress. Stage 1 is "workshop-format" training where contracting management theory is learned in an interactive environment. The structure of the course comprises theoretical modules designed to provide the contractor with the most basic understanding of the principles of entrepreneurship, general management and contract/project management that are required to operate a successful small contracting business.

The course is tailored to cater for the needs of contractors, recognising the dynamics of the industry and within the context of construction projects. While the course is basic, it lays an appropriate foundation for learning allowing the contractor to move from small-scale projects to medium-sized contracts which range up to R5m. The business and management/entrepreneurship theory is delivered in a workshop environment where there is wide participation and sharing of experiences. The entire programme takes between 12 and 18 months.

Dlungwana et al (2004:38) state that a need for clear grading criteria is fundamental to the monitoring and evaluation of contractor development. A comprehensive contractor grading framework, with specific capacity development milestones, requires verification indicators as well as entry, progression and exit criteria and a clearly defined career path, in order to profile each emerging contractor. Based on such grading, it is possible to determine what support interventions are required.

The principle of contractor grading stems from need to understand the levels of contractors’ capabilities in order provide appropriate development support and the need to match the contractor’s capability to the project with an appropriate level of complexity. The grading of contractors is well-recognised by the Construction Industry Development Board (CIDB) (Construction Industry Development Board Act, 2000). The model adopts a similar grading system in order to achieve the necessary alignment with the CIDB.
With the help of the mentors, the contractors are able to apply the theoretical knowledge in real construction projects. An ongoing performance assessment is conducted to assess progress as set out in the performance criteria. Contractors that develop the necessary contractor capacity move from the one category to the other until they have completed the programme and are able to compete in an open market where less assistance is provided.
Development objectives

- Work Opportunities
- Access to Finance and Credit
- Creation of an Enabling Environment
- Access to Training and Mentorship
- Information and Advice

Development steps using the model

1. Pool of contractors at different levels of performance
2. Select contractor for development
3. Allocate contractor to relevant performance categories and identify gaps
4. Provide training and work opportunities and advise, monitor progress
5. Monitor, assess contractor performance, promote to next category or fail
6. Contractors with highly improved performance

Key strategies to achieve development

- Objective selection criteria in line with Govt. RQts. & Contractor Assessment Report
- Performance categories/levels
- Provide linkage with others/holders
- Provide appropriate accredited support interventions, match contractors to appropriate projects
- Performance assessment criteria

Source: Dlungwana et al (2004:42)

Figure 2: Functioning of the model
Figure 2 illustrates a step-by-step procedure of how the model functions. The first activity is to select a contractor as a candidate for the development programme based on, inter alia, the following criteria:

- Affirmative Business Enterprise status;
- previous work experience;
- academic qualifications;
- previous training;
- compliance with legal and tax requirements;
- resources owned; and
- aspects of empowerment such as the proximity of the contractor to the site to address development of local enterprises.

The gaps or areas for improvement, within each category, must be identified in order for contractors to attain that capacity that is required for them to grow and become competitive. Development needs, in terms of work opportunities, training and mentorship, are also identified and matched with contractors within specific categories.

Other key development activities that may be required such as the provision of work opportunities, training, appropriate mentorship, and information. Ongoing performance assessment forms part of an evaluation process that ensures the development programme yields positive results.

5.8 The integrated model

5.8.1 Capability statement of project team

The project team assembled for this project strongly satisfies the requirements of a contractor development programme.
### Demonstrated capacity and roles of stakeholders

<table>
<thead>
<tr>
<th>Role</th>
<th>Party</th>
<th>Description</th>
</tr>
</thead>
</table>
| Project manager               | CSIR             | The project manager responsible for coordinating the programme will be the CSIR. The CSIR will outsource training and mentoring services to suitably accredited service providers. CSIR’s past involvement in emerging contractor development includes, amongst many others:  
  - research project on construction capacity levels for the R1,3b Alexandra township renewal project (2002);  
  - strategy development for emerging contractor and worker skills development in the Alexandra project (2002); and  
  - research projects for the CIDB with regard to obstacles affecting the performance of, amongst others, emerging contractor in construction projects (2001 and 2003). |

  **(Service provider – Trainers)**  
  - Suitably qualified and CETA-accredited training providers will be appointed by the CSIR to provide theoretical training.  

<table>
<thead>
<tr>
<th>Service provider</th>
<th>Noyana Management Consultancy (Pty) Ltd:</th>
</tr>
</thead>
</table>
Noyana Management Consultancy (Pty) Ltd is a wholly owned Black consulting firm that specialises in contractor training and facilitation of finance. The firm will be involved as a mentor. It will:

- identify key areas for improvement and recommend appropriate intervention; and
- conduct a review of the capacity building intervention and communicate with the project Manager.

The company is an accredited mentor and its experience includes:

- directorship (of the owner) in a number of construction industry-related organisations, including current board membership of the CIDB;
- training and mentorship of a number of projects, including a Department of Public Works housing project valued at R5 million in Northern Pretoria;
- mentoring on a number of Khula-guaranteed projects.

Professor Dries Hauptfleisch holds a BSc (Building Management), MBA and PhD degrees from the University of Pretoria. He held the position of head of the Department of Construction Management (previously Building Management) at the University of Pretoria from 1980-2000. At the end of 2000, he stepped down as head of the Department of Construction Economics in order to devote more attention to continuing education, research and private practice.
Throughout his academic career, he has been in private practice relating to property development, construction, manufacturing and retail. He is active in professional bodies and his career achievements include:

- President of the South African Institute of Building during 1978/79;
- Founder and editor of the Institute’s official publication - The Professional Builder, which has subsequently been incorporated in the journal ProjectPro,
- Chairman of the Committee of Heads of Departments of Construction Management in South Africa and serving on the National Development Fund Management Committee;
- Head of a panel of experts which advised on the restructuring of the Building Industries Training Board and Building Industry Training Scheme in 1995, which contributed to major organisational changes;
- Heading a national forum which reevaluated the academic approach towards education in quantity surveying, construction management and real estate at South African universities during 1997/1998; and
- Serving on the plenary and two focus groups during the development phase of the newly formed interministerial Construction Industry Development Board.

Table 1: Defining the project team

5.8.2 Scope of work

Sixty emerging contractors, who have the capacity to handle contracts up to R5 million, will be admitted to the development programme for 12 months. Their knowledge and skills will be developed through intensive involvement of local service providers and officials in the training and mentorship programme. Skills transfer by local service providers therefore forms a critical part of this programme. Access to work opportunities on an ongoing basis is a critical component of the programme as contractors are exposed to practical experience.
Consequently, an appropriate agreement between the ECDC and the clients of construction projects should be entered into prior to the start of the programme.

5.8.3 Methodology

The methodology to be followed in developing the contractors is illustrated in Figure 3 and described in section 5.8.4.

Figure 3: Methodology for contractor development
### Project phases, resources and activities

The project will be executed in the six project phases as outlined below:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of Activity</th>
<th>Resources</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1:</strong></td>
<td><strong>Project planning, setting up office and ongoing creation of enabling environment (including securing of projects)</strong></td>
<td>• CSIR (project manager)</td>
<td>• Project plan</td>
</tr>
<tr>
<td></td>
<td>This activity involves agreement on the project scope, methodology, the project plan and the development plan. The activity includes the preliminary planning to set up the office and the infrastructure, including programme management systems and procedures. The project team and other role players will be organised. The primary role players include the:</td>
<td>• Local coordinator</td>
<td>• Training programme administration system</td>
</tr>
<tr>
<td></td>
<td>• CSIR and its partners (service providers);</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• the Client (ECDC);</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• the employers (construction site owners) and contractors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The project manager will assist the client ensuring that an enabling environment is created so that obstacles to hampering development are removed and contractors have the opportunity to develop their full potential.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2:</strong></td>
<td><strong>An operations office help desk will be set up to integrate all development activities and a local project coordinator will be trained to manage all</strong></td>
<td>• Training Provider</td>
<td>• Database of selected contractors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Local coordinator</td>
<td></td>
</tr>
<tr>
<td>Phase 1:</td>
<td>Identification and alignment of interventions required to develop the necessary capacity for contractors, including appropriate training courses and mentorship.</td>
<td>Local coordinator</td>
<td>Needs analysis report</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Training provider</td>
<td>Required training and mentorship interventions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentors (CSIR partners)</td>
<td>Development plan</td>
</tr>
<tr>
<td>Phase 2:</td>
<td>Selection of contractors and local service providers Matching of contractors to projects. The project coordinator (CSIR) will ensure transfer of skills and knowledge to the local coordinator for the continuity of the project. Sixty emerging contractors will be selected, assessed and graded to determine key development needs (areas for improvement). Local service providers will be selected for training and involvement in the project with the aim of transferring skills that are necessary to sustain the project.</td>
<td>Mentors (CSIR Partners)</td>
<td>Training courses and programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project manager</td>
<td>Mentorship programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implementing agents (govt departments)</td>
<td>Skills transfer plan to local service providers</td>
</tr>
<tr>
<td>Phase 3:</td>
<td>Identification and alignment of interventions required to develop the necessary capacity for contractors, including appropriate training courses and mentorship.</td>
<td>Local coordinator</td>
<td>Needs analysis report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Training provider</td>
<td>Required training and mentorship interventions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentors (CSIR partners)</td>
<td>Development plan</td>
</tr>
<tr>
<td>Phase 4:</td>
<td>Accredited training service provider will conduct a training workshop with contractors giving particular attention to identified improvement areas. After covering theoretical training modules, mentors will provide practical onsite advice and guidance.</td>
<td>Project manager</td>
<td>Training courses and programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local coordinator/client</td>
<td>Mentorship programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Training provider</td>
<td>Skills transfer plan to local service providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mentors (CSIR Partners)</td>
<td></td>
</tr>
</tbody>
</table>

**Mentors (CSIR Partners)**

**Project manager**

**Implementing agents (govt departments)**

**Database of selected local service providers**

**Assessment frameworks for contractors and service providers**

**Database of selected local service providers**

**Assessment frameworks for contractors and service providers**
Train and monitor local mentors.

- Training providers and mentors work in close cooperation so that theory and practical outcomes are complementary.
- Mentors and individual contractors will formalise their professional relationship by signing a performance agreement.
- The project manager (CSIR) will continually coordinate all training and mentorship activities, and monitor overall performance to determine progress. Progress reports will be given to the client on a regular basis.

### Phase 5:

**Final assessment of training and mentorship**

- Assessment of competency will be conducted to test the learning.
- CETA will be involved in the assessment to award successful contractors at an appropriate NQF level.
- Regrading of contractors will be conducted, where appropriate. Re-grading is important as it ensures ongoing assessment of the

<table>
<thead>
<tr>
<th>Partners)</th>
<th>Local mentors</th>
<th>Programme monitoring and control framework (Monthly reports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partners)</td>
<td>Local mentors</td>
<td>Programme monitoring and control framework (Monthly reports)</td>
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<tr>
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</tr>
<tr>
<td>Partners)</td>
<td>Local mentors</td>
<td>Programme monitoring and control framework (Monthly reports)</td>
</tr>
</tbody>
</table>

- Independent assessor
- CETA
- CIDB

- Independent competency assessment report
contractor’s capacity and contracting risk, hence the contract amount for which the contractor can tender.

**Phase 6:**
Final handover, compilation and presentation of a final report

- The final report will address the impact of training and mentorship, promotion of contractors to higher grades, growth of contractors and the extent to which identified improvement areas have been addressed.
- Final presentation of the report will be made to the ECDC and the parties deemed appropriate by the ECDC.

| Project manager | Local coordinator/client | Handover of all appropriate material. Final progress report. |

**Table 2: Project phasing**

According to Dlungwana et al (2004:12), a contractor development model is a best practice tool, aimed at assisting implementing agents to facilitate implementation of an emerging contractor development programme. The model should help to focus on the quality and effectiveness of development programmes by ensuring a more effective and comprehensive development of contractors’ capability and capacity. Central to the model will be the implementation of a business plan with clear contractor development outcomes.

Through an integrated model, implementing agents will be in a position to apply...
initiatives in a manner that is responsive to the development imperatives of individual enterprises. The model endeavours to strike a balance between facilitating an enabling environment for emerging construction firms and coordinating enabling environment initiatives that respond effectively to the needs of firms.

5.8.5 Works programme and time frames

<table>
<thead>
<tr>
<th>Phase</th>
<th>1st quarter</th>
<th>2nd quarter</th>
<th>3rd quarter</th>
<th>4th quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M1 M2 M3 M4 M5 M6</td>
<td>M7 M8 M9 M10 M11 M12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Project planning and setting up office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Selection of emerging contractors, local service providers and a local coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Development needs analysis and identification of appropriate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3: Planned Work Programme

Table 3 illustrates the planned programme and time frames for a 12 month model.

5.8.6 Project Budget

The cost break-down for phases as described in section 4.5, are set out below:

<table>
<thead>
<tr>
<th>COST ITEM</th>
<th>AMOUNT (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manpower</td>
<td>2,299,500.00</td>
</tr>
<tr>
<td>Subsistence, travelling and administration</td>
<td>334,775.00</td>
</tr>
<tr>
<td>TOTAL (excluding value-added tax)</td>
<td>2,634,275.00</td>
</tr>
<tr>
<td>Value-added tax</td>
<td>368,798.50</td>
</tr>
<tr>
<td>TOTAL (including value-added tax)</td>
<td>3,003,073.50</td>
</tr>
</tbody>
</table>
Table 4: Model cost breakdown

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>RATE</th>
<th>AMOUNT (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CETA accredited service provider</td>
<td>R2750/day</td>
<td>1,244,200.00</td>
</tr>
<tr>
<td>Mentor Trainers</td>
<td>R600/hr</td>
<td>534,200.00</td>
</tr>
<tr>
<td>CSIR project manager</td>
<td>R500/hr</td>
<td>521,100.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>2,299,500.00</strong></td>
</tr>
</tbody>
</table>

Table 5: Model manpower cost breakdown

**Budget exclusions**

The following items have been excluded from the budget and are to be arranged by the clients of the model:

- mentorship costs for mentoring contractors on sites on a weekly basis. Only the “train the mentor programme” costs have been budgeted;
- bookkeeping services to contractors to be provided by an accounting officer;
- procurement of the help desk infrastructure (office, hardware and software) and the running costs over the 12-month period;
- hiring of training venues and refreshments during training;
• costs incurred by emerging contractors during training, such as travelling to training venues and meals- however assessment, and certification costs are included in the budget; and
• contractor registration on the CIDB’s Register of Contractors.

5.9 Model deliverables

The main deliverables have been identified in section 5.8.4. The following is a summary of the key deliverables:
• monthly progress and quality assurance reports;
• training workshops on contractor management training course;
• capacity building mentorship sessions conducted with individual contractor on a weekly basis to empower them to develop management and on-site administration skills;
• training sessions and consultations to transfer knowledge and skills to the local officials and service providers;
• independent assessment reports; and
• final progress report on the entire programme.

5.10 Conclusion

The construction sector in the Eastern Cape is in dire need of a skilled construction workforce. There is an enormous task awaiting the construction industry (building & civil) to cater for the shortfall in housing, accommodation and educational facilities for all target groups. In the light of this need the ECDC’s Enterprise Development Services unit has developed the Emerging Contractor Development and Support Program.
The purpose of the programme is to assist emerging contractors in developing a capability to deliver infrastructure projects effectively and efficiently, it also aims to help developed contractors, with sustainable construction operations, to create further employment opportunities. While the programme retains flexibility in terms of addressing the development areas that are unique to individual contractors, it will also provide training in the areas of administration, resource management, marketing and tendering to all selected contractors.

CHAPTER 6: QUALITY ASSURANCE FOR AN INTEGRATED MODEL

6.1 Introduction

To quality assure the integrated model, emerging contractors and mentors will be assessed in terms of knowledge gained and knowledge transferred. Emerging contractors will be assessed monthly and mentors every second month. Assessment tools have been developed to monitor the emerging contractors growth path and to assess mentors in terms of their ability to transfer skills to emerging contractors.

The assessment tools will provide feedback on all the role-players in the programme as contained in the various annexures referred to in this chapter. The project team will be responsible for the daily quality assurance of the integrated model.

See Annexure 2: Project team quality assurance responsibilities

6.2 Emerging contractor assessment tool

The emerging contractor assessment tool has been developed to assess the emerging contractor’s construction industry experience, management experience, level of development and access to skilled resources.
See annexure 3: Emerging contractor assessment tool

6.3 Construction mentor assessment tool

Construction mentors need to be assessed in order to determine how capable they are in transferring skills to emerging contractors, have the necessary experience to mentor contractors and have the necessary communication skills. The mentor assessment tool has been developed as a interview where mentors are questioned and scored, based on their response to questions. The score is transferred to a matrix grid the mentor's growth pattern, as depicted by the matrix grid, then determines whether there is correlation between the mentor's development and the contractors development. Mentors will also undergo training to improve their skills.

See annexure 4: Construction mentor schedule of knowledge areas

See annexure 5: Construction mentor interview assessment grid

See annexure 6: Construction mentor training program

6.4 Overall assessment

All the assessment tools are integrated. With the appointment of role-players and the development of assessment tools, the principle of cross-assessment has been incorporated to ensure a “team” approach with measurable outcomes. This will assist the project team to drive the programme with continuous improvement objectives.

6.5 Roles and responsibilities of the construction mentor

The roles and responsibilities of the mentor have been drawn up in contractual format by ECDC. This provides a benchmark against which mentors can assessed.

The roles and responsibilities of ECDC appointed mentors are to:

- Meet with the contractor, analyse his tendered rates and the tender document, discuss the project, provide general advice, identify pitfalls and confirm the items in a report to the contractor and the ECDC.
• Report to ECDC within seven (7) days of the effective date regarding the ability of the contractor to complete the contract within the allocated time and factors, which may affect the risk exposure of ECDC regarding the contract.

• Provide advice to the contractor in terms of the level of administrative, financial, technical and managerial skills required by the contractor to complete the project.

• Assist/mentor the contractor in drawing up a construction programme, which includes the relevant milestones and a cash flow programme.

• Teach the contractor the importance of regularly updating the abovementioned programmes and the executing of construction work according to the programme.

• Stress the importance to the contractor of setting out the works correctly, either by doing it himself or by outsourcing the function.

• Give advice to the contractor regarding the ordering of material, certifying the material on receipt and ensuring this correlates with invoices.

• Comment to ECDC on material prices paid by the contractor.

• Attend site meetings and visit the site monthly.

• Provide a monthly report to ECDC, which includes on-site progress, quality of work, attitudes and opinions of the client and the principal agent, shortcomings in terms of technical, administrative and managerial progress and recommendations as to how these skills are addressed.
The mentor is expected to, at all times, provide work of the highest professional standards in order to reduce the risk of ECDC, wherever possible. The mentor cannot however, be held responsible for any losses incurred by ECDC or the contractor as a result of advice and mentorship provided by the mentor, unless it can be proven that the consultant mentor was negligent in the execution of his tasks.

6.6 Conclusion

Quality assurance is a key component of the integrated model. Monitoring the progress of the emerging contractor, the construction mentor and other role-players will allow ECDC to determine the success of the integrated model and whether the model has achieved the deliverables as stated in chapter 5.

Previous training programmes have not contained a quality assurance component. Consequently they lacked the capacity to determine their effectiveness. In contrast the integrated model has been designed to follow the emerging contractors development. It measures the effectiveness of the programme in terms of developing emerging contractors.
PART 4  CONCLUSION

CHAPTER 7:  CONCLUSION AND RECOMMENDATIONS

7.1  Introduction

The main problem for this research is as follows:

- The establishment of an integrated skills development model for the creation of sustainable emerging contractors supported by the ECDC.

Out of this arose the following sub problems that have been addressed in order to develop the integrated model:

- The development of an effective model to improve the management skills of the emerging contractors; and

- The creation of quality assurance mechanisms to enhance the elements of the development model in order to satisfy ECDC objectives.

Development models, aimed at emerging contractors, need to be developed with the emerging contractor in mind. It is therefore important that the custodians of a model such as the integrated model, involve the emerging contractors so that the model performs according to their needs.

ECDC conducted workshops throughout the Eastern Cape province. Contractors were invited to share their views so that a model would be designed around the needs and requirements of the emerging contractors so as to improve the efficiency of the model and to ensure the deliverables set can be obtained. The integrated model was therefore designed with the input of contractors. The feedback received from the contractors through the workshops has alerted the project team to potential bottlenecks that the integrated model may experience and which would result in the deliverables being skewed.

7.2  Findings of the study

7.2.1  Emerging contractors and the ECDC funding programme
The following issues were raised by the emerging contractors in the workshops these will be addressed before implementation of the integrated model:

- Emerging contractors are not fully exposed to the operating procedures of the ECDC. This can be attributed to ECDC not informing contractors thoroughly or that contractors do not understand the procedures explained to them.

- Most problems concerned the financing component. This is as a result of contractors not understanding ECDC processes.

- Most emerging contractors view the construction mentor as a “policeman or watchdog”, safe guarding the interest of ECDC.

- The ECDC developed financing programme which acts as the financing wing of the ECDC payment processes are considered slow and is causing disruptions in cash flow and material ordering.

7.2.2 Project management team

Chapter 2 addressed the need for effective project management for the model. Discussions by the appointed project team found:

- In order to effectively implement the integrated model, the programme must have a “champion”, a person who will drive and promote the programme. The project team will provide the executive capacity for planning, coordination, monitoring and evaluation of initiatives and policy targets in a manner that ensures responsiveness to changing circumstances. The champion will be the link between the project team and all construction stakeholders.
• Previous development models failed to address the need for effective project management and had a project manager rather than the proposed project team sourced for the integrated model.

7.2.3 Black Economic Empowerment

Chapter 3 reviewed the current status of BEE in the construction industry in an attempt to address the reasons for BEE in construction and the impediments to greater progress of BEE in the industry.

The research indicated:

• The model is a BEE tool designed to promote the expansion and growth of emerging contractors;
• That fronting in the construction industry still exists; and
• Black emerging contractors are being exploited by established contractors who use their Historically Disadvantaged Individuals (HDI) status to win lucrative government tenders.

7.2.4 Emerging contractor and skills development

Chapter 4 reviewed the current interventions in place to develop the skills of black contractors in South Africa. Government initiatives such as the Expanded Public Works Programme, CIDB and CETA are attempts by government to address development in the construction industry.

Research into emerging contractors and skills development was conducted in order to understand the extent of training and mentorship required. Research indicated:

• Emerging contractors do not understand construction contract documents or the technical issues related to the relevant conditions of contract documents on most government projects.
• Contractors with no technical skills or expertise in construction are being awarded contracts via the tender board. This results in problem contracts from the onset.

• Emerging contractors, who do not have the necessary technical skills, approach consulting quantity surveyors to price their bill of quantities (BOQ) on their behalf, at costs ranging from R 500.00 to R 2000.00 per document.

• Client approved consultants at times do not assist the contractors, furthermore mentors expose their contractor’s inefficiencies. A monitoring system for consultants should be implemented.

7.2.5 Quality assurance for an integrated model

Chapter 6 addressed the quality assurance mechanisms designed for the integrated model. The project team will be responsible for the ongoing quality assurance assessments of the model. The quality assurance of the model includes the continuous assessment of emerging contractors and construction mentors. This was derived from the need to understand the effectiveness of the model and the failure of previous training programmes. This failure was attributed to the implementing agent’s lack of understanding of the effectiveness of the programmes.

7.3 Testing of the hypotheses

Hypothesis one:

Previous research has failed to identify an integrated approach for the development of emerging contractors as well as quality assurance for the model.
Testing of hypothesis one:
Various training programs as reviewed in chapter 4 neglected to recognise the importance of adopting an integrated approach, this has resulted in lack of or no quality control measures, unmeasured outcomes and no valid assessments of contractors and mentors. The integrated model developed addresses this failure as identified in other programmes by having a complete quality assurance component which allows the project team to assess all aspects of the model and the progress made by the participants of the programme.

Hypothesis two:
There is sufficient information available to develop an integrated model.

Testing of hypothesis two:
There is sufficient information available, information has been sourced by the success and failure of previous training programmes, by conducting workshops with emerging contractors, by observing the behaviour and problems experienced by emerging contractors financed by the ECDC and by studying the goals and objectives of construction stakeholders such as CETA, CIDB and DPW.

Hypothesis three:
The impact of the integrated model for the emerging construction sector will require additional research beyond the scope of this dissertation which focuses only on the development of an integrated model.

Testing of hypothesis three:
Research into the outcomes of the integrated model developed will require additional research once the implementation phase has been achieved, the programme will run over a period of twelve months after which a full outcomes assessment will be achievable.

7.4 Proposed recommendations
The following are recommendations based on information gathered during the development of the model:

7.4.1 The testing of the hypotheses indicates that an integrated model supported by quality assurance interventions and that the development of emerging contractors can be achieved by such a model as referred to in the dissertation.

7.4.2 An emerging contractor forum needs to be developed where all issues relating to the emerging sector can be addressed and methods of improvement presented and discussed. This is critical in a province where most emerging contractors are failing to deliver on essential projects and causing government to fail in its attempt to promote BEE in the construction industry.

7.4.3 The integrated model is based on the assumption that the emerging contractors trained on the programme have acquired contracts therefore it is imperative that construction stakeholders such as DPW, CETA and DOL are informed and participate in the implementation of the model. ECDC regard the programme as a provincial programme for the benefit of all construction stakeholders.

7.4.4 The integrated model developed and quality assured is generic in nature and therefore applicable to and usable by all stakeholders in the construction industry.

7.4.5 The implementation of the integrated model will produce comprehensive quantitative data which may be used beneficially for further research and development.

7.5 Conclusion
ECDC offers services to the emerging contractor which affords them opportunities to develop within the construction industry. As a financier, ECDC is not in a position to carry this task out alone. The full support of client bodies, government, suppliers, consultants and all construction stakeholders is required to ensure that the purpose of the programmes, addressed in the workshops, are effective. Hence, the development of an integrated model to allow for the participation of all construction stakeholders. The model has been endorsed by CETA who have contributed R 4.65 million towards the mentorship component of the model.

For too long, the construction industry has been segregated. In order to be effective an integrative approach is needed where all resources and skills are brought together, where all stakeholders have a common goal to empower emerging contractors, contribute to the development of construction entrepreneurs and at the same time deliver on infrastructure development.

ECDC is willing to be part of this process and this is the corporation’s reason for incorporating an integrated model which allows the ECDC to understand the needs and thoughts of emerging contractors and to establish how the road ahead needs to be paved so that construction contractors are developed to contribute in a positive manner towards the economy in the Eastern Cape province.


ANNEXURES

Annexure 1: Mentor accreditation examination paper
Annexure 2: Project team quality assurance responsibilities
Annexure 3: Emerging contractor assessment tool
Annexure 4: Construction mentor schedule of knowledge areas
Annexure 5: Construction mentor interview assessment grid
Annexure 6: Construction mentor training program