nelson mandela bay
PORT ELIZABETH | UITENHAGE | DESPATCH

Final Report

NELSON MANDELA BAY

HUMAN RESOURCES DEVELOMENT STRATEGY

(PHASE 2)

30 August 2007

DOCUMENT INFORMATION SHEET

Title of Report	**:**	**Nelson Mandela Bay: Human Resource Development Strategy**
Type of Report	**:**	Final Report
Prepared by	**:**	Nwabisa Vokwana & Duncan Grenfell
Organisation	**:**	Coega Development Corporation **Business Unit: Coega Human Capital Solutions**
Date of Issue	**:**	30 August 2007

PREPARED BY

COEGA
DEVELOPMENT CORPORATION

TABLE OF CONTENTS

APPENDIX A-C

ACCRONYMS

ABET	Adult Basic Education and Training
AIDC	Automobile Industry Development Centre
ASGISA	Accelerated and Shared Growth Initiative for South Africa
CDC	Coega Development Corporation
CETA	Construction SETA
CHIETA	Chemical SETA
Coega HCS	Coega HUMAN CAPITAL SOLUTIONS
DoL	Department of Labour
DST	Department of Science and Technology
ECP	Eastern Cape Province
EDTA	Economic Development Tourism & Agriculture
ELCONOP3	Electrical Construction Operations 3
EPWP	Extended Public Works Programme
ESETA	Energy SETA
ETC	Eastcape Training Centre
FET College	Further Education and Training College
FIFA	Fédération Internationale de Football Association
FOODBEV	Food and Beverage Sector Education and Training Authority
FTE	Full Time Equivalent
GP	Gauteng Province
HCFIS	Human Capital Forecasting Information Management System
HE	Higher Education
HEMIS	Higher Education Management Information System
HRD	Human Resource Development
HSRC	Human Science Research Council
ICT	Information and Communication Technology
JIPSA	Joint Initiative on Priority Skills Acquisition
MBA	Master Builders Association
MBDA	Mandela Bay Development Agency
MEI&P	Mechanical, electrical, instrumentation and piping
MERSETA	Manufacturing, Engineering and Related Services SETA
MIG	Municipal Infrastructure Grant
NBI	National Business Initiative
NMB	Nelson Mandela Bay

NMBIC	Nelson Mandela Bay Investment Council
NMBICC	Nelson Mandela Bay International Convention Centre
NMMM	Nelson Mandela Metropolitan Municipality
NMMU	Nelson Mandela Metropolitan University
NQF	National Qualifications Framework
NSA	National Skills Authority
NSDS	National Skills Development Strategy
OEMs	Original Equipment Manufacturers
OFO	Organising Framework for Occupations
PE College	Port Elizabeth College (FET)
PIG	Provincial Infrastructure Grant
RIDA	Rapid Infrastructure Development Agency
RU	Rhodes University
SAQA	South African Qualification Authority
SDF	Skills Development Facilitator
SETA	Sector Education and Training Authority
SMME	Small Medium and Micro Enterprise
SNF	Shutdown Network Forum
SOE	State Owned Enterprise
SSP	Sector Skills Plan
TETA	Transport Education and Training Authority
UCT	University of Cape Town
UDDI	Uitenhage Despatch Development Initiative
WSP	Workplace Skills Plan
WSU	Walter Sisulu University

SECTION OVERVIEW

Section 1 is the introduction and discussion of the objectives of the human resource development strategy.

Section 2 discusses the research methodology with a focus on research areas and research constraints.

Section 3 gives a general socio-economic and education overview of the Eastern Cape Province and the Nelson Mandela Bay.

Section 4 gives a brief overview of the education and training institutions and provides a detailed account of the state of the education and training capacity in the Nelson Mandela Metro. A detailed discussion of the capacity of FET colleges is provided.

Whilst the Port Elizabeth College is the biggest government funded FET College, the report is silent on the capacity of the college. Numerous attempts, visits, emails, telephone calls to obtain factual information about the college proved fruitless.

Section 5 is an overview of the skills situation in the Nelson Mandela Metro. The discussion on the Metro is prefaced by a discussion on the skills situation at national level.

Section 6 provides a detailed discussion on the human capital initiatives underpinning human capital development within the Metro. The section concludes with a discussion on skills funding sources and funding constraints.

Section 7 outlines the recommendations that could form basis for implementing an HRD strategy for the metro.

Section 8 is the conclusion.

1 INTRODUCTION

The Nelson Mandela Metro Municipality, through its Trade & Investment Economic Development, Tourism & Agriculture directorate commissioned the Coega Development Corporation (CDC) to undertake a study that would result in the drafting of the NMB's human resource development strategy and plan. The objective of the HR Development Strategy is to foster the process of building the region's intellectual capacity and understand the skills base of the region; influence and improve international confidence and investor perceptions of the NMB economy; improve productivity; reduce unemployment and increase the number of SMMEs.

The HRD strategy proposed has taken a holistic approach by analysing a range of factors that impact on human resource development. In this regard the report details the socio-economic situation of the Nelson Mandela Bay; provides information on some of the key learnerships, apprenticeships and skills programme taking place in the region; gives an informative view of the students enrolled and graduating from the NMB based education and training institutions with the manufacturing, construction, chemical and energy sectors; provides a brief over view on the private training provider capacity, (that is) facilities and human resources, as well as a detailed matrix of the types of skills, the trades and skill levels required for mega projects due to start in the NMB from 2007-2020. There is also a detailed analysis of the various skills development initiatives and partnerships established by various stakeholders to address the human resource shortages within the NMB.

1.1 OBJECTIVES OF THE NELSON MANDELA BAY HRD STRATEGY

The Nelson Mandela Metropole (previously Port Elizabeth, Uitenhage and Despatch municipalities) has a population of about 1.4-million people, 52% of which are female. Port Elizabeth is also home to some of the largest automotive and original equipment manufacturers (OEM's) in the country. The Nelson Mandela Metropolitan Municipality has experienced economic growth as well as an increase in the number of people seeking employment.

The HRD strategy will only focus on the manufacturing, construction, chemicals and energy sectors. These sectors have been identified as the key strategic economic sectors for the region.

The objectives of the HRD strategy will be:

- To make recommendations on the best approach and interventions that the Municipality can undertake to create a pool of highly competent skills, at all skill levels.
- To ensure the creation of sustainable and innovative partnerships, between some of the key stakeholders.
- To ensure the support and funding of key human resource development initiatives currently in existence in the NMB region.
- To ensure the integral participation of local business in the skills development initiatives.
- To ensure the availability, accessibility, support and improvement to engineering infrastructure and facilities.
- To ensure the nurturing of training provider capacity within these sectors.
- To consolidate and coordinate Grade 10-12 Maths and Science initiatives.
- To ensure the capacitation of Technical Schools and their support by private business and local communities
- To establish an HRD Role player structure to ensure the implementation of the future HRD Plan.
- To build Nelson Mandela Bay's international image and reputation as a leader in human resource development within the broad field of Science, Engineering and Technology.

The objectives outlined above recognise that the municipality must play a central and complementary role in providing incentives for pursuing human resource development. The objectives also recognise the national and provincial imperatives of utilising human capital as a competitive advantage in attracting foreign direct investments.

1.2 WHAT INFORMS THE NMB HRD STRATEGY

- Interventions that will ensure the development of human resources across the manufacturing, construction, energy and chemical sectors are able to

respond to current and future mega projects and upcoming investments of the Nelson Mandela Bay.

- Human capital development initiatives that exist in the Nelson Mandela Bay region
- Education and Training Institutions able to respond to skills training as well as development of a well equipped human resources.
- Develop and manage a central database that will enable a HRD Forecasting for the Nelson Mandela Bay
- Information and marketing initiatives by the municipality and key role players within these sectors for the promotion and attainment of a consolidated and integrated HRD programme.

2 RESEARCH METHODOLOGY

In compiling the document, desktop and field research was undertaken in order to respond to key research items as outlined below. Emails, telephonic and face to face interviews were also conducted with a range of stakeholders.

In addition to the interviews, the team carried out site visits to inspect the training facilities used at the East Cape Midlands College, Eastcape Training Centre and Port Elizabeth College (Russell Road) and Ilitsha Holdings (see appendix 1).

Other sources for information were sector Work Place Skills Plans; organisational websites and documentation, relevant databases such as the Department of Labour unemployed database, Nelson Mandela Metropolitan University databases, research reports, etc. Where possible the research team has attempted to ensure that all research data is relevant and up-to-date. Reference to sources shall be reflected in footnotes.

2.1 Goals of the research process

The primary goal of the research is to draft the NMB HRD Strategy through conducting analysis that will include:

1. Conducting a skills audit in the NMB to determine the availability of skills as identified in the short term skills matrix developed under Phase 1 of the NMB HR Development Plan.
2. Conducting a gap analysis between the demand for skills and skills availability in the region.
3. Analysing of the education and training institutional capacity in the NMB to meet training demands.
4. Reporting on the state of facilities in education and training institutions, used to meet skills development requirements.
5. Outlining current NMB initiatives being undertaken in the region aimed at addressing the skills shortages.
6. Identifying funding opportunities to address skills development initiatives

2.2 Research approach

The approach adopted is outlined for each item as follows:

Research Item (1 & 2):

Conduct a skills audit and a skills gap analysis in the NMB to determine the availability or non-availability of skills as identified in the short term skills matrix developed under Phase 1 of the NMB HR Development Plan.

In undertaking the skills audit and skills gap analysis the research team looked at the NMB projects planned for the next five years, inclusive of the Vision 2020 projects of the NMBM *(reference given to the report conducted for the NMB by the LBMS[1])*; projected investment pipeline of projects for Coega IDZ and the 2004 Motherwell Skills Audit undertaken by the former University of Port Elizabeth. Where data is available the team looked at the local private sector future investments. However the latter has proved to be particularly difficult as private companies consider such information as confidential in nature.

To enable a full understanding of the skills available in the NMB region the team interrogated information from the local bargaining councils of the different sectors (construction, manufacturing, chemical, metals and related); the Department of Labour's unemployment database, CDC HCS database and research conducted by NMMU.

The skills development legislation requires all companies to provide information on their human resource development plans on an annual basis. One of the objectives of such an excise is for the companies to report to their relevant SETA on the current status of their workforce. The relevant SETAs for this project are MERSETA, CETA and CHIETA.

Detail will be reported as national, regional (Eastern Cape) and local (bargaining councils) information. In addition, the report will include information from professional councils, whose key functions is the registration of personnel against particular unit standards. The registers provide an indication of

[1] Dated June 2006

individuals entering the professions each year. The most relevant profession for this study is the Engineering Council of South Africa (ECSA). The report outlines all the personnel registered with the council.

The discussion of this item is contextualised in a discussion of the demographic profile of the population residing in the NMB. The research team also consulted HSRC research conducted in the Eastern Cape Province, 2005 Household Survey, 2006 Labour Force Survey and Census statistics of persons residing in the NMB.

Research Item (3 & 4):-

Conduct an analysis of the education and training institutional capacity that exists in the NMB to meet the demands identified in Phase 1 of the NMB HR Development Plan as well as report on the state of facilities used to meet skills development requirements and training.

Higher Education and Further Education and Training institutions play a critical role in ensuring that training and development appropriate and required human resource capacity in any context. The recent restructuring in both the further education and training and higher education sector has presented institution with both opportunities and challenges. For instance, all newly merged or incorporated education institutions are required to provide the national Department of Education institutional operating plans (IOP's). An IOP must stipulate an institution's change scenarios that will enable an institution to plot out the anticipated financial outcomes of pursuing particular strategies or options and thereby assist them in making a "best case" choice. Each change scenario must reflect operating income and expenditure estimates and include: implications for teaching, learning and research activities, as well as support services; proposed changes to institutional infrastructure, property, plant and equipment and the means for financing each project.

The NMB has also been affected by the recent changes in the education landscape. The FET sector saw the creation of two mega public colleges, the Port Elizabeth Public College and the Eastcape Midlands Public College. Relevant information was requested from them. The Nelson Mandela Metropole University is a new university made up of the former Port Elizabeth Technikon

and Universities of Port Elizabeth and Vista (PE Campus). The research team has been given access to the NMMU's IOP document and this will assist in understanding the intended strategic direction of the university and how as such it such relates to the human resource development needs of the NMB region. The NMMU has also given us access to their current figures in different areas of specialisation within which students are enrolled and graduate. This information will be complemented by information received the national Department of Education.

A spreadsheet on evaluating the training facilities was compiled as a basis for the site visits and collection of data on the status of engineering facilities. The continuous upgrading and maintenance of facilities in education and training institutions is critical in meeting the skills development requirements of the region. Thus information on the current structural resources used for the implementation of human resource training in the NMB will be outlined.

Education institutions play a pivotal role in providing local business and foreign investors with the requisite skills. The academic and research capacity of higher education institutions in South Africa are playing a key role in ensuring the resources are in place. Research and development capacity and specialists' skills are located within higher education institutions. This report shall outline the capacity of the NMB based education institutions, in particular the NMMU, PE Public College, Eastcape Midlands Public College as well as the capacity of private education providers located in the NMB. Thus the team developed a portfolio of current and planned specialist academic and research programmes that are offered by education institutions in the region.

Research Item (5 & 6):-

Outline current initiatives aimed at addressing the skills shortages identified in the HR Development Strategy and Plan and identify funding opportunities to address skills development initiatives.

A number of initiatives have been undertaken by government and quasi-government organisations to address the shortages of skills in the South African economy. These initiatives have recently been taken to a higher level through the introduction of the of the ASGISA and JIPSA government initiatives. Professional

bodies also play a key role in addressing skills shortages. For the purposes of this research our focus is on the ECSA initiatives. The Sector Education Training Authorities have continued to play a crucial role in ensuring skills development. For this report the research team has only outlined initiatives by MERSETA, CHIETA, ESETA and CETA.

Within the NBM area, there are several initiatives aimed at ensuring the development of human resource capacity in the region. These are outlined in detail.

Research item 7:-

Make recommendations on the key strategic interventions needed for to ensue a functional regional co-ordinating structure for human capital development .

The NMB has in place an Economic Development Tourism and Agriculture Unit, which amongst other things is tasked with ensuring the development and implementation of a viable human resource development strategy for the metro. As part of this mandate the EDTA unit has a human resource reference group. The composition as well as the terms of reference of the HRD Reference Group needs to be revised so that they effectively articulate as well as align to the provincial and national HRD strategies. The research team interacted with key stakeholders on how the composition of a revised HRD structure. The report makes suggestion on the need to create sector specific sub-structure.

Research Constraints

A major challenge has been time constraints. Obtaining NMB specific information on a range of issues has proved most difficult. This difficulty is influenced by the lack of survey data conducted for the NMB. The research has also been hampered by the development of Sector Skills Plans (SSP) by the various SETAs. Most SSP will be available in public domain from late April and the first week of May.

After numerous attempts the research team was not able to obtain information from the Port Elizabeth Public College. Various attempts were made to obtain

basic information about course offerings, numbers of students and quality of facilities for the engineering department, yet these attempts were fruitless. This has compromised this report as it does not give the full picture of the FET Sector in the NMB region.

3 OVERVIEW: EASTERN CAPE & NMB CONTEXT

3.1 THE DEMOGRAPHIC PROFILE

The Eastern Cape lies on the south-eastern seaboard of South Africa and is the country's second largest province. Its population is just over 6, 9 million, about 15% share of the South African population. The geographical spread of the region is close to 168 966 square kilometres, which is about 41 people per square kilometres. Whilst one can safely say that all people with basic education have some command of the English language, isiXhosa is the first language spoken by approximately 83.4% of the EC population, Afrikaans is a first language to about 9.3% and English is a first language to about 3.6% of the population. The capital town of the province is Bhisho, located about 300 kilometres South East of Port Elizabeth with Port Elizabeth being the major city. The Nelson Mandela Metropole (previously Port Elizabeth, Despatch and Uitenhage municipalities) has a population of about 1.4-million people, 52% of which are female. Port Elizabeth is also home to some of the largest automotive and original equipment manufacturers (OEM) in the country.

Gender and Race Population breakdown[2]

	African		Coloured		Indian / Asian		White		TOTAL	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
SA	18197	18 989	2049	2 097	581	573	2228	2 144	23079	23 825
EC	2896	3 276	233	257	0	0	183	181	3319	3 721

[3]Population spread in the Nelson Mandela Bay[4]

NELSON MANDELA BAY DEMOGRAPHIC SPREAD				
Population			Employment Status (15-65 years)	
	African	592355	Employed	226617
	Coloured	236160	Unemployed	196112
	Asian	11237	NEA	271544

[2] Data source: Household Survey 2005
[3] Data source: Census 2001. However current population estimates stand at 1.4 million

	White	166026	TOTAL	694273
	TOTAL	1005779		
Gender	Male	479831		
	Female	525947		

Gender: Population of working age (15-65 years)[5]

	FEMALE				
		Not Economically. Active	Economically active		
	TOTAL		Total	Workers	Unemployment rate
		N(1000)	N (1 000)		
SA	15 328	8 246	7 082	4 756	32.8
EC	2 238	1 367	870	544	37.5
	MALE				
		Not economically Active	Economically Active		
	TOTAL		Total	Workers	Unemployment rate
		N (1000)	N (1 000)		
SA	14 318	5 355	8 963	6 876	23.3
EC	1 834	919	915	614	32.8

3.2 *THE SOCIO-ECONOMIC STATUS OF THE EASTERN CAPE*

In order to set the context for the analysis of labour market trends in the Eastern Cape, below is an analysis of trends in the provincial economy in the 1996 – 2002 periods. Given that economic growth and its character determine the demand for labour, this is an essential causal factor that explains trends in employment and unemployment.

3.2.1 Overview of the Rural Economy: Agricultural Production, Livelihoods and Employment:

In terms of its relative position within the national economy, the Eastern Cape is home to 15% of South Africa's population, but accounts for only 7% of its GDP. Consequently, in terms of output per capita, it is South Africa's second poorest province after Limpopo, with per capita income well below the national average and less than a quarter of that of Gauteng and the Western Cape.

[5] Source: SA General Household Survey 2005

During the 1996 – 2002 periods, the Eastern Cape's annual average growth rate of 1.9% was well below the national average of 2.5%, and the second lowest of South Africa's nine provinces. This is an indication that the province has been falling behind the more prosperous provinces in the post-apartheid period. Per capita output has, however, grown over the 1996 – 2002 period, due to economic growth outstripping population growth.

The structure of the Eastern Cape economy differs markedly from the national economy in two respects: the mining sector is much smaller and the tertiary sector considerably larger compared to other rural provinces such as Mpumalanga, Limpopo and Kwa-Zulu Natal. In addition, in the primary sector, agriculture is a larger contributor to output in the Eastern Cape than is the case for the national economy. As a result the tertiary sector, the financial and trade sub-sectors account for a relatively higher proportion of output than is the case for the national economy.

In terms of human development, the province has made progress during the 1996 – 2002 periods, as evidenced by an improvement in its human development index (a composite index of life expectancy, literacy and income) from 0.49 to 0.53. However, it remains the second lowest of South Africa's 9 provinces, after Limpopo.

3.2.2 Poverty and Inequality

The legacy of apartheid weighs heavily on the Eastern Cape, particularly because it incorporated two former homelands, Transkei and Ciskei. In 2002, the Eastern Cape had the highest level of poverty and inequality of South Africa's 9 provinces. Critically, between 1996 and 2002, the percentage of people in poverty in the Eastern Cape increased by a massive 14 percentage points, from 54% to 68%, far exceeding the growth in poverty at a national level.

Given that economic growth exceeded population growth in the 1996 – 2002 periods, it would be reasonable to expect some eradication of poverty. However, growing inequality has meant that the benefits of

economic growth have been unequally distributed, thereby contributing to a growing poverty rate. Indeed, with a Gini Coefficient (the most widely used summary statistic of income inequality) of 0.64 in 2002, the Eastern Cape had the highest level of inequality of South Africa's 9 provinces. While growing inequality has been a national trend in the post-apartheid era, it has grown faster in the Eastern Cape than nationally.

3.2.3 Structural Change and Sector Trends

The structure of the Eastern Cape economy differs from the national economy in two respects: the tertiary sector accounts for a higher proportion of output and the primary sector for a smaller proportion. This is primarily because there is almost no mining activity in the province. The tertiary sector has been growing the fastest over the 1996 – 2002 periods, followed by the secondary and primary sectors. In all cases growth has been significantly below that of the national economy.

Agriculture is the most important source of output in the primary sector, accounting for over two-thirds in 2002. Forestry accounts for just under one-third of primary output. In the secondary sector, manufacturing is dominant, accounting for 82.6% in 2002 and growing at an annual average rate of 1.6% in the 1996-2002 periods.

The *transport equipment* (i.e. automotives) sub-sector is both the largest contributor to the secondary sector, accounting for 26% of its output in 2002, and the fastest growing. Another sub-sector that plays an important role in the provincial economy is *fuel, petroleum, chemical and rubber products*, accounting for 14.6% of secondary output in 2002. The *food, beverages and tobacco products* industry accounts for 10.4% of the output of the secondary sector, but has been contracting at an average rate of –1.7% over the 1996-2002 period. Other important industries in the manufacturing sector are furniture, metal products, textiles, clothing and leather, wood and wood products and electrical machinery and apparatus. With the exception of clothing and textiles, these industries have all been growing during the 1996 – 2002 period.

The expansion of the tertiary sector in the Eastern Cape has been the most significant structural change in the provincial economy in the post-apartheid period. The *community services* sub-sector is dominant, accounting for 45.4% of output in 2002. This sector is dominated by services provided by government such as health and education and has been growing at a slow annual average rate of 0.4% during the 1996 – 2002 period. In the analysis of the Eastern Cape's 7 sub-regional economy's it is striking that in the district councils that were formerly homelands, community services account for as much as 50% of economic output.

The fastest growing sectors (by annual average growth rate in the 1996 – 2002 periods) are post and telecommunication (13.4%), activities auxiliary to financial intermediation (11.5%) and financial intermediation (7.8%). The fourth largest sector, retail trade and repairs of goods have been growing at an annual average rate of 3.1%, above the national average of 2.7%. Four sub-sectors have been declining, as measured by annual average growth rates in the 1996 – 2002 periods: water transport (-26.6%), hotels and restaurants (-1.6%), wholesale and commission trade (-0.9%) and sale and repair of motor vehicles (-0.4%). Apart from water transport, none of these sectors have contracted at the national level.

Broad structural change between 1990 and 2002 is such that all the sub-sectors within the primary and secondary sector have declined in terms of their contribution to the province's gross value added. In contrast, with the exception of trade, all the sub-sectors in the tertiary (or services) sector have expanded during this period. In relation to South Africa's other provinces, the Eastern Cape has a marked comparative advantage in the agriculture and community services sectors and a marginal advantage in manufacturing and trade, as measured by the location quotient.

From the perspective of sub-sectors the top performers have been agriculture and hunting in the primary sector, transport equipment, chemical and rubber products, metal products, machinery and household products and electrical machinery in the manufacturing sector and retail

trade, financial intermediation, services auxiliary to financial services, and post and telecommunication in the tertiary sector. Notably, with the exception of agriculture none of these sectors have been generating employment at any significant scale.

3.2.4 Trade Performance

The most dramatic structural change that the Eastern Cape economy has undergone in the post-1994 period is the shift from an inwardly focused autarkic economy to an open, export oriented economy. This shift is evidenced by booming exports. The growth in exports has been dramatic, peaking at 250% of their 1996 levels in 2001. Indeed, despite buoyant export growth in the national economy, the growth of exports in the Eastern Cape has by far outstripped national aggregates, making it the province with the fastest growing exports. In aggregate, imports grew by 20% between 1996 and 2002, and accounted for 8% of South Africa's imports.

In 2002, 96% of exports and 98% of imports were of manufactured goods. Agriculture accounted for 4% of exports and 2% of imports. The transport equipment sub-sector accounts for more than two-thirds of exports and imports and is the fastest growing export sector. Other significant and fast-growing sub-sectors are metal products, machinery and household appliances, furniture and textiles, clothing and leather goods.

3.2.5 The Spatial Distribution of Economic Activity in the Eastern Cape

The cause of high and growing rates of poverty and inequality in the Eastern Cape become evident when the population of its 7 sub-regions is compared to their contribution to provincial gross value added. While the Nelson Mandela metro is home to only 16% of the Eastern Cape's population, it accounts for 44% of its gross value added. In contrast, the Oliver Tambo DM, home to 26% of the province's population, accounted for a mere 10% of GVA in 2002. Per capita GVA is vastly unequal across the 7 sub-regions. The per capita income of Alfred Nzo, the poorest sub-region, is 12% of the richest sub-region, the Nelson Mandela Metro. As is

the case with economic activity, poverty is inequitably distributed across the province, with 82.4% of the poorest sub-region's population, the Alfred Nzo district council, living below the poverty line, while in the Nelson Mandela metro only 38.6% of the population are below the poverty line.

Growth has been vastly uneven among the 7 sub-regions. The Port Elizabeth Metro has grown spectacularly, with its annual average growth rate far exceeding the national average. The Western District Council has grown at a rate of 2.4% per annum, close to the national growth rate for the 1996 – 2002 periods. For the remaining DCs, growth has been well below the national average. In the case of the Ukhahlamba and Alfred Nzo DCs, average annual growth has been negative. Hence these economies have been contracting, partly as a consequence of deindustrialisation, as evidenced by a decline in the output of the secondary sector. This has contributed to the deepening poverty and inequality in the Eastern Cape. Critically, these sub-regions have fallen behind in terms of national and provincial growth in the post-apartheid period.

With regards economic structure, in the Nelson Mandela Metro and Amathole DC, the secondary and tertiary sectors are dominant and have underpinned the high growth rate of the former. In the four poorest sub-regions, the primary sector is an important contributor to GVA because of the role of agriculture. The services sector is the largest contributor to GVA largely because it is dominated by government services. The secondary sector is relatively small in these sub-regions and has been contracting in the 1996 – 2002 period, suggesting that the poorer sub-regions are undergoing a process of deindustrialisation.

The spectacular growth in exports emanating from the Eastern Cape is concentrated exclusively in the Nelson Mandela Metro and the Amathole DC, where the manufacturing sector is concentrated. Indeed, the Nelson Mandela Metro accounts for almost two-thirds of the Eastern Cape's imports and exports. With the exception of the 2% of exports accounted for by the Western DC, the remaining sub-regions are completely excluded from export-oriented growth trajectory of the province.

3.2.6 Nodal Developments

The following nodal developments are currently at various stages of implementation in the Eastern Cape:

- Fish River SDI
- Wild Coast SDI
- Coega IDZ
- East London IDZ

Given the vastly unequal distribution of economic activity and poverty across the Eastern Cape's 7 sub-regions, it is worth noting that only the Wild Coast SDI is located in the poorer sub-regions. The Fish River SDI, of which the Coega and East London IDZs comprise an integral part, is focused on the Nelson Mandela Metro and East London (as opposed to the Amathole DC). These nodal developments will be an important means of attracting investment, both foreign and domestic to the Eastern Cape. They also have the potential to set in motion a virtuous circle of growth and development if agglomerations develop around anchor investments.

The key to maximising the economic impact of nodal developments is to strengthen linkages between anchor projects and the provincial economy, in order to enhance employment multipliers and spread the benefits of economic growth. The development of such linkages requires policy interventions as it is naïve to assume at the outset that linkages will automatically develop between large new Greenfield investment projects and the local economy, particularly if the projects are located in an IDZ environment. At the same time, such linkages are critical if projects are to generate multipliers in the regional economy, thereby setting in motion a virtuous circle of economic development.

From the perspective of labour markets and employment, the impact of these nodal developments on unemployment will be marginal. In the context of a broad unemployment rate of 47.6% and 1.1 million unemployed people in 2002, the creation of an estimated 46,000 permanent jobs over the next 10 years is a proverbial drop in the ocean.

The employment opportunities associated with these nodal developments can, however, is vastly expanded if linkages with the provincial economy are forged and deepened over time.

3.2.7 Overview of the Rural Economy:

The analysis of the rural economy is essential to the strategic review of the Eastern Cape labour market as the majority of the Eastern Cape's population (63.5% in 2002, compared to a national average of 44.6%) reside in rural areas, where the unemployment rate, in terms of the broad definition, is highest and where the majority of the unemployed are located. While the broad agricultural sector accounted for a mere 6.8% of the provinces output in 2002, just over one-fifth of employment is in this sector.

A large number of rural households in the Eastern Cape still depend on the rural agricultural economy for various livelihood strategies, in a context where the agricultural sector makes a smaller contribution to total household income relative to other sectors. Indeed, the contribution of the rural agricultural sector to total household income has undergone a secular decline and there are no indications that this trend is set to change.

The Eastern Cape's rural economy comprises two major parts: a highly developed technology-intensive commercial agricultural sub sector and a small-scale underdeveloped subsistence agriculture sub sector. These two agricultural sub-sectors exist almost as two separate economies. The scale of farming in the two economies is highly unequal. There are approximately 10 million hectares in the hands of 6,500 white commercial farmers. This land is mainly under sheep, cattle, mixed, dairy and vegetable production. The land area of what was Ciskei is a mere 800, 000 hectares, while that of the former Transkei is approximately 4, 280 000 hectares.

Detailed studies of livelihoods in the Eastern Cape show that most households depend on multiple sources of income. Subsistence agriculture generally contributes a relatively small proportion compared to wages from both migrants and non-migrants. The latter accounts for

between 60% and 80% of the income of rural households in the Eastern Cape, with between a third and half coming from migrant remittances.

Pensions are the second most important sources of cash income contributing between 10% and 20% to average household income. Estimates of agricultural income in terms of both cash sales and produce consumed within household show great variability, but most studies estimate it to be between 10% and 25% of average household income, of which the greater part is accounted for by direct consumption. This may be an underestimation as longitudinal studies have revealed that difficulties in measuring maize yields has led to a consistent underestimation of the productivity of farming households.

Access to land, even relatively small plots, forests or communal grazing, allows households to maintain a diversified livelihood strategy that includes wage employment, pensions, agricultural production and keeping livestock as a form of investment. Collectively, these strategies enhance their ability to obtain a livelihood in adverse conditions. The primary reason for cultivation is for household consumption and most of the produce is consumed before harvesting time.

Broadly speaking, rural communities practice arable farming in two ways: the cultivation of food gardens and arable farming. The former involves households engaging in cultivation in the immediate vicinity of the house. The contribution of food gardens to rural livelihoods should not be underestimated. While yields are small, they represent an important contribution to household food security.
In the second area of food production, where rural communities practice arable farming on arable land, access to such land poses a major challenge for most rural households. In general terms there has been a decline in the quantity of arable land available to each household from an average of 1.72 hectares in 1950 to 0.43 hectares in 1990, largely as a result of `betterment planning' and overcrowding. At the same time, the proportion of households without land has increased from 10% to 40%.

As a consequence of the seasonality of agricultural production, there is a scarcity of staple foods, including maize, in the majority of households

during the August to February period. This coincides with the observation that 95% of households rely on maize that is bought and not self-produced during this period and that less than 5% of households are self-sufficient for more than 6 months of the year.

Expenditure on food increases to more than 60% of total household expenditure during this period. Although there is a general perception that livestock in rural areas have little economic value in terms of sales through formal markets, livestock ownership and production serves a greater variety of functions than is the case in the commercial agriculture system.

Livestock are used as draught animals (sometimes this is hired out) milk, manure, dung as a sealant, dung for heating, bride-wealth, hides, slaughtering, and for cash sales. While agriculture is an important component of household food security and rural livelihoods, especially for the poor, other sources of food and income have come to play an equally important role. It is clear that poor rural households have diversified their livelihood strategies by constructing a diverse portfolio of activities and social support systems in their struggle for survival and to improve their standard of living.

However, such diversification could be perceived as an indication of increased household vulnerability, due to the failure of previous livelihood strategies. The evidence suggests that there has been an erosion of a fundamentally agrarian existence for the poor and an increased reliance on non-farm and even non-rural incomes. Employment trends are such that 21% of those employed in the Eastern Cape are in the agriculture, hunting and fishing sector. In the commercial agricultural sector there is a much higher proportion of permanent farm labour than is the case nationally.

This suggests that employment in the commercial agricultural sector is much more important as a source of sustainable employment and wage income in the Eastern Cape than is the case in the rest of the country. In contrast employment on farms in the former homelands is neither sustainable nor a significant source of wage income. In a context where

other sectors of the economy within the Eastern Cape have not been expanding enough to provide a viable alternative to the poor performing agricultural sector, access to land, and ownership of livestock remain important for household livelihood strategies.

Policy interventions within the framework of Provincial Growth and Development Strategy will be very important if the trend is to change. The implementation and monitoring of sustainable land based development programmes will remain critically important for a large majority of the population in this province.

Ultimately, the dynamics of poverty and livelihoods within the communal areas are integrally tied to the progress of the development agenda within urban areas, the former 'white' commercial agricultural areas and the future of small towns.

3.2.8 The Nature, Size and Composition of the Labour Force in the Eastern Cape

The data used to analyse the Eastern Cape's labour market comes from the September 2002 Labour Force Survey (LFS6). The Eastern Cape sub-sample of LFS6 consists of approximately 10 000 people of working age residing in 4 000 households.

Based on data from LFS6, it is estimated that the Eastern Cape has 3.87 million people of working age (15-64). Of these only 46.6% (±1.8%) are estimated to be economically active (using the official or "strict" definition). This is low when compared with the national labour force participation rate of 56.7%. Of the economically active population in the Eastern Cape, 590 000 or 32.5% (± 2.3%) are unemployed. This unemployment rate is not statistically different from the national unemployment rate of 30.5%.

Using the broad definition of economically activity and hence unemployment the percentage of the population that is economically active (using the broad definition) is estimated to be 60.0 % (± 1.4%) and the number of unemployed to be 1.110 million or 47.6 (± 2.4%). This

compares with a national broad labour force participation rate of 67.7% and unemployment rate of 41.8%.

Thus, the broad definitions of participation and unemployment indicate that in the Eastern Cape participation is significantly lower and unemployment is significantly higher than in the country as a whole. There is a great deal of variation in labour force participation and unemployment rates across the province. In terms of the official definition labour force participation varies from 26% in Alfred Nzo to 62% in Cacadu and the Nelson Mandela Metropole, while the unemployment rate varies from 19% in Ukhahlamba to 43% in Chris Hani. It is, however, more pertinent to consider the proportion of the working age population that are actually employed: Only one in three (31%) of adults of working age is employed and this figure varies from 18% in Alfred Nzo to 49% in Cacadu.

Labour force participation increases with higher levels of educational attainment. While only 37% of those with no schooling are economically active (using the official definition), 71% of individuals with matric and 86% of those with tertiary education are economically active. Unemployment amongst those with tertiary education is considerably lower than for other groups.

Unemployment declines sharply with age. Almost three-fifths (59%) of the working age population in the Eastern Cape is under the age of 35 while the broad unemployment rate for this group stands at an alarming 60.7%. The informal sector is a major source of employment, with this sector employing almost as many people as the private formal sector. In the Eastern Cape it is estimated that approximately 432 000 people work in the private formal sector, 218 000 in the public sector, 412 000 in the informal sector and 136 000 as domestic workers.

In terms of broad economic sector, the composition of employment in the Eastern Cape differs markedly from national trends. In particular, agriculture accounts for a significantly higher proportion of employment, as do private households (i.e. domestic work), construction and social and personal services. In contrast, employment in manufacturing and the

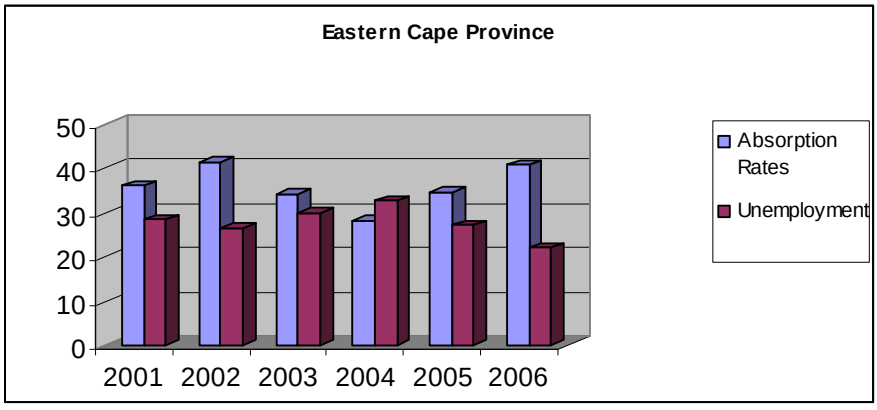
tertiary sector (i.e. wholesale & retail trade, transport and communication and financial services) accounts for a lower proportion of employment than is the case nationally. This starkly illustrates the fact that the sectors that have driven the provincial economy's growth have not been absorbing labour.

More than two-thirds (69%) of the employed have less than a grade 12 education, while 18% have completed matric and 13% have postsecondary qualifications. More than three-fifths of those with tertiary qualifications work in the public sector. There are large returns to education. Whereas the average salary for someone with less than matric is R666 per month, this rises to R2831 p.m. for someone with matric and R5677 p.m. for a worker with a diploma or degree.

Wages among those in the informal and domestic services sectors are extremely low, with mean wages in these sectors in September 2002 standing at R365 and R285 per month respectively. Wages in the public sector are higher than in the private formal sector for all workers other than those with tertiary education.

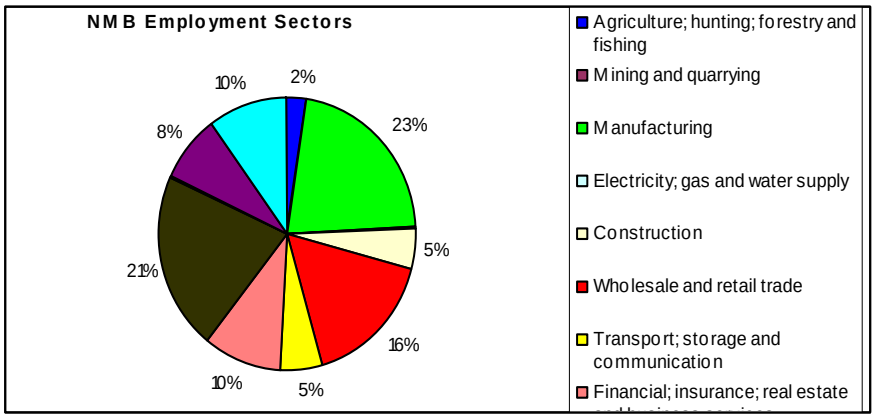
In sum, the majority of the Eastern Cape's labour force is African, rural and unskilled. The spatial distribution of unemployment is such that it is concentrated in the former homeland areas. Moreover, a high proportion of jobs are in the low-wage, low-productivity informal sector indicating that jobs are of a poor quality.

EC Employment and absorption rates and unemployment levels[6]



[6] Source: Data obtained from Labour Force Survey: 2006

NMB Employment Sectors[7]



The above graph is based on the Census 2001 statistical information and we expect that the picture would have changed given the presence of the IDZ as well as development within the automotive industry around the Nelson Mandela Bay.

3.2.9 Synthesis and Policy Implications

Policy-makers should also be cognisance of the fact that high and growing rates of unemployment are a consequence of dynamics on both the demand and supply sides of the labour market. On the supply-side, increasing rates of labour force participation has significantly expanded the number of job seekers, while the demand for labour has been sluggish, particularly in the formal sector.

Consequently, a large stock of unemployed people has built up over many years, and each year the economy is unable to absorb not only this stock but also new entrants. Indeed, in terms of the 'strict' definition at the national level the unemployment rate has grown by 10.5 percentage points between 1994 and 2002 (from 20% to 30.5%), and by 13.4 percentage points if the expanded definition is used. The causes of unemployment in South Africa are manifold and complex.

[7] Census 2001

There is, however, substantial agreement that three factors are: trade liberalisation, the skill composition of the labour force and the capital-intensive nature of the South African economy. The experience of unemployment in the Eastern Cape and its underlying causes is consistent with the national experience. The dramatic increase in manufactured output and exports that has supported the growth of the tertiary sector has not given rise to the scale and nature of labour demand required to redress growing unemployment.

What makes the unemployment situation in the Eastern Cape dire is the large proportion of the population residing in rural areas. Hence, when the broad definition of unemployment – which has a rural bias because it includes discouraged workers – is used, the Eastern Cape's unemployment rate of 47.6% is significantly higher than the national average of 41.8%.

3.3 The Impact of HIV/Aids on the Eastern Cape's Economy and Labour Market

While HIV prevalence among adults in the Eastern Cape is among the lowest of the 9 provinces, the impact is likely to be severe, as it is concentrated in the 15-49 age groups, which constitutes the bulk of the economically active population and the core of Eastern Cape economy. This has negative implications for the composition, size and growth of the labour force, as well as the province's capacity for effective human resource development.

Projected HIV infections, Aids deaths and Aids morbidity is estimated to grow at a much higher rate than the provincial population. By 2010, the number of HIV infections will peak at 1.2 million. The projections suggest that the Eastern Cape is now in the middle of an extremely vulnerable period, as the sharpest increases in infections are being experienced.

In terms of projected AIDS mortality, by 2010, 600 000 people in the Eastern Cape will have died of Aids and approximately 200 000 will have contracted Aids-related illnesses. On average, this will result in a steady population growth rate of approximately 1% per annum. Given that rural populations generally have lower HIV prevalence rates, the predominance of tribal areas (with the incorporation of

the former Transkei and the Ciskei), farming villages and agricultural areas in the Eastern Cape, may contain the spread of HIV infection.

This must, however, be balanced against the influx of migrant labourers, who due to retrenchments may now be returning to these rural areas, thus leading to the in-migration of HIV infections in rural areas. While this influence on HIV infection rates is not well explored in the literature, it is likely to have a considerable impact in the Eastern Cape. There are a range of demographic, socio-economic and cultural factors that underpin the particular patterns of HIV/Aids in the province.

There are some initial indications that male circumcision may have a protective effect against the transmission of HIV. Given its widespread practice in the Eastern Cape among the African Xhosa population, it may play a significant role in reducing the overall HIV prevalence rate, compared to other provinces. However, unhygienic circumcision practices, may in fact contribute to the spread of the disease.

The following socio-economic characteristics of the Eastern Cape may play a role in ensuring that the HIV/Aids burden falls disproportionately on those that are the most marginalised, vulnerable and at a general socio-economic disadvantage:

- High levels of poverty (particularly in former homeland areas);
- High levels of unemployment;
- Migrant labour and returning retrenched migrants;
- High levels of male absenteeism from families and communities; and Restrictive cultural traditions in terms of the social and economic status of girls and women.

HIV/Aids impacts negatively on the national and provincial economy because mortality rates are higher than they would otherwise be and this causes a reduction in the labour force. Within the South African context, the costs of HIV can be high for companies. Such costs could be in relation to the need for companies to invest massively in HIV/Aids prevention programmes; putting in place a vigorous EAP benefit; medical aid/insurance as well as costs towards

sick leave, compassionate leave and providing contingency budgets for the increased levels of absenteeism due to Aids-related deaths and illnesses.

As the cost-burden to companies, individuals, households and the state increases, so does their vulnerability. The implications for the Eastern Cape's labour market are dire: in a context where the national labour force is projected to decline by between 18 to 21 per cent by 2015, the costs related to HIV/Aids morbidity and mortality (including increased labour turnover, losses in skills, experience and productivity) will be onerous.
The epidemic is also likely to exacerbate unemployment among the unskilled. This is because its disproportionate impact on the economically active population will result in changes in the size and nature of the labour force. At a national level, it is projected that the demand for labour, particularly for unskilled labour, will decline due to the decline in economic growth. Hence the growth in employment will be lower than would otherwise be the case.

Moreover, in a context of high and growing rates of unemployment both nationally and in the Eastern Cape, the added Aids cost burden may pose a further obstacle to job creation as companies attempt to shift the cost burden by reducing staffing levels, or opting for capital substitution in order to protect their profit margins. Public interventions to reduce HIV infection will be a critical determinant of its impact on the labour market. As regards the efficacy of preventative measures, the NMF/HSRC study(2002) reports that among Eastern Cape respondents, 48.5 per cent reported public clinics and hospitals as the main sources of condoms, while 20 per cent reported non-specific sources. This is an indicator of the essential role of public facilities in prevention messages. The same study reported that 58.5% of Eastern Cape respondents knew where to obtain VCT (Voluntary counseling and testing) services.

There are, however, indications that the province has not been successful in establishing public VCT facilities: in 2002 the Department of Health reported that there were only 6 public VCT facilities in the province. This translates into a ratio of 0.08 VCT facilities per 100 000 population in the Eastern Cape, the lowest in the country. More recently, it was found that despite a public advertising campaign on free HIV/Aids testing, half of the Eastern Cape's clinics could not provide this service. Officials ascribed this to both a lack of training among nursing staff and a lack of equipment. Hence public management capacity

remains a challenge to implementing preventative measures in the Eastern Cape.

In sum, the negative impact of HIV/Aids on significant sections of the Eastern Cape's population has profound implications for the province's labour market and its economic prospects. These should be factored into provincial strategies and plans in the areas of economic growth, employment creation and human resource development.

Health Status of SA Population[8]

			N (1 000)			
	People sick/injured		People not sick/injured			Total
South Africa		**5 923**			**40 965**	**46 913**
Western Cape		664			3 980	4 652
Eastern Cape		**878**			**6 158**	**7 040**
Northern Cape		129			774	903
Free State		439			2 514	2 953
KwaZulu -Natal		1 028			8 626	9 655
North West		605			3 218	3 825
Gauteng		1 095			7 928	9 029
Mpumalanga		503			2 717	3 221
Limpopo		582			5 052	5 636

The figures on the above table are based on the number of people sick on the day of the interview. The figures reflect all sicknesses and are not reflection HIV/Aids prevalence. The Eastern Cape had nearly 12% of its population sick.

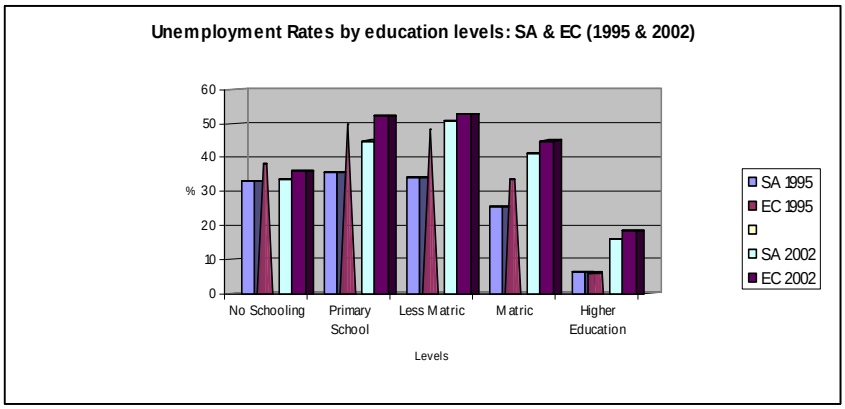
3.4 HRD Profile of the Eastern Cape

The Human Development Index (HDI)[9] of the Eastern Cape (0.49) indicates high levels of underdevelopment, corresponding with the high poverty levels in the province. The highest levels of underdevelopment are measured for the former

8 Source: LSF Survey 2006

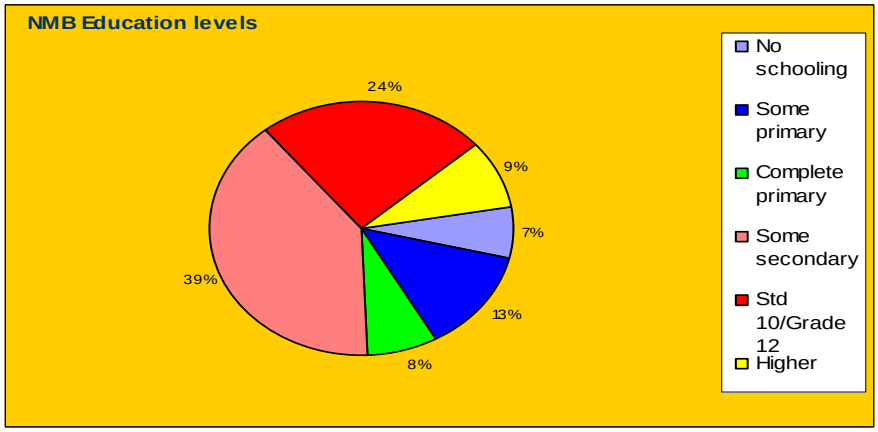
[9] Sources: Stats SA 1995; 2002

homeland areas, OR Tambo and Alfred Nzo DMs, with HDIs of 0.42 and 0.44 respectively. The previously advantaged Nelson Mandela Metro has relatively high levels of development, with an HDI of 0.65. This disparity goes some way towards accounting for the very high Gini Co-efficient (0.61) in the Eastern Cape – which mirrors the national co-efficient of 0.60.



The table above speaks to unemployment rates according to the different Education levels. The worrying trend has been the rapid increase of unemployment of university graduates. The increase in unemployed graduates has been dramatic in the last five years. A recent study conducted by the University of Cape Town indicates that most unemployed graduates are those from historically disadvantaged education backgrounds. Whilst there are numerous reasons for this current situation, the research conducted shows that most of these are graduates in the social sciences, humanities and some fields in commerce. The number of unemployed graduates has grown significantly in the past five years. JIPSA seeks *(see section of SD initiatives)* ways of absorbing unemployed graduates into the economy while addressing the mismatch in relation to the type of training offered to these students as compared to skills needed by the job market.

NMB Education levels[10]



The graph above is based on Census 2001; possibly the picture has changed. The changes in the structure of the education landscape have also impacted on the Nelson Mandela Bay. The restructuring of the Port Elizabeth Technikon, Vista University and Port Elizabeth University into a single mega institution has created a new momentum in the growth of the only local university.

Another factor which has potentially changed the education levels within the NMB has been the 2002/03 restructuring of the further education and training sector, which saw the merging of 152 colleges into 50 multisite-campus FET colleges. For the NMB this resulted in 2-government funded FET colleges that have multi-satellite campuses spread across NMB. Within the general education and training band there has also been a consolidation of the technical schools.

Over and above the changes in the education sector the department of labour has been spearheading several skills development initiatives. These initiatives will have a major positive impact on the Nelson Mandela Bay education levels, as these initiatives also include Adult Basic Education and skills programmes.

The migration of people from other parts of Eastern Cape and South Africa to the NMB, in search of employment opportunities as well as better jobs, will also potentially increase the number of people with post-secondary education.

[10] Data source: Census 2001

3.5 Education Landscape: Overview

The national Department of Education is responsible for education across the country as a whole, while each of the nine provinces has its own education department. However the planning and management of FET colleges is managed by the National Department of Education instead of the Provincial Department of Education.

South Africa has 12.3-million learners, some 386 600 teachers and 26 292 schools, including 1 098 registered independent or private schools. Of all schools, roughly 6 000 are high schools (grade 7 to grade 12) and the rest primary (grade 0 to grade 6).

The National Department of Education provides a national framework for school policy, but administrative responsibility lies with provinces. Power is further devolved to grassroots level via elected school governing bodies, which have a significant say in the running of their schools. Private schools and higher education institutions have a fair amount of autonomy, but are expected to fall in line with certain government non-negotiable - no child may be excluded from a school on grounds of his or her race or religion, for example.

The greatest challenges lie in the poorer, rural provinces like the Eastern Cape and KwaZulu-Natal. Schools are generally better resourced in the more affluent provinces such as Gauteng and the Western Cape. Illiteracy rates are high at around 24% of adults over 15 years old (6- to 8-million adults are not functionally literate), teachers in township schools are poorly trained, and the matric pass rate remains low.

The South African government is targeting education for the poorest of the poor, with two notable programmes. One is fee-free schools, institutions that receive all their required funding from the state and so do not have to charge school fees. These have been carefully identified in the country's most poverty-stricken areas, and will make up 40% of all schools in 2007.

3.5.1 Education Bands

South Africa's National Qualifications Framework (NQF) recognises three broad bands of education: General Education and Training, Further

Education and Training, and Higher Education and Training. General Education and Training runs from grade 0 to grade 9. General Education and Training also includes Adult Basic Education and Training.

The table below shows the different education bands as well as the NQF levels within each band and the qualifications that obtainable after completion of each level. This section gives a brief overview of the institutional capacity and gives some detail relating to the further education training (FET) band. The FET education band is critical for the training of unskilled and semi-skilled workers.

	GRADES	NQF LEVEL	QUALIFICATIONS
Higher		8	Doctoral degree
		7	Masters degree Honours Degrees Postgraduate diploma
		6	General 1st degree Postgraduate degree Bachelors degree
		5	1st Diploma Higher Certificate Certificate
Further	12	4	Diploma
	11	3	Certificate
	10	2	
General	R-9	1	Grade 9/ABET level 4

3.5.2 Further Education and Training (FET) (NQF Level 2-4):

This band offers grades 10 to 12, and includes career-oriented education and training courses. There are different types of FET institutions - technical colleges, community colleges and private colleges. Diplomas and certificates are qualifications recognised at this level. The FET also offer DoE and Non-DoE courses, the non-DoE courses are not accredited by the national Department of Education but could be accredited by professional bodies or tailor made according to industry needs.

Until 2002 there were 152 technical colleges in South Africa, these were merged with other technical colleges, colleges of education and/or manpower training sites to form 50 new Further Education and Training (FET) colleges. The merger process did not change the distribution of college campus sites across the provinces, however there were some changes in the configuration of the college sector.

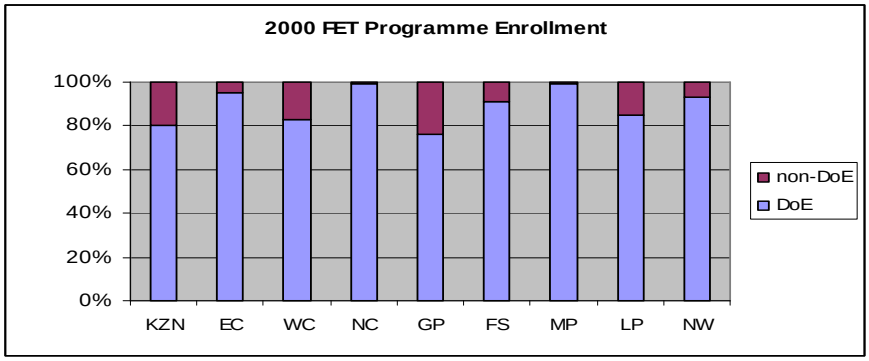
A key feature of the newly configured colleges is that they have multiple campus sites as well as satellite campuses. A majority of FET's are located in rural, peri-urban, urban and metropolitan areas. The location spread of the FET colleges is similar to that of Higher Education institutions, with the exception of the Limpopo Province which has a higher number of FET's compared to the number of higher education institutions in that province. The tables below are based on 2000 data.

3.5.3 DoE and Non-DoE Programmes in FETs:

FET's can offer both DoE accredited as well as non-DoE programmes. The provision of non-DoE programmes is a proxy indicator of the extent to which FET colleges are responding to new market opportunities. Non-DoE programmes accounted for about 12% (16 853) of the total full time equivalents[11] (FTE) (138 712); however this distribution varies across provinces. The Western Cape, KwaZulu Natal and Limpopo Province each had more than 15% of their students enrolled in Non-DoE programmes, Mpumalanga and Eastern Cape had 5% or less enrolled in such programmes.

FTE Spread: DoE and non-DoE

[11] Full Time Equivalent **(FTE)** means the number of Students determined by the Department of Education in any Year to be the full-time equivalent of the actual number of Students enrolled in any educational, cultural or recreational activity



3.5.4 National Certificate Vocational (NCV):

The NCV is a newly introduced three year programme. The first student intake was in January 2007. It is a skills demand based programme. FET colleges are given a go ahead to offer courses once they can prove that a specific skill is in short supply. The NCV programme is offered in seven fields, including Electrical & Infrastructure construction; Engineering and related design (Welding, Fitting and Machining and Motor Mechanics) and Civil engineering construction. Learners are allowed one language as well as a Maths or a Maths and Literacy course. Only students who have successfully completed grade 9 can register in the programme. The NCV differs from the noted programmes in that it has a 40:60 academic and practical percentage split respectively.

The entry level of the NCV programme is at NQF level 2. At the end of the three year programme, there are 3-streams. A learner can undertake a 2-year practical training. The 2-year practical training is in the industry linked to the trade subject the student specialised in. At the end of the 2-year practical training the student will qualify as an artisan. Alternatively the students can continue and register for a further 2-year in the college and undertake NQF level 5 & 6. The other alternative will be for the student to attend university. However to be able to take this option the student is required to have undertaken Maths and Science over and above the trade specific courses. The NCV programme is currently offered by the government funded FET colleges.

3.5.5 Nelson Mandela Metro FET Colleges:

In 2004 the FET colleges were identified as critical in the alignment of education with the world of work. The geographical location of some of the FET colleges in peri-urban and rural areas also makes these institutions critical in the training of unskilled and semi-skilled rural based workers. The Departments of Education and Labour started a recapitalization program that includes infrastructure development as well as revamping of training programs.

National treasury committed R1.5 billion for the recapitalization of colleges. This was earmarked for the revamping of facilities and infrastructure. In 2005 the Minister of Labour, Membathisi Mdladlana, and the Deputy Minister of Education, Mohamed Surty, signed a collaborative agreement in the Eastern Cape with the Umsobomvu Youth Fund's skills development projects for youth through FET college sector.

The FET sector is indeed critical for the training and development of low-level skills. CDC has existing partnerships with local FET's and has networks with FET colleges outside the NMB area, these can be utilised for either starting a training programme or working in collaboration with these institutions for the training of unskilled and semi-skilled workers. The metro has 2-government funded colleges and three accredited training providers that can offer programmes in the sectors under review. The East Cape Midlands and Port Elizabeth colleges are the two government funded FET colleges. Local manufacturing companies, first tier industries and OEM's who provide their own in-house training partner with FET colleges to offer fundamentals and elective components of particular trades. There are a few local FET Colleges are able to offer training of industry areas such as autotronics, welding, mechatronics, electrical, etc.

3.5.6 NMB Private Training Providers

There are very few accredited Private Providers, within the sectors under discussion, that have the capacity and facilities to offer FET level qualifications, learnerships and skills programme in the region. Eastcape Training Centre (ETC) is the oldest and the most established private training provider; it is located in the Port Elizabeth part of the NMB. The Industries Education & Training Institute (IETI) also located in the Port

Elizabeth has the capacity and facilities to offer FET level learnerships and skills programmes.

The Ilitsha Training Provider is a newly MERSETA accredited training provider. The Ilitsha training provider was initially an engineering shop that has developed training capacity. They are accredited by the MERSETA. There are also a few NMB based accredited training providers able to provide training within the specific sectors. Most of these are within the Construction SETA.

3.5.7 NMB DoE Technical Schools

There are 10- DoE funded technical schools in the Metro. The schools are faced with various resource related challenges. It is schools located in disadvantaged communities that are highly affected by internally insurmountable resource constraints.

3.5.8 Higher Education National Context:

South Africa has 23 higher education institutions, spread across the 9-provinces. Two of these provinces do not have higher education institutions.

A matric endorsement is required for the study of university degrees, with a minimum of three subjects passed at the higher, rather than standard, grade. Some universities set additional academic requirements. A standard school-leaving South African senior certificate is sufficient for technical qualifications and diplomas. The newly introduced National Certificate Vocational (NCV) offered by FET colleges will allow students who have completed NQF level 5 to enrol at university and pursue a degree in a specific field.

There are three types of universities**:**

- 11 **Traditional University's**, only 4-universities do not have a faculty of engineering: NQF Level 5 upwards
- 6 **University's of Technology**, modeled similarly to the German technical universities. However these are not yet at the same level as the German Universities: NQF Level 3 upwards.

- 5 **Comprehensive University's**, offer Technikon and traditional university programs: NQF Level 1 upwards.

Comprehensive University's are a hybrid of traditional and technology university. Their range of qualifications is the same as those offered in traditional universities as well as universities of technology. The difference being the levels from which qualifications can be offered. These universities offer short courses as well as course from NQF level 1 up to the highest NQF level. This type of university is viewed as potentially the most dynamic and could offer avenues for innovation as well as flexibility in the training and development of both high-level and low-level skills. The only comprehensive university in the Eastern Cape is the Nelson Mandela Metropolitan University, located in the Nelson Mandela Bay.

National Picture: ***Location of*** *Engineering Capacity (includes Built Environment):* based on HEMIS*

	EC Province[12]	FS Province	W.Cape Province	Gauteng Province	KZ N	Other	TOTAL
All HEI's location	**17.39%**	**8.69%**	**17.39%**	**26.08%**	**17.39%**	**13.04%**	**100%**
HEI Spread (actual no.)	**4 (1)**	**2**	**4**	**6**	**4**	**3**	**23**
Traditional University Spread	*2*	*1*	*3*	*3*	*1*	*2*	*12*
Uni. of Tech.	*1*	*1*	*1*	*2*			*5*
Compr.Uni.	*1*			*1*	*1*	*1*	*4*
Technikon/Institutes					*2*		*2*
Headcount: **2004**	3656.34 **1355.17**	1611	9398.75	21,977.34	11,047.33	594.42	48,285.17
Headcount: **2005**	3,496.91 1401.58	1,599.09	8,688.16	30,998.01	11,057.67	655.59	56,495.43
Full requirements: **2005:**	298.5 211.75	184.41	1,616.92	3,328.00	1,078.83	117.75	6624.41

[12] Numbers in red denote Nelson Mandela Metropolitan University

3.5.9 Nelson Mandela Metropolitan University:

As stated above South Africa have a number of international reputable universities. The spread of these by province is reflected above. Whilst the Eastern Cape Province has a fair number of universities, there are only 2-universities which offer engineering degrees/diplomas. The Nelson Mandela Metropolitan University (NMMU) is the only one located within the Nelson Mandela Metro. The Engineering Faculty of the university has a long history of established partnerships with both private and public sector organisations. As a comprehensive university, NMMU is strategically configured to offer qualification at all NQF levels as well as enter into university-industry partnerships for the establishment of new academic programmes.

4 EDUCATION AND TRAINING CAPACITY: NMB

4.1 TECHNICAL SCHOOLS

Nelson Mandela Metro Technical Schools, there are ten technical schools that are fully funded by the Department of Education located within the NMB region. Most if not all these schools offer only technical subjects with a few offering academic subjects. The teaching staff within these schools has engineering and/or technical qualifications.

The schools however differ markedly in terms of their resource capacity. Predominantly all the schools located within township settlements have inadequate resources and in some instances no facilities of their own. There are schools which attend the practical training aspect of their programmes in other schools. Newton Technical School is viewed as the most well resourced school in the Nelson Mandela Bay, with sponsorship from the corporate sector.

With effect from 2006, technology was introduced as a compulsory subject in all technical schools. The subject was been introduced from grade 8. Two of the ten schools do not offer all four technical subjects. Gelvandale Technical School does not offer electrical technology and Otto Du Plessis does not offer civil technology.

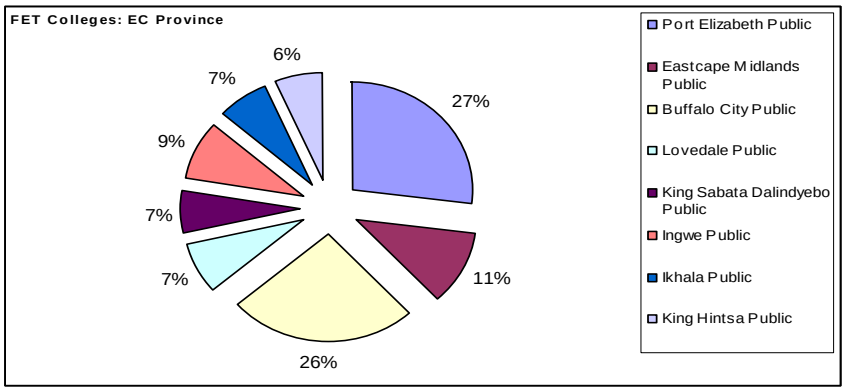
Table reflects numbers of students taking subjects in 2007 in Technical Schools: NMB region

	Electrical Tech	Mechanical Tech	Civil Tech	EGD	Technology
Grade 8					1250
Grade 9					1545
Grade 10	179	444	136	680	
Grade 11	93	307	89	383	
Grade 12	112	220	108	345	

4.2 FURTHER EDUCATION AND TRAINING COLLEGES

The East Cape Midlands and Port Elizabeth College are the 2-FET colleges located in the Nelson Mandela Bay area. Based on the 2000 FET college information the two colleges account for had 5264(33.7%) headcounts of the 15873 headcounts registered in FET's in the Eastern Cape Province. The East Cape Midlands is located in Uitenhage part of the NMB whilst the Port Elizabeth College is located in the Port Elizabeth area. Both these colleges are predominantly funded by government. Unlike most FET colleges in the Eastern Cape, the two colleges are located at the heart of the Eastern Cape's automotive industry.

FET Colleges: EC Province[13]

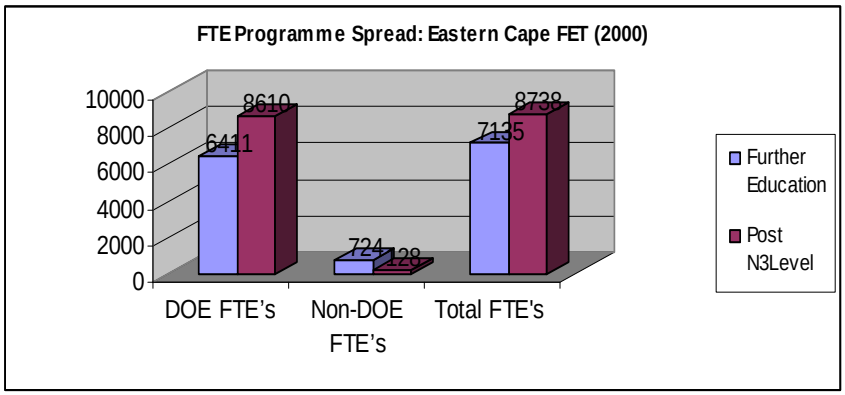


4.2.1 FET Programmes

Until 2006 the programmes offered by the colleges were at the ABET level and further education (N1-N3) and post N3-level. Within the levels there are programmes that are DoE accredited as well as non-DoE accredited. The table below reflects the actual number of students enrolled for DoE and non-DoE programmes.

[13] Data Source: National Business Initiative Study, 2000:

FTE Program Spread: EC FET[14]



4.2.2. PUBLIC FET COLLEGES: NMB

4.2.2.1 PORT ELIZABETH COLLEGE (PEC)

Port Elizabeth Public FET College has seven sites located at different areas of the Metropole. The sites include Algoa, Iqhayiya, Dower, Heathpark, Erica, Russell Road and Victoria. It attracts students from a wide market in both the Metropole region and in the wider outcastes of the Eastern Cape Province.

The College offers a diversified service in line with labour market needs of both the metropole region and the Eastern Cape Province. The service offering is composed of a variety of programmes implemented as responsive means to industry/community needs. These programmes include Business Studies, Engineering studies, Utility Services, Art and Design, Learnerships and Skills Training programmes.

ENGINEERING STUDIES: The different campuses are organised according to programme and course offerings. There are two campuses that focus on Engineering; these are **Iqhayiya & Russell Road Campuses** including the NCV (new programme) & Bridging Course in Engineering.

The courses range from:

[14] Data Source: National Business Initiative Study, 2000

- Information Tech. & Computer Science
- Electrical Infrastructure Construction *(Electrical)*
- Civil Engineering Construction (Basic Construction Plumbing OR Basic Masonry & Tiling Construction)
- Engineering and Related Design *(Mechanical)*
  - Fabrication & Extraction
  - Automotive Repair & Maintenance
  - Fitting & Turning

Current course levels offerings: Iqhayiya Campus (Struandale)

- Current N2, N3, N4, N5, N6 Engineering
- Engineering CCL / Part-time (Only N1-N6):
- Engineering CCL / Part-time: Welding, Electrical and Motor Skills

As explained somewhere else in the document the NCV programme is a new programme and specialisation in colleges are informed by the locality within which such FET colleges are located.

For PE College the NCV Programme offerings are according to the table reflected below.

PROGRAMME NC(V)	Russell Road Campus	Iqgayiya/Algoa
▪ Engineering & Related Design ▪ Electrical Infrastructure Construction ▪ Civil Engineering Construction	x x	 x
▪ ICT ▪ Management ▪ Finance, Economics & Accounting	x x	 x
▪ Tourism ▪ Hospitality	x x	

Other critical scarce kills offered are:

- Engineering & Related Design: Fabrication and Extraction, Manufacturing & Assembly
- Civil Engineering & Building Construction.
- Electrical Infrastructure Construction

4.2.2.2 EASTCAPE MIDLANDS COLLEGE (EMC)

The College has partnered with various business and SETAs in providing training courses, academic focus as well as a skills focused courses to part time students. The college has also partnered with some of the business for workplace experience to their learners. The nature of these partnerships will be discussed in detail when more information is received.

The table below reflects some of the academic programmes offered by the college on a part time basis and the levels at which these course are offered. However the college is prepared to consider these for full time students should there be a high demand for them. The table reflects the intake in each course at different levels. Their student enrollment is done in trimester system, with the college having a trimester intake system.

2006: Engineering Part-time Courses: EastCape Midlands College[15]

	N1	N2	N3	N4	N5	N6
Machining & Tool making	90	90	105	105	105	105
Boilmakers & Welders	90	90	105	105	105	105
Motor & diesel mechanics	90	90	105	105	105	105
Electricians:	90	90	105	105	105	105

Engineering Skills Training Short courses:

Machining	36

[15] These are students enrolled in the courses.

Welding:	90
Electrical	45
Electronics:	45
Electronics:	45

Learnerships Programme: In addition to its normal student intake the college is also contracted by a range of companies including the CDC to be a training service provider for some of the learnerships. The facilities can currently accommodate only 25 learners at any given time in a workshop. The learnership programme is also offered to private students that are students paying out of their own pockets.

The table below reflects the current learnerships as of 31 March 2007.

Current Learnerships: EMC

COMPANY	**LEARNERSHIP PROGRAMME**	**NO**
AIDC	MECHATRONICS L3	16
	MECHATRONICS L4	12
COEGA	FITTING & MACHINING L2	30
	FITTING L2	32
	MACHING L2	42
	MECHATRONICS L2	18
	WELDING L2	8
CONTINENTAL	Machining L2	24
HELLA	ACMA L2	12
SHATTERPRUFE ELECTRICAL	ELECTRICAL L2	2
VOLKSWAGEN	Autotronics L4	18
	Electrical L3	10
	FITTING L3	12
	FITTING L4	12
	MACHINING L4	6
	Maintaining Vehicles L3	13
	MECHATRONICS L4	14
	MECHATRONICS L4	15
	TOOLING L4	6
GRAND TOTAL		**302**

4.3 PRIVATE TRAINING PROVIDERS: Accredited

NMB Public and Private training providers offer a range of courses. The course offerings predominantly reflect the industries that operate in the metro. The only major concern is that more than 60% of the courses are offered by the private training providers are at NQF Level 2.

4.3.1 EASTCAPE TRAINING CENTRE (ETC)

This training provider is primarily accredited by the Construction Education and Training Authority (CETA) with secondary accreditation from the CHIETA, ESETA and MERSETA. Thus the range of programmes ETC us able to offer are accredited by more than one SETA. For instance their electrical programmes are listed across three ESETA, MERSETA and CHIETA. The centre offers day and evening classes in some of the following courses. The training provider offers training beyond the borders of the Nelson Mandela Bay as well as outside the Eastern Cape. It is able to offer such due to its extensive resources. It has mobile units that allow it to provide training off-site and in rural areas.

Staff Capacity: The College has a relatively large staff complement. This is influenced by the wide range of programmes offered. There are 3 Fitting and Machining; 4 Fabrication; 3 Welding; 3Electricall; 1 Rigging; 10 Driver / Operator; 6 Bricklaying; 4 Carpentry; 2 Plumbing; 2 Painting; 4 Shuttering; 3 Steel Fencing; 6 Concrete Handling, 3 Pipelaying staff members.

ETC Skills Programmes & Learnerships Offered

ACCREDITED PROGRAMMES	**NQF**
CHIETA	
MECHANICS: Chemical Turning	2
MECHANICS: Chemical Fitting	2
MECHANICS: Chemical Fitting	3
MECHANICS: Chemical Fitting	4
MECHANICS: Chemical Boilermaking	2
MECHANICS: Chemical Boilermaking	3
MECHANICS: Chemical Welding	2

MECHANICS: Chemical Welding	3
MECHANICS: Chemical Welding	4
ELECTRICS: Chemical Electrical	2
ELECTRICS: Chemical Electrical	3
CETA	
NC: Construction Carpentry	3
NC: Construction Masonry	3
NC: Construction Painting	3
NC: Construction Plumbing	3
Construction Contractor - Labour Intensive	2
Construction Processes - Labour Intensive:	4
NC: Community House Building	2
NC: Construction Contracting	2
ESETA	
NC: Electrical Engineering Level 2	2
NC: Electrical Engineering Level 3	3
MERSETA	
NC: Manufacturing, Engineering and Related	
Activities	1
NC: Automotive Component Manufacturing and	
Assembly	2
NC: Automotive Repair and Maintenance	2
NC: Engineering Fabrication	2
NC: Welding Application and Practise	2
NC: Mechanical Engineering: Machining	2
NC: Mechanical Engineering: Fitting	2
NC: Mechanical Engineering: Fitting and Machining	2

4.3.2 INDUSTRIES EDUCATION & TRAINING INSTITUTE (IETI)

The IETI is a fully BEE complaint company. It has full accreditation from several SETAs. Its primary accreditation is with the Energy SETA, with secondary accreditation from the merSETA and CETA. The institute has also applied for re-accreditation with Theta and Fieta. The institute also registered with the Department of Labour. Under the

DoL skills courses it offers skills courses in the trades mentioned below as well as in the up-holstery and Furniture Production & Cabinet Making.

The centre has established partnerships with some professional associations such as the Electrical Contractors Association (ECA) as well as with civil society organisations such as the Zionist Christian Church. They continue to work in the rural areas with the Department of Labour by assisting SMME development of the poorer communities and thereby assisting to the growth of these people.

Programmes offered:

- Electrical Apprenticeship
- Electrical Learnership from NQF Level2-4
- Refrigeration Learnership from NQF Level 3-4.
- Welding Learnership from NQF Level2-4
- Electrical Appliance Repairs
- Domestic Refrigeration
- Bricklaying & Plastering Learnerships NQF Level 3
- Plumbing Learnership from NQF Level 2-3

Facilities/Workshop and Training Capacity: The workshop capacity is equipped to handle 120 students per day, with a ratio of 15:1 learners per instructor.

Skills Programmes and Learnerships:

Learnership Programme	**NQF level**	**No**
Welding	2-4	270
Electrical	2-4	28
Refrigeration	2-3	22
ECA Learnership	2-4	100
Coca Cola	2-3	
Zionist Christian Church	Short Courses	72
DoL Courses (Below)		150 (Overall of the courses listed below)
Cabinet Making	Currently these courses are short courses. The DOL is in the process of updating the welding and Electrical to Unit Standard Based type courses	
Electrical Modules 0-6		
Furniture Production		
Bricklaying		
Plastering		
Welding		
Catering & Baking		
Plumbing		
Electrical Appliance Repairs		

Staff Capacity: We currently have 2 fulltime Instructors Qualified in Electrical and they are registered Assessors with Energy Seta & EDTP Seta. We then have 3 Contract employees on 6 Month Contracts. 2 are qualified Electricians and 1 is a qualified welder. The welder is a registered assessor with MERESTA. The institute also has 3 consultant instructors. One is a qualified Welder, the other a Welder with 15 years experience no qualification expected in the Electronics filed and the third one is a qualified carpenter and a qualified assessor.

Infrastructure & Equipment: IETI: A centre into which the institute move in September (2006) has a floor capacity of 2500sqm. The centre has 7 lecture rooms and six of these are occupied full time. Each lecture room has a capacity of 20 learners max, but only 15 are taken at any given time.

The institute has various policies in place that ensure that all facilities and equipment is continuously maintained. Most of the instructors have a technical background and are thus able to respond to general maintenance demands. The institute has infrastructure that enables it offer off site training. Most of the DoL skills programmes are offered off site with a ratio of 1:12. These would be for the DOL courses. The workstation capacity differs. There are 60 workstations for Electrical; 60 workstations for Welding; 12 workstations for Refrigeration and 12 Workstations for Furniture.

4.4 OTHER PRIVATE TRAINING PROVIDERS: CETA Accredited

The CETA utilises NQF accredited providers for its learnership programmes. Training providers within the NMB region accredited by the CETA are also accredited to offer **Legacy Programmes** for the training of the unemployed by the Department of Labour.

The tables below reflect a list of training providers found in the NMB area as well as a list of the legacy programmes for the training of the unemployed. Only well resourced and equipped training providers are able to offer a wide variety of programmes. The smaller training providers are accredited to offer few programmes. The list of the NQF accredited programmes is attached.

NQF Accredited Training Providers:

Amokoro Training Coastal (Pty) Ltd
Eastcape Training Centre
Lukhanyo Edu-Train College
N D Training Centre
Perfect Circle FET
Phambili Training & Management
Phumelela Skills Training & Consultants
Qhamani Training Centre
Buyisela Skills Centre
CREATE
Jabez Training Centre
Khanyile Training Centre (Pty) Ltd
P. E. Child and Family Welfare Society
Uitenhage Self Employment Centre

4.5 SKILLS PROGRAMMES AND LEARNERSHIPS: Additional

4.5.1 Construction Industry Training Providers:

The programmes listed below reflect those offered by the various training providers in the region. The level at which these are offered is predominantly at level 2. Most of the training providers offer training to the unemployed.

Legacy Programmes offered by NMB Based Training Providers

- Bricklayer And Plasterer;
- Carpenter;
- Plumber;
- Shutterhand Grade 3;
- Painter And Decorator;
- Erect Fencing;
- Combined Concrete Hand;
- Joinery And Wood machinist;
- Waterproofer;
- Ceiling & Partitioning Erector;
- Shopfitter; Road works;
- Basic Construction Hand;
- Underground Services –Water;

- Entrepreneurial Development;
- Plasterer And Tiler;
- Labour Intensive Training- Modern Supervision;
- Block laying;
- Supervisor Core Modules;
- Entrepreneurial Development Course;
- Basic Leadership Course;
- Road Works Skills Grade 3;
- Drainage And Services Skills Grade 3;
- Construction Site Practice & Water Reticulation Skills.

4.6 Engineering Infrastructure & Facilities: NMB Region

For the government funded Further Education and Training facilities, there is currently a massive infrastructure and facilities upgrade. The funds have been put aside specifically for the upgrading of engineering facilities.

The Qhayiya campus of PE College has been allocated more than R5-m with funds put aside for such. With the demand of skills, as reflected above it is critical that the NMB has adequate facilities to ensure that it is able to train both high-level and low-level skills. The final report will have a detailed breakdown of the facilities available. There will also be a discussion on the state of training facilities owned and turn by business. ***EastCape Midlands FET College Facilities (appendix)***

4.7 Nelson Mandela Metropole University (NMMU)

Apart from the presence of small satellite campuses in the NMB, the NMMU is the only local university in the Nelson Mandela Bay area. Institutional Operating Plan (IOP) provides a clear indication of future priority and growth areas for the university. These are summarised in the table below.

NMMU's Overview of priority and growth areas metro level[16]

Nelson Mandela Metro/George priorities
▪ Education and Health professionals

[16] Source: NMMU Institutional Operational Plan 2006

- Investment sectors: Automotives, Textiles, Services, Metallurgical, Energy, Logistics, ICT/ Electronics, Agriculture and Agro-processing
- Environment management and conservation
- Coastal Zone Management
- Construction
- Architecture
- Finance and Administration Human Resources Management
- Small Business Development
- Mechanical, Electrical, Process, Industrial, Chemical and Civil Engineering
- Chemical - fine, polymers, pharmaceutical, minerals & metals Petrochemical Industries: Oil, Gas and Chemical
- Manufacturing
- Tourism
- Social Needs
- Local Government

The NMMU has therefore strived to conceptualise and define its academic growth areas in response to national, provincial and local policy and economic imperatives. However, in specifying these growth areas, the NMMU's notion of responsiveness and engagement is not limited to economic responsiveness, but includes an active attempt to contribute meaningfully to the challenges of a developing society in a sustainable manner, including poverty alleviation, education, healthcare, and enhanced systems of governance particularly at the local level.

NMMU Academic Growth Areas:

- Mechatronics and manufacturing technology for the automotive sector
- Chemical, rubber, polymer and nano-technologies
- Optic fibres and electron microscopy
- Pebble bed nuclear technology
- IT security, programming and software development
- Infrastructure development
- Building, construction management and housing
- Architecture and architectural technology

Motivation: Of critical importance to both the Eastern and Southern Cape, ASGISA indicates that the single greatest impediment of economic growth is the shortage of skills – including professional skills such as engineers and scientists, managers and

financial personnel, project managers; and skilled technical employees such as information technology (IT) specialists.

Analysis of the value chain in the different manufacturing sectors in the Eastern Cape identifies major gaps and opportunities in the market. Most of these opportunities require higher levels of technology, links to research and development, and skills training. Automotive components, plastics, electronics and information and communication technologies, textiles and clothing, are key opportunities.

The NMMU is known for its existing strength in engineering, specifically mechatronics and manufacturing technology for the automotive industry. Furthermore academic programmes, research capacity and engagement activities at the NMMU in engineering, architecture and the built environment are already contributing to addressing these infrastructural development needs of the Province.

Faculty of Engineering, the Built Environment and Information Technology

- **School of Engineering** - Departments: Civil Engineering; Electrical Engineering; Mechanical Engineering; Mechatronics; Industrial Engineering
    - **Entity**: Institute for Advanced Manufacturing and Engineering Research

- **School of the Built Environment** - Departments: Construction Management; Quantity Surveying and Building
    - **Entities**: Centre for Building Research and Support; Centre for the Study of Construction Processes

- **School of Information and Communication Technology -** Departments: Information Technology; Applied Informatics
    - **Entity**: Institute for Information and Communication Technology Advancement

Table: 2005 Academic Year Graduates: Engineering Faculty

QUALIFICATION OBTAINED	NUMBER
NATIONAL DIPLOMA: INFORMATION TECHNOLOGY	3
NATIONAL DIPLOMA: INFORMATION TECHNOLOGY	23
NATIONAL DIPLOMA: INFORMATION TECHNOLOGY	27
NATIONAL DIPLOMA: INFORMATION TECHNOLOGY	1

NATIONAL DIPLOMA: BUILDING	4
NATIONAL DIPLOMA: BUILDING	25
NATIONAL DIPLOMA: ENGINEERING : CIVIL	1
NATIONAL DIPLOMA: ENGINEERING : CIVIL	28
NATIONAL DIPLOMA: ENGINEERING : ELECTRICAL	61
NATIONAL DIPLOMA: ENGINEERING : COMPUTER SYSTEMS	3
NATIONAL DIPLOMA: PRODUCTION MANAGEMENT	13
NATIONAL DIPLOMA: PRODUCTION AND OPERATIONS MANAGEMENT	4
NATIONAL DIPLOMA: ENGINEERING : INDUSTRIAL	15
NATIONAL DIPLOMA: ENGINEERING : MECHANICAL	32
NATIONAL DIPLOMA: ENGINEERING : METALLURGY	1
BACCALAUREUS TECHNOLOGIAE: INFORMATION TECHNOLOGY	1
BACCALAUREUS TECHNOLOGIAE: INFORMATION TECHNOLOGY	18
BACCALAUREUS TECHNOLOGIAE: INFORMATION TECHNOLOGY	23
BACCALAUREUS TECHNOLOGIAE: QUANTITY SURVEYING	26
BACCALAUREUS TECHNOLOGIAE: CONSTRUCTION MANAGEMENT	6
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : CIVIL	4
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : CIVIL	2
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : CIVIL	9
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : ELECTRICAL	12
BACCALAUREUS SCIENTIAE HONORES IN CONSTRUCTION MANAGEMENT	4
BACCALAUREUS SCIENTIAE IN CONSTRUCTION STUDIES	12
BACCALAUREUS TECHNOLOGIAE: PRODUCTION MANAGEMENT	6
BACCALAUREUS TECHNOLOGIAE: PRODUCTION AND OPERATIONS MANAGEMENT	11
BACCALAUREUS SCIENTIAE IN CONSTRUCTION ECONOMICS	17
BACCALAUREUS SCIENTIAE HONORES IN QUANTITY SURVEYING	5
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : INDUSTRIAL	16
BACCALAUREUS TECHNOLOGIAE: ENGINEERING : MECHANICAL	9
BACCALAUREUS TECHNOLOGIAE: QUALITY	19
MAGISTER SCIENTIAE IN THE BUILT ENVIRONMENT	1
MAGISTER SCIENTIAE IN THE BUILT ENVIRONMENT	3
MAGISTER SCIENTIAE IN THE BUILT ENVIRONMENT	1
MAGISTER TECHNOLOGIAE: INFORMATION TECHNOLOGY	5
MAGISTER TECHNOLOGIAE: BUSINESS INFORMATION SYSTEMS	1
MAGISTER TECHNOLOGIAE: ENGINEERING : ELECTRICAL	3
MAGISTER TECHNOLOGIAE: ENGINEERING: INDUSTRIAL	2
DOCTOR TECHNOLOGIAE: ENGINEERING : ELECTRICAL	3
DOCTOR TECHNOLOGIAE: ENGINEERING: MECHANICAL	2

5 OVERVIEW OF SKILLS ANALYSIS: Eastern Cape

5.1 NATIONAL OVERVIEW

Skills shortage in the broad field of Science, Engineering and Technology is not peculiar to South Africa. With regard to South Africa there are various factors that can account for the current skills shortage. Chief amongst these factors are policy related factors. Recently there have been concerted efforts aimed at addressing skills shortage.

The opening of the South African market coupled with economic growth within South Africa and Southern Africa as well as the global expansion in mining and infrastructure economic activities have also impacted hugely on the demand, mobility and fluidity of engineering and technical skills in particular. These economic shifts have increased the extent of the skills shortage in South Africa.

Changes in how corporations and companies conduct business have also contributed to the current skills shortages. For instance the increasing global trend of outsourcing engineering and technical aspects of business has also had a huge negative impact on the South African engineering skills. International recruiting agencies have targeted the South African engineer for some of these mega global projects. An international study conducted by Booz Allen Hamilton/NASSCOM: 2006 indicates that Europe and the United States are facing a severe shortage of skilled hi-tech workers, especially engineers. The shortage is due to an ageing workforce as well as the 10-year pattern in which very few students pursued an engineering profession.

Internationally the drop in the number of students pursuing engineering qualifications has also had its impact. In South Africa the current schooling system produces very few learners that are can qualify to undertake an engineering or technical qualification, resulting in very few students registering for such professional qualifications. The situation is further worsened by the throughput rate within these qualifications. On the international front, Europe and the US are also producing far less students, still outperforming South Africa, with these qualifications, whilst China and India are the leading global producers of far more knowledgeable workers within the engineering profession. India is also a global leader in producing approximately

95 000 graduates a year in electrical, information technology and computer- science engineering.

5.2 Registered Engineers in South Africa[17]

As discussed under the section on South African Higher Education context, South Africa produces far fewer engineering students. Statistics posted on the Engineering Council of South Africa website reflects a very gloomy picture of registered engineers in South Africa. Of major concern are the few numbers of African Asian and "Coloured" engineers across the professional and candidate levels.

Table: ECSA website

	W	African	C	Asian	TOTAL
Professional Engineer					
Civil	6054	182	30	93	6359
Electrical	2404	213	28	136	2781
Electro Mechanical	8	3	2	1	14
Industrial	149	5	0	3	157
Mechanical	2758	94	17	66	2935
TOTAL	**11373**	**497**	**77**	**299**	**12246**
Candidate Engineer					
Civil	599	195	7	86	887
Electrical	397	304	12	112	825
Electro-Mechanical	17	10	0	3	30
Industrial	74	6	0	1	81
Mechanical	590	207	0	67	864
TOTAL	**1677**	**722**	**19**	**269**	**2687**
Professional Technologists					
Civil	1090	68	29	108	1295
Electrical	840	68	16	31	955
Industrial	9	1	0	3	13
Mechanical	447	12	9	12	480
Engineering Design And Draughting	5	0	0	0	5
TOTAL	**2391**	**149**	**54**	**154**	**2748**

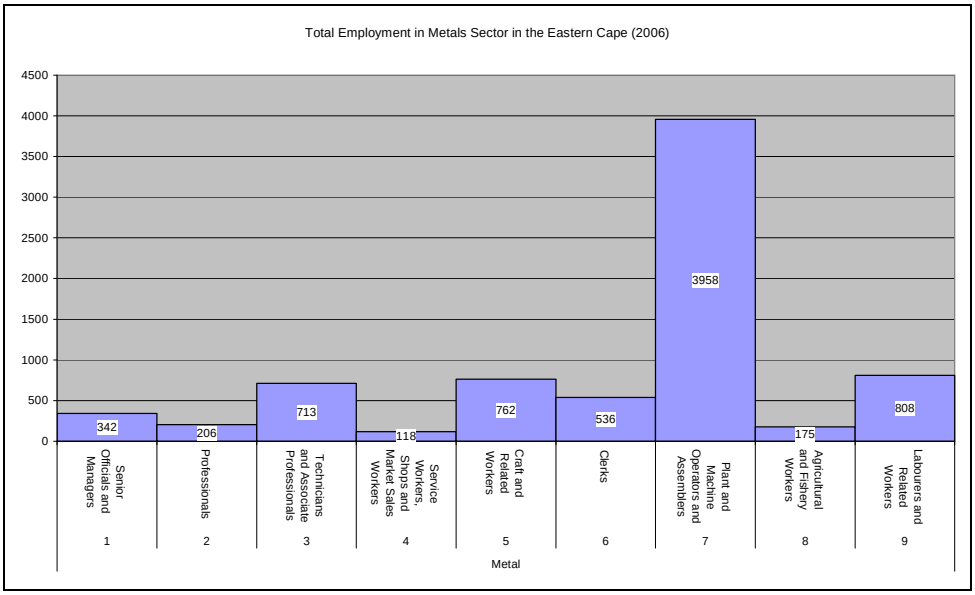
[17] Source: Engineering Council of South Africa

Candidate Engineering Technologists					
Civil	172	177	11	57	417
Electrical	67	135	5	30	237
Industrial	3	6	0	0	9
Mechanical	52	79	3	7	141
TOTAL	**294**	**397**	**19**	**94**	**804**
Engineering Tech Masters					
Civil	124	0	0	1	125
Electrical	166	0	0	0	199
Engineering Design And Draughting	17	0	0	0	0
Industrial	2	0	0	0	2
Mechanical	108	0	0	0	108
TOTAL	**417**	**0**	**0**	**1**	**418**
Registered Engineering Technicians					
Civil	296	16	8	12	332
Electrical	406	28	16	21	471
Engineering Design And Draughting	5	0	0	0	5
Industrial	5	0	0	0	5
Mechanical	157	11	4	6	178
TOTAL	**869**	**55**	**28**	**39**	**991**
Candidate Engineering Technician					
Civil	97	345	14	54	510
Electrical	83	331	5	41	460
Industrial	3	11	0	0	14
Mechanical	49	146	3	20	218
TOTAL	**232**	**833**	**22**	**115**	**1202**
Professional Technologist					
Civil	153	79	14	17	263
Electrical	446	487	43	70	1046
Industrial	2	0	0	1	3
Mechanical	79	47	8	11	145
Electro-Mechanical	14	1	0	0	15
TOTAL	**694**	**614**	**65**	**99**	**1472**

5.3. MERSETA Sectors

This section provides an analysis of the metals sub-sector of manufacturing sector. The metals sector in South Africa currently employs approximately 380,000 employees, of which 82% are located in small companies, 11% in medium size companies and the remainder in large companies. The provincial absorption of employment is located in Gauteng 77.9%, 7% in KwaZulu-Natal and Western Cape respectively. The metals sector is the most labour-intensive sectors of manufacturing with 64% of total employment being in the un-skilled and semi-skilled labour, the remaining component being skilled and highly skilled labour.

In terms of employment types the sector has 90% of personnel employed permanently, 8% outsourced and 2% temporary. The prediction is that this will change in time as most employers want to minimise labour contractual obligations. Large firms tend to maintain 98% of personnel on a permanent basis while medium size firms have 20% outsourced and 80% permanent. Employment in the metals sector[18] for the Eastern Cape (EC) currently stands at 7618. This is only 1.95% of the national metals sector. This is an indication of the scale of the metals sector in the EC. The occupational make up if this total is illustrated in the graph below.



The Eastern Cape provides a relatively small proportion of employment in the national metals sector. Relative to the national Formally Employed as provided in the

[18] Sourced from MERSETA Workplace Skills Plans from August 2006

LFS 2004[19] the proportion of employed persons by occupation category is outlined in the table below.

Skill level	Occupation Categories	Metals Sector Employment (EC)	%	Metals Sector Employment (RSA)	%	National Formal Employment (2004 LFS)	%
NQF 5 & Up	Senior officials & Managers	342	4.5%	22799	5.9%	788253	9.1%
	Professional	206	2.7%	13604	3.5%	522830	6.0%
	Technicians and Associated Professionals	713	9.4%	33937	8.7%	1094941	12.6 %
NQF 3 & 4	Clerks/Administrative Staff	536	7.0%	40795	10.5%	1200759	13.8 %
	Service Workers/Support & Co-ordination Staff	118	1.5%	27995	7.2%	1138353	13.1 %
	Artisans/Journeyman/ Maintenance	762	10.0%	39071	10.1%	1033025	11.9 %
	Plant & Machine Operators and Assemblers	3958	52.0%	132927	34.2%	1102553	12.7 %
NQF 2 & below	Elementary Occupations (GW)	983	12.9%	77578	20.0%	1823265	20.9 %
	TOTAL	7618		388706		8703979	

The table above shows that there is no correlation between the proportional employment by occupational category between the Formally Employed persons in SA and those employed in the metals sub-sector. This can be illustrated by the fact that a far greater number of persons employed in the metals sector are in the Plant and Machine Operator occupational categories than in the total Formally Employed category. The WSP information indicates that the industry is reliant on approximately 50% of the workforce being in the semi-skilled occupational categories. A relatively small portion of Service, Support and Co-ordination staff (1.5%) is located in the metals industry in the EC. There is vast difference with the total formally employed sector of 13.1%. This can be compared to the national metal industry figure of 7.2%. An analysis of the skills shortages in metals sector20 indicates the following:

[19] Labour Force Survey 2004(updated figures are available in the LFS March 2006)
[20] Source: Secondary Research Findings: General Employment Trends, MERSETA 2006

Scare skills

Skills required	Skills shortages
Tool makers	Draughts persons
Armature winders	Welders
Welders	Tool makers
Draughts persons	Artisans
Mechanical Engineers	Mechanical engineers
Electricians	Millwrights
Operators	Refrigeration mechanics
Millwrights	
Industrial Mechanics	
Fitters and Turners	
Earth moving equipment mechanics	

The Metals Chamber members of the MERSETA at a workshop in March 2006 identified specific scarce and critical skills. The analysis indicates that the industry is suffering from a gradual loss of skills. There is an absence of formal training in basic foundry skills, tooling, and rapid design technologies.

The skills constraints are particularly severe for smaller firms, which lack resources to provide on-going training in new techniques and production methods while a number of firms have developed their own in-house training programmes in both basic foundry skills and more advanced skills specific to the type of casting process used, a major problem with these independent initiatives is that they are not formally recognised or accredited.

A key concern raised is that a lag time exists between training and having a qualified person. The key factor that needs to be considered is that cost of training in the metals sector is high as it takes a long time to obtain specialised training. And hands-on experience is needed to complete training. .

National Picture: identified scarce skills and levels

ENGINEERING	TECHNICIANS	TRADE	MANAGEMENT
Design & development	**Drafting & design**	**Repair & maintenance**	**Senior Executive – strategic**
Design and development engineers	*Drafts persons*	*Electricians*	*Production managers*
Electrical engineering designers		*Coded & pipe welders*	*Black managers*
Mechanical designers (CAD)		*Mechanics*	*Business Unit*
		Millwrights	

		Roll turners	*Managers*
		Instrument mechanics	
Materials	**Electronic repair &**	**Manufacturing:**	**Middle**
Chemical engineers	**maintenance**	*Pipe welders*	**management**
Metallurgical engineers	*Millwright*	*Fitters & turners*	*Operations*
Black material engineers		*Power transmission*	*managers*
		specialist	*IT managers*
		Ceramists	*Production managers*
		Chrome platers	*Project managers*
Process	Instrumentation & control		
Product engineers	systems		
	Instrument mechanics		
Specialised	**Other**		
Power transformer engineers	*Contract technicians*		
Black engineers			
Traditional			
Mechanical engineers			
Civil engineers			
Electrical engineers			
Contract engineers			

5.3 Construction Sector21

The Construction Industry Development Board undertook an investigation in 2006 to assess whether there was likely to be a skills deficit in the construction and engineering fields as a result of the proposed increases in infrastructure investment over the next decade. The overwhelming conclusion of the investigation is that a comprehensive challenge exists to restore or replace the skills pipeline that produces the wide range of skills required by the construction and engineering industries, in order that the country's longer-term infrastructure delivery objectives can be met.

According to the CIDB 2006 discussion document formal employment in the construction sector decreased progressively in the 1990s until the low of 2001 when the industry had lost more than 200 000 jobs. An increase in infrastructure investment since 2003 has seen a steady increase in the number of jobs created and the accompanying challenge to secure requisite skills. This challenge has been exacerbated in recent times by the announcement of the Gautrain, infrastructure for the 2010 FIFA World Cup and government's R372bn infrastructure investment

[21] Discussion is borrowed from the CIDB 2006 skills supply in the construction industry.

programme. The strong focus of the EPWP on labour intensive construction also places extra demands for qualified supervisors and managers.

Historically, as evidenced by graduation rates in construction and engineering, skills development has always lagged behind increases in construction spend. While it is reasonable therefore to assume that industry will respond to meet the growth in skills demand, this current growth phase requires substantive interventions involving a wide range of stakeholders, because:

- The current growth in infrastructure investment has come on the back of lows in the industry that have not been experienced for decades;
- Labour practices of the past decade have resulted in fundamental structural changes favouring labour brokering, resulted in declining investments in skills development; and
- There have been fundamental changes, and breakdowns, in the skills-supply pipeline.

An analysis of the supply of skills in the learnership, further education and training (FET) and higher education and training (HET) sectors shows that increasing numbers of learners are *entering* training institutions – which could suggest that the supply should more than adequately cover the increased demand over the next five years.

However, taking into account the low throughput ratios, lack of access to experiential training for qualification purposes and non-accreditation of certain curricula together with normal attrition rates as well as changes in work processes, the ability of the supply pipeline to meet the required demand is far from certain. In order to interpret the additional demand for skills, and to place the skills challenge in context, it is necessary to differentiate between scarce skills and critical skills:

The term “scarce skills” refers to those skills which are in short supply but which can be obtained through short-term targeted training (such as many artisan skills); while “critical skills” refers to particular high-level skills within certain occupations (e.g. experienced contract managers, high-quality metallurgical welders). The largest demand for skills is in the scarce skills categories, which can be met through short-term targeting training. Critical skills, on the other hand, are required in much fewer numbers, but require up to 10 to 20 years of experience.

5.4 OVERVIEW: SKILLS SHORTAGES IN THE NMB[22]

The most recent skills survey conducted within the NMB area has been the Skills Audit of the Motherwell area concluded in 2004 by the Faculty of Health Sciences at the University of Port Elizabeth. This sub-section borrows heavily from this 2004 research project. A skill needs analysis conducted on the planned mega projects to take place in the Metro suggests that the skills shortages identified by the metals industry will be required in all the planned mega projects.

5.4.1 Electrical / Mechanical Skills:

The survey conducted in Motherwell found that an estimated 11620 or 9.3% of people in this area had some electrical or mechanical skills, while 1.8% had qualifications in the skills category. While a slightly lower percentage of people in the younger age categories possessed these skills that those in older age categories, it is not significant. The percentage of males with electrical of mechanical skills (16.6%) was significantly higher than among females (3.7%), while 4.6% of disabled people compared with 9.5% of the rest indicated so.

Among full time employed people, 14.0% had electrical or mechanical skills, among self-employed people it was 13.1%, while among part time employed and unemployed people it was 11.8% and 8.1%, respectively. While 44.6% of those with skills in this category had 1 - 4 years' experience, 25.6% had 5 - 9 years and 18.5% had 10 - 19 years experience. The vast majority (85.8%) of those with qualifications in this field obtained them since the advent of the millennium. Of the projected 11620 people with electrical or mechanical skills, 3180 indicated that they had skills in a basic electrical background, 2680 had skills related to the work of electricians (it does not necessarily mean that they are electricians, though) 2180 had skills relating to motor mechanics and 920 had spray painting skills.

[22] Source: 2004 Motherwell Skills Audit Motherwell, conducted by HDRI, UPE

5.4.2 Manufacturing skills:

In the same survey an estimated 13.6% of the population aged between 18 - 65 years old had manufacturing skills, representing 15440 people. Although a larger percentage of people (19.6%) in the 35 - 49 year old category have manufacturing skills, it is especially the younger age bracket where the percentage of people with these skills are low (9.3%). Almost twice the percentage of females have manufacturing skills (16.7%) compared with men (9.2%), while the percentage of the disabled (12.3%) with manufacturing skills closely reflects that of the rest of the population (13.8%).

When categorizing people with manufacturing skills according to employment category, it is apparent that they are spread over many employment categories. The percentage of pensioners, housewives, full and part time employed people, self employed and unemployed people with manufacturing skills were all between 13% and 19%. In terms of experience, a similar situation arises, with the majority of people having between 1 - 19 years of experience in manufacturing. Almost half the people with manufacturing experience (49.6%) obtained their qualifications in the 1990s, with another 37.6% doing so since the beginning of 2000. Of the projected 15440 people with manufacturing skills, 5020 have skills relating to textiles, 2840 have skills relating to food and 2500 relating to dressmaking (including sewing and knitting).

5.4.3 Building Skills:

Survey results indicate that a projected total of 16940, or 13.1% of people in Motherwell of working age, had building skills. However, only 2.8% of the population had building qualifications. While 10.1% of those 18 - 34 years old had building skills, about 16.5% of people in the higher age groups could say the same. Men also dominated this skills category, with 23.1% of men, compared with only 5.3% of women in Motherwell with building skills. The percentage of disabled people (11.5%) with these skills almost equalled that of the rest of the population (13.2%). While almost 23% of part time employed people indicated that they had building skills, these were higher than those with full time employment (15.9%) or the unemployed (12.6%).

While the majority of those skilled in building have 1 - 4 years experience (40.5%), about 23% had 5 - 9 and 10 - 19 years experience, respectively. About 20% of those with qualifications obtained them prior to 1990, while those obtaining their qualifications inthe 1990s and those after 1999 were relatively evenly divided. Of the projected 16940 people with building skills in Motherwell, 4600 have painting skills, 3980 have brick laying skills, 1740 have carpentry skills and 1640 have plastering skills.

CIVIL CONSTRUCTION SKILLS

SKILLS	CRITICAL SKILLS NEEDED					PREDICTED CRITICAL SKILLS SHORTFALL OR OVERSUPPLY				
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Mason	110	90	52	60	8	310	330	368	360	412
Carpenter	48	46	50	56	0	472	474	470	464	520
Concrete Curbing	18	32	16	14	4	142	128	144	146	156
Concrete Slab casters	14	54	44	2	42	26	-14	-4	38	-2
Concrete setting skills	2	22	22	20	0	38	18	18	20	40
Drain pipe layers	0	20	20	20	0	100	80	80	80	100
Storm water pipe layers	16	82	32	32	4	4	-62	-12	-12	16
Engineers	24	24	18	22	8	96	96	102	98	112
Fitters	0	2	2	2	2	60	58	58	58	58
Curbing	2	2	2	2	2	58	58	58	58	58
Pipe layers	0	4	8	18	0	260	256	252	242	260
Paving	2	2	2	0	0	398	398	398	400	400
Plastering masons	4	0	0	0	0	336	340	340	340	340
Premix layers	6	6	6	6	4	74	74	74	74	76
Plumbers	34	18	22	28	2	506	522	518	512	538
Rail track layers	0	8	8	8	8	40	32	32	32	32
Readyboard fitters	25	0	0	0	0	-2	0	0	0	0
Road construction skills	72	136	118	118	36	8	-56	-38	-38	44
Road signs and Marking	12	16	12	12	8	28	24	28	28	32
Planting of traffic poles	12	16	12	12	8	28	24	28	28	32
Shuttering	0	40	64	76	0	60	20	-4	-16	60
Surveyors	18	28	22	24	8	102	92	98	96	112
Tar surfacing	16	16	10	10	6	84	84	90	90	94
Welders	14	26	20	18	8	766	754	760	762	772
Steel fixer	4	46	56	62	4	36	-6	-16	-22	36
Scaffolder	0	0	8	16	0	20	20	12	4	20
Testing	12	12	12	16	28	-12	-12	-12	-16	-28
Civil Construction	82	244	162	176	76	-62	-224	-142	-156	-56

Ganger	8	0	0	0	0	-8	0	0	0	0
Contracting Skills	114	0	0	0	0	-114	0	0	0	0
TOTAL						**4052**	**3882**	**3928**	**3930**	**4320**

BUILDING SKILLS

SKILL	CRITICAL SKILLS NEEDS					PREDICTED CRITICAL SKILLS SHORTFALL OR OVERSUPPLY				
	2004	**2005**	**2006**	**2007**	**2008**	**2004**	**2005**	**2006**	**2007**	**2008**
Masons bricklaying	190	96	80	70	10	2290	2384	2400	2410	2470
Masons plasterers	152	74	78	68	8	1048	1126	1122	1132	1192
Carpenters	4	48	46	40	0	1056	1012	1014	1020	1060
Concrete slab casters	132	0	0	0	0	-72	60	60	60	60
Drain pipe layers	0	20	20	20	0	20	0	0	0	20
Metalwork Roofing	146	34	34	34	14	-106	6	6	6	26
Plumbers	144	20	14	12	2	496	620	626	628	638
Shuttering	132	40	40	40	0	-72	20	20	20	60
Site agents	138	8	4	4	0	-118	12	16	16	20
Pipe layers	0	20	20	20	0	60	40	40	40	60
Surveyors	138	8	4	4	0	-18	112	116	116	120
Welding	6	16	10	10	0	354	344	350	350	360
Trenching	132	80	80	80	0	168	220	220	220	300
Painting	146	32	32	28	8	2474	2588	2588	2592	2612
General mason	144	52	40	40	0	-84	8	20	20	60
Building engineer	136	8	4	4	0	-138	-8	-4	-4	0
Waterproofing	132	20	22	22	0	-112	0	-2	-2	20
Tiling	10	24	24	24	4	110	96	96	96	116
Laying floor or carpets	0	10	10	10	0	60	50	50	50	60
Concrete reinforcing	132	40	40	40	0	-112	-20	-20	-20	20
Glazing	142	20	16	14	4	-82	40	44	46	56
Concrete mixer	30	46	40	40	0	-10	-26	-20	-20	20
Brick making	60	100	40	40	0	120	80	140	140	180
TOTAL						**8256**	**8818**	**8928**	**8962**	**9530**

ELECTRICAL / MECHANICAL SKILLS

SKILLS	CRITICAL SKILLS NEEDS					PREDICTED CRITICAL SKILLS SHORTFALL OR OVERSUPPLY				
	2004	**2005**	**2006**	**2007**	**2008**	**2004**	**2005**	**2006**	**2007**	**2008**
Basic electrical background	56	48	2	2	2	1344	1352	1398	1398	1398
Electrical engineers	0	4	4	4	0	480	476	476	476	480
Electricians	12	28	24	24	4	1488	1432	1436	1436	1456
High voltage engineers	2	6	4	4	0	58	54	56	56	60

Stringer / Cable pullers	30	62	20	20	0	-10	-42	0	0	20
Diesel mechanics	0	10	10	10	0	60	50	50	50	60
Electric Fencing	2	2	2	2	2	38	38	38	38	38
Lubrication	30	42	0	0	0	10	-2	40	40	40
Ventilation Controller & Dust barrier	20	30	0	0	0	0	-10	20	20	20
TOTAL						3478	3402	3514	3514	3572

5.4.4 MBA: Skills in the Building Industry: Southern & Eastern Cape[23]

The information below is based on average statistical information. The information is also based only on companies that are registered with the Master Builder Association. Thus the information excludes companies that are not registered on MBA database. Thus the numbers are estimates on average, as the workforce in the industry rise and fall quite dramatically as new contracts are started or existing ones are completed.

No of registered companies	± 600
Unskilled Employees	± 8000
Skilled Employees	± 2000
Gen Foreman	**±** 60
Foreman	**±**120
Bricklayer/Plasterers	**±** 1150
Carpenters	**±** 200
Plumbers	**±** 100
Electricians	**±** 120
Painters	**±** 200
Joiners	**±** 50

[23] Data provided by the NMB local MBA offices, March 2007.

5.4.5 Projected Skills Shortages For Planned Mega Projects:

The metro has planned to undertake various mega projects that require skills in the sectors under review. These projects include some of the NMB Vision 2020 projects such as Njoli Square; Bayworld, NMBLP Hub; NMBLP 20 000sqm; NMBLP 9000sqm; Convention Centre; Coega IDZ; Ngqura Port; Soccer Stadium and Aspen **(see appendix).**

The skills have been estimated based on the size of the each project. The Coega IDZ skills estimates are based on the number of investors that have signed and only reflect the skill requirements of such projects for the construction phase and not the operations phase.

For this phase 2 of the NMB HRD project it has been difficult to get private companies to disclose some of their future planned projects. The skills breakdown below also excludes any government infrastructure projects planned, domestic building, business office or residential developments planned in the metro. The scope of this exercise has not included these latter areas.

Estimated Skills Required for Mega Projects in the Nelson Mandela Bay

Occupation	TOTAL ***
Manager	141
Architect / civil	27
Quantity surveyor	20
Mechanical	13
Electrical	15
Electrical & Mechanical	23
Electrical & Mechanical	155
Surveyors	43
Site Clerk	212
Foreman & Supervision	267
Site Agent	42
Human Resources	22
Structural Riggers	58
Bricklayers	455
Electricians	337
Mechanical artisans	925
Carpenters	374
Shutter.hd/ Concret.h/ Reinforc.hd	2480

Heavy duty drivers & Operators	315
Learners / interns	235
Structural workers *	4893
Landscape Assistant	180
Shutter.hd & Concret.hd& Reinforc.hd	5833
MEI workers **	4458
General Worker	13838
	34663

5.5 LEARNERSHIP TYPES AND SKILLS PROGRAMMES: NMB

5.5.1 Construction Education and Training Authority (CETA): NMB

CETA is moving towards a project based approach when it comes to future activities. By adopting such an approach when implementing and managing various business actions, CETA aims to ensure that effective and efficient control measures are not only put into place but adhered to in all processes (this includes Learnerships and Skills Programmes).

For the fiscal year 2006/2007, CETA will be focusing on the following Strategic programmes that will assist the Authority in achieving the strategic goals and objectives that support both legislation and NSDS targets. All project proposals will be aligned with the above strategic programmes and the CETA will ensure equitable distribution grants across the industry. The programmes are:

- Promote research and communication at CETA
- Promote quality HRD in the sector
- Identify and promote scarce and critical skills in the sector
- Promotion of co-operatives, CCOE's and New Venture creation initiatives
- Promotion of quality delivery in the sector
- Capacity Building of governance and constituent members

5.5.2 CETA Learnerships

	LS	Outside NMB	NMB	TOTAL (EC)
Construction roadworker (const)	L1	225	0	225

Community House Builder (entrep.)	L2	282	(15*)	282
Construction contractor (lic)	L2	25	0	25
Construction carpenter (fmw)	L3	19	13	32
Construction contractor	L2	136	251	387
Construction carpenter (mwp)	L3	4	7	11
Construction mason (face bl)	L3	15	4	19
Construction mason (plast)	L3	0	2	2
Construction painter	L3	16	6	22
Construction plumber	L3	49	61	110
Construction supervisor (build)	L4	10	0	10
Construction supervisor (lic r&s)	L4	112	21	133
Construction tiler	L3	0	12	12
Generic business administration	L2(SA)	0	4	4
Generic business administration	L4	0	4	4
Generic multi-sector proj.man.	L4	0	18	18
Information technology	L4	0	1	1
Labour recruitment consultancy	L4	0	4	4
Manager (building construction)	L5	3	5	8
Manager (civil construction-structural)	L5	5	0	5
NC in Vehicle Maintenance	L3	0	1	1
Public relations	L4	0	4	4
Technician (civil)	L6	9	31	40
Technician: electrical engineering	L6	0	3**	3**
TOTAL * Never commenced| ** Error of these should be an electrician.		910	412	1362

5.5.3 MERSERTA Apprenticeship and Learnerships: NMB

The MERSETA is one of few SETAS' that still offer apprenticeships. Apprenticeship training involves technical training that includes practical and theoretical training. The apprenticeships are offered in particular trades. To be a recognised fully qualified artisan an apprentice must undertake a trade test. The requirements to undertake an apprenticeship differs from trade to trade however learners must have a maths and science background.

MERSETA APPRENTISHIPS: 2007				
	National	Female National	Eastern Cape	Females
Sub-sector				
Auto				
Automotive Electrician	10	2	1	1
Electrical	1	1	0	0
Electrical (Engineering)	31	8	11	6
Electronics Equipment Mechanician	14	0	0	0
Fitter	29	1	4	0
Motor Mechanic	16	0	0	0
Tool Jig & Die Maker	21	3	1	0
Turner Machinist	16	0	0	0
TOTAL	**138**	**15**	**17**	**7**
Motor				
Automotive Body Repairer	403	7	32	0
Automotive Electrician	235	13	20	4
Automotive Engine Fitter	18	1	0	0
Automotive Machinist	166	3	16	0
Automotive Trimmer	3	0	0	0
Diesel Fuel Injection Mechanic	60	2	3	1
Diesel Mechanic	565	16	58	6
Fitter and Turner	23	0	6	0
Motor Mechanic	1708	39	149	5
Motorcycle and Scooter mechanic	31	1	4	0
Spraypainter	220	10	22	3
Tool Jig & Die Maker	39	5	2	0
Tractor Mechanic	33	0	1	0
Vehicle Body Builder	9	0	0	0
TOTAL	**3513**	**97**	**313**	**19**
Metal				
Amature Winder	56	1	0	0
Automotive Electrician	1	0	0	0
Blacksmith	5	0	0	0
Boilermaker	367	9	32	1
Diesel Fitter	34	0	1	0
Diesinker and Engraver	2	1	0	0
Domestic Appliance Mechanician	2	0	0	0
Earth Moving Equipment Mechanic	151	2	1	0
Electrician	431	50	44	4

Electronics Equipment Mechanician	9	0	4	0
Fitter	270	9	20	0
Fitter and Turner	434	24	60	2
Forklift Mechanic	31	3	5	0
Instrument Mechanician	63	14	0	0
Lift Mechanic	82	9	0	0
Millwright (Electromechanician)	438	32	24	5
Motor Mechanic	12	0	2	0
Moulder	18	0	4	0
Patternmaker	22	0	3	0
Plastic Mould Maker	11	0	1	0
Refractory Mason	2	0	0	0
Refrigeration Mechanic (commercial)	27	0	1	0
Refrigeration Mechanic (Industrial)	80	0	6	0
Rigger	22	0	0	0
Roll turner	5	0	0	0
Sheet Metal Worker	37	0	11	0
Telecommunications Mechanician	2	0	0	0
Tool Jig & Die Maker	383	7	155	2
Tractor Mechanic	23	0	0	0
Turner	230	6	48	0
Turner Machinist	2	0	0	0
Welder	102	9	21	1
Total	**3354**	**176**	**443**	**15**
GRAND TOTAL	**7005**	**288**	**773**	**41**

Industry	NQF level	Qualification Title	Learnership Name	National	Eastern Cape
Mechanical					
	2	N.C in Airconditioning, Refrigeration and Ventilation	Airconditioning, Refrigeration and Ventilation	85	7
	3	N.C in Airconditioning, Refrigeration and Ventilation	Airconditioning, Refrigeration and Ventilation	125	7
	4	N.C in Airconditioning, Refrigeration and Ventilation	Airconditioning, Refrigeration and Ventilation	1	0
	2	N.C in Automotive component Manufacturing and Assembly	Automotive component Manufacturing and	978	113

			Assembly		
	3	N.C in Automotive component Manufacturing and Assembly	Automotive component Manufacturing and Assembly	23	23
	2	N.C in Autotronics	Autotronics	70	11
	3	N.C in Autotronics	Autotronics	24	10
	4	N.C in Autotronics	Autotronics	35	19
	2	N.C in Engineering Fabrication	Boilermaker	481	57
	3	N.C in Engineering Fabrication	Boilermaker	10	0
	2	N.C in Engineering Fabrication	Sheetmetal Worker	96	0
	2	N.C in Engineering Fabrication	Vehicle Body Building	5	0
	5	N.C in First Line Manufacturing Management	First line Manufacturing Management	17	0
	4	N.C in Further Education and Training Certificate	Manufacturing and Assembly Logistics	7	0
	2	N.C in Industrial Rubber Manufacturing	Mixing or Extruding or Moulding or Calendaring	29	0
	2	N.C in Iron and Steel Manufacturing	Iron and Steel Manufacturing	115	0
	3	N.C in Iron and Steel Manufacturing	Iron and Steel Manufacturing	20	0
	4	N.C in Iron and Steel Manufacturing	Iron and Steel Manufacturing	6	0
	3	N.C in Maintaining Vehicles	Commercial Vehicles	29	0
	3	N.C in Maintaining Vehicles	Earthmoving Equipment	50	0
	3	N.C in Maintaining Vehicles	Passenger, light delivery	120	0
	3	N.C in Management	Team leader	232	0
	4	N.C in Management	Management	62	41
	5	N.C in Management	Management	102	46
	1	N.C in Manufacturing,	Manufacturing,	2917	171

		Engineering and Related activities	Engineering and Related activities		
	2	N.C Mechanical, Engineering	Fitter and Turner	93	14
	3	N.C Mechanical, Engineering	Fitter and Turner	2	0
	4	N.C Mechanical, Engineering	Fitter and Turner	25	10
	2	N.C Mechanical, Engineering	Fitter	102	12
	3	N.C Mechanical, Engineering	Fitter	31	0
	4	N.C Mechanical, Engineering	Fitter	1	0
	2	N.C Mechanical, Engineering	Roll Turner	4	0
	2	N.C Mechanical, Engineering	Tool, Jig & Diemaker	57	22
	2	N.C Mechanical, Engineering	Turner	78	6
	3	N.C Mechanical, Engineering	Turner	15	6
	3	N.C Mechanical, Engineering	Tool, Jig & Diemaker	20	7
	2	N.C Mechatronics	Mechatronics	187	61
	3	N.C Mechatronics	Mechatronics	41	39
	4	N.C Mechatronics	Mechatronics	2	39
	2	N.C Metal and Engineering Manufacturing Processes	Metal and Engineering Manufacturing Processes	182	1
	4	N.C Metal and Engineering Manufacturing Processes	Metal and Engineering Manufacturing Processes	0	0
	4	N.C Motor Sales and Support services	Motor Sales and Support services	219	0
	4	N.C Motor Sales and Support services	Parts & Accessories Sales	15	0
	4	N.C Motor Sales and Support services	Sales of Tyres	15	0
	4	N.C Motor Sales and Support services	Service & Repair Sales	14	0
	4	N.C Motor Sales and Support services	Vehicle Sales	108	0

	2	N.C Plastics Manufacturing	Plastic Manufacturing	85	14
	3	N.C Plastics Manufacturing	Plastic Manufacturing	15	6
	2	N.C Polymer Composite Fabrication	Polymer Fabrication	41	0
	2	N.C Power and Telecommunication Cable Manufacturing	Cable Manufacturing	4	4
	5	N.C Rubber Technology	Rubber Technology	12	12
	2	N.C Servicing Vehicles	Commercial Vehicles	99	31
	2	N.C Servicing Vehicles	Earthmoving Equipment	132	0
	2	N.C Servicing Vehicles	Passenger, light delivery	357	21
	2	N.C Thermoplastic Fabrication	Thermoplastic Fabrication	22	0
	3	N.C Welding	All positions: Plates	1	0
	2	N.C Welding	Downhand Welding: Plates	152	5

5.5.4 MERSETA In-house Skills Programmes

Companies that are levy paying members to the MERSETA implement various in-house on- job training programs. Metal sector: Artisan recognition agreement in Metal Industry CERITIFICATE shortly called ATRAMI and various trades such as welder, boiler maker, tool making etc. Motor retail and garages: Repair shop assistant mainly in Motor garages and trades such as Motor mechanic, panel beating, spray painting automotive engine fitter etc. Plastics Sector: Skills programs training is offered on job for various plastic based small work units. Automotive Sector: An Amic certificate programs are used to train workers on job and trades such fitter and turner, fitter, automotive electrician. New Tyre sector also trains on short skills programs on job and specific to the sector needs. This sector train trades such as electricians, fitters etc.

5.5.5 Possible skills challenges in the NMB

The industry sectors that will be directly affected by the skills requirements for the key construction related projects are civil & building and the mechanical, electrical, instrumentation & piping sectors. Project management skills at all levels has been highlighted as a scarce skill and crosses all sectors. All the occupations identified above have been listed by the SETAs as scarce skills. The requirements at the middle and high levels show the following:

Civil construction:

(i) Civil engineers
(ii) Structural engineers
(iii) Quantity surveyors
(iv) Survey technicians
(v) Structural riggers
(vi) Skilled shutter-hands, concrete-hands and re-inforcing-hands

Building construction:

(i) Architects (draughting)
(ii) Skilled bricklayers
(iii) Skilled carpenters
(iv) Electricians

MEI&P:

(i) Mechanical engineers
(ii) Electrical engineers
(iii) Mechanical and electrical technicians
(iv) Mechanical and electrical artisans

Currently the auto industry is the key driver of the local economy. The skills listed below have been identified as in short supply when considering the projects planned for the Metro. Thus the auto industry has the following skills shortages:

(a) Industrial engineers
(b) Process engineers
(c) Mechanical and electrical engineers
(d) Mechatronics engineers and technicians

(e) Autotronics technicians
(f) Tool, jig and die makers
(g) Auto electricians
(h) Programmers
(i) Maintenance artisans

The various planned infrastructure projects as well as the operations phase of major investors such as the Aluminium Smelter will have a huge impact on the extent of skills shortages. A number of learnership programme and skills programmes currently being implemented in the NMB region will somehow reduce the skills programme. However more needs to be done to ensure the capacitation of the local employed and unemployed human capital. The local industry through its participation in various skills initiatives is already addressing the skills shortage challenge. A number of lessons can be learnt from the interaction between training service providers, local industry, government departments and education and training institutions that collaborate in implementing development programmes to ensure the skills are developed in the various trades and skills levels.

6 HUMAN CAPITAL DEVELOPMENT INITIATIVES: NMB

6.1 Overall context

All sectors of the South African economy have realised the severity of the skills shortages that confront the country. A number of projects and programmes have been initiated across the spectrum of agencies and institutions responsible for ensure the economy has sufficient skills to grow at the pace anticipated. The brief discussion below speaks on some of the key initiatives that government, professional associations, SETA regional offices and the CDC have embarked on to mitigate the potential human resource shortages in the sectors under review.

Briefly the focus is on:

- ASGISA and JIPSA initiatives
- ECSA initiatives
- CETA, MERSETA, CHIETA and ESETA initiatives
- AIDC and CDC regional initiatives.

6.2 Accelerated and Shared Growth Initiative for South Africa (AsgiSA)

In 2004 the South African Government undertook to halve poverty and unemployment by 2014. To achieve this, government adopted a two phased approach. In the first phase, between 2005 and 2009, the aim was to increase the annual growth rate to average 4, 5% or higher. In the second phase, between 2010 and 2014, an average growth rate of at least 6% of gross domestic product (GDP) should be achieved.

In order to roll back the backlog that has emerged in public infrastructure, public-sector investment is planned to rise to around 8% of GDP. As indicated in the Medium Term Budget Policy 6 Statement in October 2005, government and public enterprise investment expenditure for the period April 2005 and March 2008 is planned to be about R370 billion.

Of this, about 40% will be spent by public enterprises, mostly Eskom (R84 billion) and Transnet (R47 billion, of which R40 billion is 'core'), and mainly on power generation, power distribution, rail transport, harbours and an oil pipeline. The general purpose is to improve the availability and reliability of infrastructure services in response to rapidly growing demand.

Key areas of government expenditure, incorporating all spheres, are:

- provincial and local roads,
- bulk water infrastructure and water supply networks,
- energy distribution,
- housing, schools and clinics, business centres, sports facilities, and
- multi-purpose government service centres, including police stations, courts and correctional facilities.

Electronic communications is a key commercial and social infrastructure is receiving the focus of attention. Plans to be implemented in electronic communications include:

- Implementation of a strategy to rapidly grow South Africa's broadband network
- Implementation of a plan to reduce telephony costs more rapidly
- Completion of a submarine cable project that will provide competitive and reliable international access, especially to Africa and Asia
- Provision of subsidies to encourage the establishment of telecommunications – and labour-intensive businesses in poor areas.

Another key challenge in the infrastructure sector is preparations for the 2010 FIFA World Cup. This includes building or improving the 10 stadiums to be used, and investment in the environs and access to the stadiums.

Other strategic interventions in the infrastructure arena include further development of the country's research and development infrastructure, and further improvement in the modalities for public-private partnerships in the development and maintenance of public infrastructure.

Public-sector infrastructure spending has considerable potential spin-offs in terms of the generation or regeneration of domestic supply industries, small business development and empowerment. Government is seeking to maximise the positive impact of these spin-offs on the domestic economy.

In addition to the general infrastructure programmes, provinces were asked to propose special projects that would have a major impact on accelerating and sharing growth. A set of projects has been selected for finalisation of implementation plans, some of which are already underway.

Provincial infrastructure projects aligned to AsgiSA:

- The Umzimvubu Catchment and Timber Industries Development Initiative in the Eastern Cape
- A diamond and gemstone jewellery project in the Northern Cape
- A biofuels initiative that will cover at least Northern Cape, Free State, KwaZulu-Natal, Eastern Cape and Mpumalanga
- A water reticulation project for Mokopane-Vaalwater-Marken in Limpopo
- A Moloto Corridor Rail Project, mostly in Mpumalanga
- Gauteng-Durban Corridor including Johannesburg City Deep, Harrismith Hub and Durban Dube Trade Port
- The Johannesburg International Airport Logistics Hub and Industrial Development Zone in Gauteng
- The Makhathini Cassava and Sugar Project in KwaZulu-Natal
- A national livestock project that would particularly focus on the Northern Cape and North West
- The Dilokong Platinum Corridor to integrate development located around the planned De Hoop Dam in Limpopo
- The proposed Square Kilometre Array and linked projects in Northern Cape
- The Cape Flats Infrastructure Project in the Western Cape

For both the public infrastructure and the private investment programmes, the single greatest impediment is shortage of skills – including professional skills such as engineers and scientists; managers such as financial, personnel and project managers; and skilled technical employees such as artisans and IT technicians. The shortfall is due to the policies of the apartheid era and the slowness of our education and skills development institutions to catch up with the current acceleration of economic growth.

The AsgiSA responses range from medium-term educational interventions to raise the level of skills in areas needed by the economy to immediate measures to acquire the skills needed for the implementation of AsgiSA projects.

- The QIDS-UP programme aimed at achieving high levels of literacy and numeracy in the lowest grades
- The Maths and Science (Dinaledi) programme for 529 high schools to double Maths and Science high school graduates to 50 000 by 2008
- An upgraded career guidance programme
- A huge upgrading of the Further Education and Training colleges.
- The Adult Basic and Education Training programme is to be ramped up, based on a model developed in Cuba and New Zealand

Apart from interventions to address the skills challenge in the educational sphere, measures include the development of an Employment Services System (to close the gap between potential employers and employees), and Phase 2 of the National Skills Development Strategy.

A short-term project is the development of a scarce skills database based directly on the expected needs of the over 100 individual projects included in AsgiSA.

Other key skills projects include the deployment of experienced professionals and managers to local governments to improve project development, implementation and maintenance capabilities. The project managed by the Development Bank of Southern Africa (DBSA) will deploy an estimated total of 150 expert staff, with the first 30 to be deployed in April 2006. The project will also include skills transfer to new graduates. The DBSA is compiling a database of ‘retired experts' for this and further possible deployments.

The Umsobomvu Youth Trust is driving a number of initiatives, many of which entail youth volunteers, to support a range of skills development programmes.

A new institution is the Joint Initiative for Priority Skills Acquisition (JIPSA). It is led by a committee of the Deputy President, key ministers, business leaders, trade unionists and education and training providers or experts. Its job will be to identify urgent skills needs and quick and effective solutions. Solutions may include special training programmes, bringing back retirees or South Africans and Africans working out of Africa, and drawing in new immigrants where necessary. It may also include mentoring and overseas placement of trainees to fast-track their development. JIPSA will have an initial timetable of 18 months, starting in March 2006, after which its future will be reviewed.

As part of JIPSA, 100 women will in April begin a one-year placement programme in the United Arab Emirates focused on developing skills in infrastructure project management and project financing as well as tourism. There will be similar placement programmes in South African companies.

AsgiSA includes some specific measures of response to the challenges of exclusion of the Second Economy.

This is aimed on leveraging the increased levels of public expenditure, especially investment expenditure, to promote small businesses and broad-based empowerment addressing such issues as access to finance, preferential procurement and a review of the impact of regulations on labour-intensive sectors. Linking small businesses to opportunities deriving from the 2010 FIFA World Cup is another task for government. Private companies will also be persuaded to engage in affirmative procurement. It is also clear that to achieve AsgiSA's goal of halving unemployment and poverty by 2014, a particular attention will have to be given to the concerns of women and youth.

With regard to women, the focus will be on expanding and accelerating access to economic opportunities including skills development and finance. Programmes include:

- Human resource training
- Ensuring they have access to finance (micro to mega bucks)
- Fast-tracking them out of the Second Economy
- Ensuring their significant participation in agriculture and creative industries
- Improving their access to basic services
- Increasing their participation in the Expanded Public Works Programme (EPWP)

On the youth front, one intervention is to target unemployed graduates for jobs or learnerships. This includes support for the Umsobomvu Youth Fund initiative to register unemployed graduates on their database, and engage with business to participate in this initiative. The focus on youth development will have to be intensified in all spheres of government. Measures to promote youth development during 2006/07 include:

- Set up 100 new youth advisory centres
- Enrol at least 10 000 young people in the National Youth Service
- Enrol 5 000 volunteers to act as mentors to vulnerable children
- Expand the reach of our business support system to young people
- Intensify the Youth Co-operative Programme
- Closely monitor the impact of our programmes on youth skills training and business empowerment as an integral part of our national effort

Broad Based Black Economic Empowerment will be leveraged to support shared growth. The leveraging components of BBBEE are:

- Provisions for access to finance for women and youths
- Funding commitments for housing and small business loans
- Skills development commitments
- Social responsibility commitments
- Other commitments to enterprise development

BBBEE charters will be assessed from time to time to establish how broad-based their impact has been.

A further key small business initiative will be to pursue decisions made by Cabinet on the regulatory environment for small businesses. Decisions on the small business regulatory environment include:

- The Minister of Labour will lead a review of labour laws, including their impact on small businesses
- The reforms in tax administration affecting small businesses will continue
- The DTI and the Department of Provincial and Local Government (DPLG) will prepare recommendations on how to improve the regulatory environment for small businesses in municipalities
- The sector departments will review the impact of their laws and regulations on small businesses.

In respect of municipalities, the AsgiSA process has also mandated the Department of Provincial and Local Government (DPLG), in consultation with the DTI, to improve the capacity of local government to support local economic development.

The EPWP is a key Second Economy intervention. As part of AsgiSA, this programme will be expanded beyond its original targets.

6.3 Initiative for Priority Skills Acquisition (JIPSA):

The immediate focus of JIPSA will be on the skills identified by AsgiSA. Predominantly the focus is on engineering and planning skills, local and regional planning skills in local government; artisan and technical skills; management and planning in education; health and local government; teacher training; local economic development skills and skills appropriate to BPO and tourism industry. These skills interventions will feed into skills that are needed for infrastructure development in government, private sector and state owned enterprises, the Expanded Public Works Programme (EPWP) and public service and social services delivery e.g. health and education.

Whilst some of these interventions are short term plans, they require languages and information and communication technology (ICT) skills. Other sectors are agriculture, creative industries, mineral beneficiation, chemicals, forestry, and cross cutting skills such as finance. The skills development interventions are geared on benefiting SMMEs within the sectors that have been identified. In summary and based on the AsgiSA priorities, the following working areas for JIPSA have been identified:

- High level, world class engineering and planning skills for the 'network industries', transport, communications and energy all at the core of our infrastructure programme;
- City, urban and regional planning and engineering skills desperately needed by our municipalities;
- Artisan and technical skills, with priority attention to those needs for infrastructure development;
- Management and planning skills in education, health and in municipalities;
- Teacher training for mathematics, science, ICT and language competence in public education;
- Specific skills needed by the Priority AsgiSA, sectors starting with tourism and BPO and cross cutting skills needed by all sectors especially finance; project managers and managers in general;

- Skills relevant to local economic development needs of municipalities, especially developmental economists.

In May 2006, training of 100 local government practitioners has commenced in the field of Project Management, by Old Mutual in conjunction with SAMDI and DPLG. This has been a practical, hands-on course for practitioners.

- The Department of Public Works and The Presidency have co-ordinated a programme to the United Arab Emirates (UAE) to secure suitable placement of women in infrastructure projects. Placement offers have also been secured in the Hospitality and Finance Sector. A total of 100 women and unemployed graduates are targeted. The process of matching available placements and candidates is underway and the DPW, DFA, IDT DBSA and women in construction have played a significant role in this regard.
- Another 120 women and youth are soon to be placed with the Bombela Consortium to be part of the Gautrain Project. The number of women with qualifications in the built environment who have responded to our recruitment for both UAE and Gautrain Projects is pleasing.
- Seventeen young black female interns jetted off to Qatar by Sasol on the first leg of a four month long work experience and mentoring programme.

6.4 National Skills Fund: Provincial Strategic Projects

The National Department of Labour has initiated a strategic projects fund for skills development projects in each of the nine provinces. Each province has submitted proposals on the nature and extent of the strategic projects and the skills development requirements that would support the achievement of government's skills development goals.

The Office of the Premier co-ordinated the drafting of the strategic projects plan for the Eastern Cape Province. It consulted widely with all stakeholders.

For the Eastern Cape Province the following overall objective[24] is defined as being:

[24] Source: EC Strategic Projects Provincial Proposal July 2006

To make a strategic contribution to the PGDP of the Eastern Cape by developing critical and scarce skills amongst the youth of the province through providing effective work-based training and learning within PGDP projects that will equip youth to enter the labour market and participate in the economy. Participating projects will provide the necessary work experience for youth, without specific skills to register for:

- *Learnerships;*
- *Apprenticeships; and,*
- *for those who have obtained a qualification to gain work experience by being placed in relevant Internships*

Learners will be placed in projects within sectors identified as growth sectors in the PGDP i.e.

- Agriculture
- Infrastructure Development
- Manufacturing and,
- Tourism

Further, the project aims to address some of the main priorities identified by Provincial Sector Skills Coordination Structures i.e.:

- Establishing a shared provincial training information management system
- Developing learning programmes and systems to support project-based skills training on an ongoing basis
- Establishing partnerships between role-players for effective training delivery, responsive to the needs of individuals and the economy.

The specific objectives for the programme are defined as:

- The project aims to utilise existing PGDP and IDP projects to provide work-based training opportunities for unemployed youth – unskilled, semi-skilled and graduates through implementing:
  - 2 282 learnerships across the four identified economic sectors
  - 56 three year apprenticeships within the manufacturing and infrastructure sectors

- 155 internships for graduates across the four identified economic sectors
- To develop provincial coordination capacity through:
  - Utilising the management requirements of this project to strengthen sector coordination structures.
  - Implementing a provincial training information system to effectively manage this project thereby establishing the infrastructure required for effective provincial coordination.
- To develop the capacity of work places, in particular projects, to absorb learners for work-based and experiential learning to ensure the ongoing training of unemployed youth.
- To expand and improve training provision within the province.

6.5 SETA Skills Development Initiatives

In South Africa currently there are 23 Registered SETAs. Each registered or form part of the umbrella Skills Education Training Authorities (SETA) that was established in terms of the Skills Development Act of 1998. This section of the report looks at the initiatives that these agencies have put in place in the sectors relevant to the requirements of the CAS.

6.6 CETA skills development initiatives: EC and NMB

CETA is moving towards a project based approach when it comes to future activities. By adopting such an approach when implementing and managing various business actions, CETA aims to ensure that effective and efficient control measures are not only put into place but adhered to in all processes (this includes Learnerships and Skills Programmes).

For the fiscal year 2006/2007, CETA will be focusing on the following Strategic programmes that will assist the Authority in achieving the strategic goals and objectives that support both legislation and NSDS targets:

- Promote research and communication at CETA
- Promote quality HRD in the sector
- Identify and promote scarce and critical skills in the sector
- Promotion of co-operatives, CCOE's and New Venture creation initiatives

- Promotion of quality delivery in the sector
- Capacity Building of governance and constituent members

All project proposals will be aligned with the above strategic programmes. CETA will ensure equitable distribution grants across the industry.

6.7 MERSETA Skills Development Initiative: EC and NMB

The MERSETA's is one of few SETAS' with regional offices that are strategically located within the Nelson Mandela Metro Municipality. This presents the municipality with an added advantage of easy to the access MERSETA resources. There are several skills development initiatives that are undertaken by the regional MERSETA office. All the initiatives undertaken by MERSETA are built on solid partnerships that the regional office has established with several critical stakeholders such as the local university and the local further education and training colleges; Coega Development Corporation; the NMB municipality and other stakeholders.

The partnership initiatives are discussed under the relevant stakeholder sections. In December 2007 MERSETA also signed an MOU with the Coega Development Corporation (CDC). The MOU was signed by the MERSETA's Chief Executive Officer, Dr Raymond Patel and the CDC's Chief Executive Officer, Mr Pepi Silinga.

Education and Training Quality Assurance (ETQA) : The MERSETA accreditation as an ETQA has been extended for another three-year period for 81 qualifications and related unit standards excluding the legacy trades inherited from the industry training boards. The total number of accredited training providers is 468. A total number of 331 workplaces were approved as facilities with the required infrastructure to implement learnerships and skills programmes.

The MERSETA has registered a total number of 484 assessors and 44 moderators in accordance with its assessor/moderator registration criteria. A total number of 8 877 learners have been issued with national certificates in recognition of their achievement of NQF registered and trade qualifications. The MERSETA has signed Memorandum of Understanding agreements with a number of other SETAs to ensure qualifications can be provided across industries.

Skills Development Implementation: The Skills Development Implementation (SDI) division is the operational backbone of the MERSETA. The division is divided into

three major business units, each specialising in different areas of operations. The first of these are the five chambers. The MERSETA represents the auto; metal and engineering; motor retail and components; new tyre; and plastics chambers. The members of these chambers are stakeholders as per the MERSETA constitution. These stakeholders represent both employers and labour in the MERSETA sector and are the most important source of information from industry.

During the 2005/2006 year, the chambers researched and identified the scarce and critical skills within the different chambers. The shortages were quantified by the chamber members, and the organisation's operations are aligned to these numbers and occupations. These lists are updated annually and form the starting point of the MERSETA's planning for implementation of the NSDSII. Research has been done on different career path and career development programmes linked to the scarce skills lists. The chambers are also responsible for the identification of qualifications needed and prioritising these qualifications for development by the Standard generating bodies and the learning programmes unit.

The next important unit in the SDI division is the learning programmes unit. The unit works closely with several Standard Generating Bodies (SGBs) and workgroups, and develops qualifications as identified by the chambers. Currently the MERSETA has 79 qualifications registered and 90 learnerships. For the year under review, 39 qualifications were developed, and registered and submitted to the South African Qualifications Authority (SAQA).

The learning programmes unit is also responsible for the development of curriculum and courseware for qualifications registered at the MERSETA. The chambers were responsible for the function in the 2005/2006 year and a project to develop courseware and curricula for 27 qualifications in the auto, metal and motor chambers has been the focus. Another focus area for this unit was developing of new policies and procedures with regard to implementation of learnerships.

The final unit in the SDI division is the regional offices. The MERSETA has six regional offices: Gauteng, Witbank, Bloemfontein, Durban, Port Elizabeth and Cape Town. The regional offices are responsible for customer services in the SETA. They are the first line of contact with companies, training providers and other stakeholders in the field. During the 2005/2006 year, the regional offices visited more than 7500

companies and administered the agreements and contracts of 4798 learners and 3117 apprentices.

Institute of Sectoral or Occupational Excellence (ISOE): The MERSETA launched the Welding Centres of Excellence in cooperation with the Department of Education and the Department of Trade and Industry in 2006. The MERSETA represents a sector in the South African economy that is currently experiencing a critical shortage of key skills in various areas including welding, fabrication and general fitting and machining. This demand is underpinned by government's Accelerated Shared Growth Initiative for South Africa (ASGISA) which aims to boost the rate of growth in economic output to 6% by 2010.

The critical need for welding artisans has been identified and the ISOE model has been chosen to place 300 new, fully qualified welding artisans per annum into the industry from the end of 2008. The most important factor that underpins this project is the intention to speed up the delivery of qualified welders to international welding standards, so that South Africa can showcase this excellence to potential foreign direct investors.

This programme aims to reduce the reliance on the importation of welding artisans. The first two ISOEs will be positioned to accommodate three intakes of 20 learners each per annum, which creates a pipeline of 60 qualified welders per annum per ISOE from the end of 2008. The project plan will accommodate five such appointed ISOEs with the capacity to deliver 300 qualified welders per annum into the market. Appointment of the remaining centres will be through a consultative forum dedicated to achieving full ISOE accreditation by the MERSETA.

The first two opportunities that presented themselves were the Saldanha Bay Fabrication Hub to support the repair and manufacture of off-shore oil rigs, and the well publicized Coega IDZ in the Eastern Cape. Agreements to support the development of Welding Centres of Excellence were signed with West Coast College in Vredenburg and with Eastcape Midlands College in Uitenhage. Both colleges are located in regions where emerging large capital expenditure projects have highlighted the need for highly trained welders and other artisans. The programme is aimed at assisting in the reduction of unemployment and the upliftment of communities in the regions.

The success of these investment initiatives depends on an exceptionally high standard skills training and development programme. To ensure training to the required international standards, the MERSETA has teamed up with the Southern African Institute of Welding (SAIW), an approved training body of the International Institute of Welding (IIW). The SAIW is assisting these ISOEs in achieving IIW accreditation through training of instructors, overseeing the acquisition and installation of equipment and installing quality management systems.

Learners completing the NQF qualification will also achieve certificates endorsed by the IIW. In crafting the solution, the MERSETA wanted to create an institute where industry could recruit from the ranks of learners close to completing the full qualification.

National Tooling Initiative: The MERSETA's commitment to supporting the National Tooling Initiative is now in its third year, having to date delivered the registered qualification design solution, the supporting new curriculum and courseware and the funding for skills transfer from the Institute of Advanced Tooling in Aurangabad (India) to South Africa. This platform now becomes the basis from which to support and motivate the implementation process for learnerships in Tooling Manufacture.

Solid progress of the MERSETA sponsored students in India over the last year will culminate in their graduation on 21 July 2006. The deployment of these graduates is aimed at supporting the instructor base at FET colleges and further research and development at the universities of technology, as well as support for SMMEs in the sector. A significant proportion of these students will be directly involved in support for the start-up of a 100 learner intake at four FET colleges in the centres of Tshwane, Durban, East London and Cape Town.

At national level, during 2005 MERSETA also supported the development and intake of Mechanical Engineering students at the Tshwane University of Technology into a specialised experiential programme for tool making. After completing their P1 and P2 obligations for the national diploma qualification in July 2006, all ten of these students will be moving into B.Tech level studies before moving into industry full time.

This work at the TUT is the precursor to developing an NQF 5 and 6 level qualification that will afford articulation of the FET band qualification to higher education. In this way a career path is created for workers in the industry from high

level practical engineering skills into small business management, corporate promotions or specialist engineering services.

The industry FRIDGE study completed in July 2005 has become a guiding document in the further development of this National Strategic Initiative. One of the most significant conclusions was that: “One qualified toolmaker creates 28 downstream jobs and one rand invested in tooling creates R250 in product value.” This core finding represents one of the fundamental objectives of the SETAs – to support economic growth for employment creation and poverty eradication.

Courseware Development: Courseware development project creates best practice basis for mass skills development. The MERSETA’s vision is to address the lack of up-to-date courseware in vocational training across its industry sectors and empower those who want to learn.

The MERSETA embarked on a process in 2004 to identify best practice in developing courseware that addressed three broad stakeholder requirements, namely academic rigour, workplace competence and learner centredness. As a result, the courseware development process has been improved in partnership with the Learnership Institute’s methodologies.

Courseware for 214 unit standards, developed in phase 1, covered qualifications in autotronics, mechatronics, tooling manufacturing, power and telecommunication cable manufacturing, airconditioning and refrigeration, metal and engineering manufacturing, iron and steel manufacturing and machining and is available in the public domain.

Courseware includes a curriculum framework (based on the German Technical Cooperation – GTZ model), a facilitator’s guide, a learner workbook, assessment tools and tool and resources lists, all of which enable the achievement of the outcomes of unit standards. By making courseware freely available, the concept, adopted by the MERSETA, provides materials for accredited training and workplace providers. Thus, the focus is taken away from developing courseware materials and put to equipping learners with the necessary workplace skills.

Bursary Scheme: The bursary programme was undertaken to address scarce skills and correct historical imbalances in access to engineering skills. From July 2003 to

31 March 2006, MERSETA awarded 215 bursaries across South African universities and technikons within identified scarce skills areas. In the 2005/2006 financial year, MERSETA awarded 91 bursaries.

Bursaries are awarded to students across the country based on their socio-economic backgrounds and excellent academic progress. The target for the next financial year is a further 100 bursaries. The bursary unit monitors the academic progress of each student. This is a major joint venture that the bursary unit has embarked on with the help of faculty officers at higher education institutions. Eleven students from different institutions have completed their studies.

There are currently 53 students doing their experiential training. The experiential training is a prerequisite for students to qualify for national diplomas in various fields of engineering. Out of 215 students, 151 are continuing with their studies. The majority of students are studying towards engineering or technological qualifications with only 11 studying marketing or management.

The regional MERSETA office allocated 20 bursaries to NMMU students to undertake a manufacturing qualification.

Experiential Training/Students/Internships: A grant of R12500 per semester per student is available to companies that are willing to provide experiential training to students. A semester must have a minimum of five months and a maximum period of six months. The grant is targeting those students undertaking a qualification, such as a National Diploma, that requires them to undertake experiential learning as a prerequisite for completing the National Diploma. However to qualify for such a grant a student must not have other sources of compensation whether from the MERSETA or any other source from either the student or company. Most critically the qualification must have, 1. Relevance to the MERSETA scope of coverage which is engineering related and 2. Result in a national diploma.

During the 2006 financial year the Eastern Cape Regional MERSETA office was allocated 333 such grants and only a 100 of these special bursaries were awarded as students did not apply for them.

Employment Skills Development Lead Employer (ESDLE): The MERSETA has contracted the Automotive Industry Development Centre's (AIDC) ESDLE to act as

lead employer in an unemployment training programme. It is one of 21 ESDLEs launched by the Department of Labour (DoL), Minister Membathisi Mdladlana, in May 2004. The DoL, through its ESDLE programmes, aims to increase the number of employers participating in the regulated training system, train more people, create additional learnership opportunities, and encourage the completion of learnerships, thus improving the quality of life by creating jobs and fighting poverty in South Africa.

The primary focus of the ESDLEs are to service SMMEs, who employ between one and 49 employees (small) and 50 – 149 (medium) employees, and to encourage them to participate in skills development and training. There is an additional focus on black economic empowerment (BEE) in regulated training. The AIDC ESDLE pilot project was conducted on NQF level 1 in 2004/2005 to train 300 unemployed young people which yielded an 87% success rate. In addition to which some learners have found permanent employment. Due to the high success rate, the MERSETA extended the project beyond the pilot phase to continue with training of learners on NQF level 2. A total of 300 learners have subsequently been registered on NQF level 2, in the following programmes:

- 72 learners on the National Certificate in Automotive Component Manufacturing
- 132 learners on the National Certificate in Vehicle Repair and Maintenance
- 47 learners on the National Certificate in Fabrication
- 13 learners on the National Certificate in Mechatronics
- 13 learners on the National Certificate in Fitting
- 23 learners on the National Certificate in Autotronics

The skills shortage has affected every sector in the economy, but in the automotive industry, as the leading industry in the manufacturing sector, this challenge is particularly acute. The industry is today integrated into the global sector and therefore fully exposed to intense competitive pressures. This, coupled with the fact that the industry is perhaps one of the most high-tech and rapidly technologically advancing sectors, placed major demands on skills development. The focus of the MERSETA has therefore been in the auto sector.

Training of the Unemployed: Working jointly with the Department of Labour the regional office has during 2006 offered 72 learnerships. The learners have been trained in several trades. **RPL:** Within the relevant trade the regional MERSETA

facilitates the assessment as well as the undertaking of a trade test. The focus has been on diesel mechanics, motor mechanics and electricians. However there has been a challenged in implementing a large scale RPL exercise due to the shortage of training providers, in particular in the manufacturing sub-sector.

6.8 CHIETA: Skills Development Initiatives: EC & NMB

SME TRAINING VOUCHER PROJECT: In its efforts to support small organisations in skills development, the CHIETA has developed a web-based system to power training vouchers that can be exchanged for courses/programmes with accredited training providers registered on the system. The intention of the project is to support small organisations in skills development and promote a culture of lifelong learning in small companies SMEs in the chemical industries sector with less than 50 permanent employees are welcome to apply.

SMEs and training providers complete applications on-line and training vouchers are issued electronically to employees with a sms as confirmation of the approved training application.

National Skills Fund Shutdown Network Forum Project: The CHIETA has received and allocated further funding for 50 Learnerships in the Eastern Cape which will be implemented with process industries in the chemical industries sector over the next three years. The Learnerships are at NQF L2 to NQF L4 in the traditional artisan trades: welder, fitter, rigger, boiler-maker, instrument mechanic and electrician.

Science Engineering & Technology Project With Schools: The CHIETA has allocated funding to the South African Agency for the Science and Technology Advancement (SAASTA), a division of the National Research Foundation (NRF) to work with approximately 90 schools in the Eastern Cape in regions located near companies in the chemical industries sector. The initiative will focus on working with educators in Mathematics, Science and Life Skills with the following objectives:

1. Broadening educators and learners awareness and knowledge of SET careers;
2. Identifying and nurturing of talent in Science and Mathematics;
3. In the long term increase the number of learners choosing science and mathematics as subjects;

4. Promote linkages between chemical sector companies and schools in their community; and
5. Ultimately increase the number of learners who opt for science and mathematics related tertiary study fields.

Discretionary Grants: Annually the CHIETA makes grants available to 198 companies across the Eastern Cape for Learnerships and apprenticeships detailed on the CHIETA's website: www.chieta.org.za

Interestingly the CHIETA also makes Learnership awards for critical and scarce skills in a range of non-core areas, including marketing, supervisory and research product development, and for example, supports 18 recently retrenched workers in a New Venture Creation Learnership at Dow Agro Sciences in Berlin.

Training Providers: The CHIETA has a small, but steadily growing number of accredited or programme approved providers in the region. Due to the nature of this sector, learnership are normally undertaken within Universities, NMMU and WSU are the key universities in the Eastern Cape offering such learnerships.

6.9 ENGINEERING COUNCIL OF SOUTH AFRICA (ECSA)

The ECSA has committed itself to undertaking several skills development initiatives. Working in partnership with the ANCYL an initiative dubbed Engenius, Engineering Body in Skills-Development Alliance, started in July 2006. The initiative is designed to help address the acute shortage of engineering skills.

"The campaign aims to promote the engineering sector, from artisans through to engineers, from a grassroots level, to encouraging existing engineers to remain in the profession," ECSA strategic implementation and quality director Liesel Kirsten said during a function at Luthuli House, the ANC's headquarters.

The campaign, headed by ECSA's Daniella Melk, aims to support the government's Joint Initiative for Priority Skills Acquisition, which identified engineering as a critical skill needed to ensure that the country's economic growth is accelerated to six per cent by 2014.

The objectives of Engenius are to unite the stakeholders that are involved in the

development of engineering skills, including industry, government, the Sectoral Training Authority, in order to join forces in steering, supporting and funding the campaign.

Kirsten reported that the initiative also planned to visit high schools and colleges to promote the engineering profession, as well as to unite and support organisations that are already involved in promoting the profession.

ECSA linked up with the ANCYL on this project because of the contact the organisation had with the youth of the country, which included a presence at all universities. The campaign aims to spend in excess of R10-million over the next two years.

The second initiative is focused on a drive to bring back retired engineers by the SA Institute of Civil Engineering started on May 2006. Those approaching retirement should be incentivised to extend their careers, and provide mentorship to the new entrants to the profession.

“We need to ban early retirement, encourage expats to return to South Africa and think of ways to accelerate training,” she said.

In fact, Lawless said that the drive to bring back to industry retired engineers as mentors was highly successful. The drive assisted in accelerating the skills development. ‘Thirty-nine retired engineers have been brought on board to assist with skills development. “In fact, 160 unemployed graduates have since February been placed,” Lawless reported.

As a last resort, South Africa would have to import skills, she said, as more projects came on board. It was noted, however, that the number of experts returning to South Africa was on the increase. Only half of local engineering practitioners on council's books (27 March 2006)

The Engineering Council of South Africa (ECSA) aims to introduce compulsory registration for all local engineering practitioners early next year, says new CEO Professor Ravi Nayagar. In accordance with the Engineering Professions Act, Act 46 of 2000, ECSA is required to regulate the engineering profession by disciplining errant engineering practitioners and by generating standards for the profession, with

the overall aim of safeguarding the public against work that is below acceptable standards.

"We have a core group of very competent people in South Africa. However, a particular challenge in the South Africa engineering profession is that there is a shortage of such competent engineers. "There are also questions around the quality of some engineering work, mainly due to non-compliance to principles and standards – in other words, engineers and technicians who take shortcuts," he explains. Madonsela adds that his four-year tenure will be marked by creating a much more rigorous regulatory environment for engineering professionals.

South African registered professional engineers will be obliged to keep abreast of developments and knowledge in their fields to maintain and demonstrate their competence.

Building foundations (11 November 2006): The number of pupils matriculating with good mathematics and science marks has to be increased in order to deal with the crisis facing the country's engineering profession and to ensure that transformation takes place, says Engineering Council of South Africa (Ecsa) president Bob Pullen. Ecsa CEO Paul Roux agrees that immediate steps should be taken to ensure that the level of mathematics and science in high schools throughout South Africa is of the highest standard in order to enable school leavers to pursue engineering-related professions.

"There are bursary schemes that specifically call for previously-disadvantaged South Africans (PDSAs) to apply, and this does assist in increasing the number of PDSAs entering the profession," he says, adding that many employers provide practical experience and professional-development opportunities to enable young black graduates to become competent at a faster rate.

Roux adds that, judging by the increase in the number of black people registering with the council every year, one can safely assume that transformation is really taking place in the profession. "There has been a significant increase in the number of black people registering with Ecsa, while the number of their white counterparts has declined in the last ten years," says Roux.

6.10 ADDITIONAL REGIONAL INITIATIVES: NMB

The information supplied by the SETAs provides an unsettling picture of the lack of skills development taking place in the Eastern Cape in the sectors that are going to impact the of the mega projects underway in the NMB, including the Coega Project. Due to the strong presence of the auto-sector, most skills development initiatives undertaken in the NMB region are predominantly focused in the auto industry. However these initiatives provide innovative models for addressing skills that could be transferred to other industries. However most of the established company's offer in-house training, which provides core training in various disciplines within the automotive/engineering fields.

In addition to the SETAs, University and the Municipality, other key role players undertake skills development initiatives. The Coega Development Corporation, AIDC programme and the UDDI Skills Development are some of the key leaders in this field. These role players have a coordinating and facilitating role, instead of undertaking the training internally.

6.10.1 MATHS & SCIENCE INITIATIVES IN THE EDUCATION SECTOR

Initiatives for Grade 10-12: There are numerous initiatives targeting learners doing maths and science. These initiatives are predominantly funded by the large private companies that are located in the NMB area as well as by NGO's.

Education Centres of Service: This is a new initiative entered into by the DoE District in partnership with a private entity called PMG Education. The initiative is to commence in April 2007. Initially the focus is on Grade 12. This partnership is informed by the introduction of the new curriculum. The programme will provide a support system to schools, teachers and learners; specific programmes in maths a science presented by experienced trainers; there will also be subject specific teacher training and testing and career guidance for grade 12 learners.

Maths and Science Programmes: At the time of drafting this document the Port Elizabeth District office was in the process of conducting a survey with all the schools under its jurisdiction to ascertain the nature and support programmes active within the schools. A preliminary list of such programmes is attached in this report.

Some of the programmes currently underway in the Metro are reflected on the table below.

Table: NMB, current DoE Maths and Science Programmes

PROGRAM	LEARNER AND/OR EDUCATOR SUPPORT PROGRAMMES			SPONSOR
	LEARNERS/EDUCATORS	GRADE	SUBJECT/LEARNING AREA	
AMESA	Educators	12		
Dinaledi	Educators/Learners		Maths/Science	D.o.E & D.MST
EDDE Programme	Learners		LO / HSS	Electoral Democracy development ED/IEC
GMSA Foundation ML Olympiad	Learners	10-12	Maths literacy	GMSA
Herald General Knowledge Quiz	Learners		General Knowledge	Herald Local Business
Marula Kids Competition	Learners	3-7	HSS/NS	SANPARKS
Mintech Quiz	Learners		Science	
N P I Debating	Learners		English	Ed Dept / Nat Productivity Institute
National Maths Olympiad	Learners		Maths	
National Science Expo	Learners		Maths /Science Tech	SASOL
National Science Olympiad	Learners		Science	
National Teaching Awards	Educators	12	All subjects + management	Nat Dept of Education
NMMU Maths Olympiad	Learners		Maths	
Protec	Learners	10-12	Maths / Science	SAPPI
SASOL SET	Learners	12	Maths / Science	NMMU/ SASOL

Settlers Park Junior Science EXPO	Learners / Educators	1-7	Maths NS Tech	VWSA
Star Schools	Learners	10-12	Maths / Science	D. of Transport
Motherwell	Learners	10-12	Maths / Science	Telkom
Zwide	Learners	10-12	Maths / Science	Telkom
THUTHUKA	Learners	11-12	Maths / Eng/ Acc	SAICA
VWSA Incubator School	Learners	12	Maths / Science	NMMU / VWSA
Young communicators award	Learners		English	Ed Dept / Anglo American / Sowetan

The Nelson Mandela Metro has seen a steady increase in the number of Grade 9-11 learners. There has also been an increase in the number of learners enrolling in technical colleges for the NCV and the traditional Nated courses. The change into the new curricula poses great opportunities for the long-term but challenges in the short term.

The nature of the challenges relate to the need to bring the teaching staff in technical colleges and technical schools into speed with the objectives of the new curricula. Another key challenge relates to the fear learners have historically had in taking up maths and science. With the mandatory maths literacy and science components of the courses, the implications are that there will be a need to introduce academic support programmes with a maths and science focus.

The table above reflects the maths and science programmes being undertaken in the Metro. These programmes are in line with the ASIGSA initiatives of promoting maths and science. The current challenge is that lack of coordination of such programmes.

6.10.2 . Automotive Industry Development Centre Initiatives (AIDC) initiatives

Briefly, the AIDC works in partnership with business, government departments and other organisations to invigorate economic development within the automotive industry. Its focus areas are Skills Development and Training, Supplier Development and Supply Chain Development.

Recently the AIDC conducted an economic impact assessment study of its activities programmes since the AIDC started. In summary the results for Skills Development and Training reflected that with regard to job creation there were 605 full employment opportunities (1 person year equivalents), multiplier of 15 private sector workers for each direct job created. The impact of SME and BEE showed that there had been 56 BEE companies and 175 SME companies that had either directly benefited or started.

The skills development component of their programme has been most impressive and more than 150 companies and institutions were involved in these programmes:

- 52 171 individuals trained and/or impacted through AIDC programmes
- An average 75.5% of the enrolments consist of BEE students
- The HIV/Aids Workplace Programmes have impacted on more than 64 556 persons

Automotive Experiential Career Development Programme (AECDP): The AECDP is an educational and mentoring programme designed and developed by the AIDC, focusing on previously disadvantaged Black senior high school learners (Grade 12) with the aim of developing, nurturing and increasing the pool of black engineers available specifically to the automotive industry.

'Automotive Experiential Career Development Programme" is fully funded by NMB since 2005. Currently in its 3rd year, initially the AIDC developed the pilot programme informed by a request from the Metro. The Nelson Mandela University runs the programme and all administrative and management work is done by the AIDC.
The AECDP addresses the skills gap that exists at schools and channels learners to correct stages of study or career paths. The programme ensures good quality mathematics and science learners and exposes the candidates to the automotive industry.

Initially Grade 12 learners attend maths and science Saturday classes for 12 weeks. This involves about 150-250 learners. All the learners are from the Nelson Mandela Metro region. From the large pool of 150-250 the top 30 achievers are selected to attend a winter school. The AIDC undertakes a vigorous selection process and the top thirty achievers are then selected to attend the full time on-campus winter school. The curricula content is on various fields of engineering. Part of the programme

involves planned visits to relevant factories. During the winter school the learners are continuously monitored and evaluated.

Partnership with NMMU:

- Establishment of a Robotic Training Facility (AMTS)
- AIDC merit awards for BEng (Mechatronic) students
- Leveraged MERSETA bursaries for BEng (Mechatronic) students
- Establishment of the AMTS Internship programme in the Eastern Cape
  Development of new short courses (Electro-pneumatics, Robotics, 10
- Siemens Automation courses, Hydraulics, CNC programming)
- Establishment of collaboration with Ruitlingen University (Germany) including:
  - Student staff exchange
  - Automotive prototype development
  - Siemens Cyber junkyard automation project
  - Development of an internet enabled laboratory project

One of the biggest challenges facing the ongoing development and existence of these valuable programmes is funding. The Skills Development and Training programmes of the AIDC have been reduced substantially during 2006 as a result of budget constraints. These programmes are now in almost full delivery cycle and need financial injection to realize the outcomes for both institutions and industry alike.

Partnership with Eastcape Midlands and Port Elizabeth Colleges: AIDC has a well developed partnership with Eastcape Midlands. Apart from the collaboration on designing curricula, the AIDC has employed a learnership and skills coordinator person that is physically based in the college.

- Establishment of Mechatronics Learnership [NQF 2-4]at East Cape Midlands College
- Established Vehicle Maintenance Learnerships at Port Elizabeth College NQF 2-3]
- Developed on SME Incubator Project to assist those learners that may not find employment. Assisted “Bush Mechanics” to up skill themselves and trained them in Entrepreneurial Skills

6.10.3 . Coega Development Corporation Initiatives

The concerns raised by Coega on the limited skills availability was confirmed in 2004 when it became evident that alarmingly small numbers of learners under the learnership, apprenticeship programmes and skills programmes were registered in the Eastern Cape Province by the SETAs. These were needed to meet the expected skills requirements for the Coega Project. This was evident from the fact that of the 9 233 learners registered nationally (MERSETA and ESETA) only 522 (this figure excludes CHIETA and CETA) were registered in the Eastern Cape (less than six percent).

Only 17% of the apprenticeships in training are from the Eastern Cape, a large portion of which are in the tool, jig and die industry. If these categories are removed the figure drops to 13%.

With very little time left to finalise planning and preparations for the magnitude and extent of skills training required in the Coega Project, it became critical that initiatives be undertaken and training begin in earnest.

The Coega Development Corporation has been working closely with the SETAs (MERSETA, CHIETA, ESETA and CETA), Department of Labour, Office of the Premier, higher education, further education and training colleges, and training providers in a Coega Mega Projects HRD Task Team. This forum has participated in the development of a Skills Development Proposal to the National Department of Labour and the National Skills Fund. A business case for skills development for the Coega Project has been accepted by the Department of Labour. Processes are in place to ensure the Coega Project is given a strategic project status within the Department with support and funding.

Engineering Learnership Programme: The most significant support for training to-date has been forthcoming from the MERSETA and ESETA. Both of these institutions have committed funding for 300 learners per year for the period 2006 to 2010. This equates to 3 000 learners with a value R12m per year. The Coega LBMS is currently rolling out this programme with 600 learners in the mechanical and engineering sectors in training over the period February 2006 to March 2007. 300 learners in the electrical engineering will be in learnership programmes before the

end of March 2007. A five year plan has been drafted that outlines the extent of learnerships being implemented.

Summary (detailed breakdown attached)

NQF Level	FIVE YEAR TOTAL				%
	NSF	ESETA	MERSETA	TOTAL	
NQF Level 1	0	0	0	0	0%
NQF Level 2	144	480	696	1320	40%
NQF Level 3	396	375	342	1113	34%
NQF Level 4	108	345	384	837	26%
TOTAL	648	1200	1422	3270	100%

Welding Centre of Excellence: A further initiative by the MERSETA and CDC to establish a welding and fabrication Institute for Sectoral and Occupational Excellence (ISOE) in NMB has been approved by the MERSETA EXCO for funding for the first phase for R6.75-m. It involves the establishment of the ISOE at the Eastcape Midlands FET College (and West Coast FET College) in Uitenhage. Instructor development, equipment provision and the accreditation of the FET to International Institute of Welding standard will be completed in the first phase (to June 2006).

Further role-player involvement: The CHIETA has indicated that it is able to fund a small number of learners, but with a focus on the operations phase of the Project. Their capacity in training provider support and development will be instrumental in developing the training sector to meet the objectives of the IDZ. In addition a research project has been initiated by the CHIETA to develop a framework for cross-sectoral work, investigate and verify skills shortages, address the issue of a database of artisans and investigate new funding methods. This will direct benefit on the Coega Project.

The CETA has indicated that it has limited budgets for the learnership programme and therefore would not be able to fund projects within the IDZ in the immediate term. Programmes for accreditation and training provider support could be accessed as part of their current programmes.

In terms of the capacity that the region has to deliver the scale of training identified for the IDZ work is being undertaken within the regional training providers (East Cape Training Centre) and the FET Colleges. The Re-capitalisation Plans for both the FET

Colleges in NMB have taken the training requirements for the Coega IDZ into consideration. The infrastructural requirements of the institutions are being addressed via the Department of Education processes on re-capitalising the sector.

Work is being done with the NMMU to ensure that higher level programmes and the technological support are in place for the skills training interventions. Their involvement in meeting the operational skills requirements will be put in place shortly.

These key role-players have been instrumental in positioning the skills development initiatives for the Coega Project. Work is ongoing to ensure that planning for implementation and funding support is forthcoming.

6.11 SKILLS DEVELOPMENT FUNDING SOURCES

Funds for the critical skills required by the Metro should be vigorously pursued with all identified stakeholders. Funding for various initiatives within the Metro has been obtained from the National Skills Fund. For instance the Coega Development Corporation has been awarded R24m for the training of 648 engineering learnerships. Coega has also secured funding from the NSF Social Development fund (DoL funding for unemployed persons) to the tune of R4.8m for the 2006/2007 financial year. Training in civils and building skills are currently being rolled out for contracts on the Coega IDZ. The Metro has also been awarded NSF funds for the implementation of learnership programmes.

The biggest challenge for the Nelson Mandela Bay is the lack of funding skills programmes that targeting Grade 10-12. The AIDC and UDDI programmes are facing major financial constraints. The key sources of funding for skills development initiatives are:

DEPARTMENT OF LABOUR: The Department of Labour is the custodian of skills development funding. There are various funding sources focusing on different skill levels. There are bursaries in and scholarships in place for the high-level skills. The funding for these skills is jointly offered with the National Research Foundation and other government funded agencies. The National Skills Fund is another major source of funding.

SECTOR EDUCATION TRAINING AUTHORITIES: The different SETA's make available various funds for skills upgrading. The funds also target active participation of SMMEs and unemployed people.

MUNICIPAL GRANTS: The municipality must make available targeted grants for different skills levels. The focus should be on unemployed, Grade 10-12 learners and students wishing to undertake a university qualification in the broad field of science and technology. The current system of awarding grants for skills upgrading needs to be revisited so as to target specific skills.

7 RECOMMENDATIONS

Metropolitan municipalities have a mandate to advance socio-economic growth, development and service delivery. In responding to this mandate the Nelson Mandela Metro has and continues to be in the forefront in local economic development and through various initiatives has created an enabling environment for enterprise development, trade and foreign direct investments.

In its continued efforts of further advancing this environment, the municipality been engaged in several processes to ensure the key strategic growth of particular identified sectors. The 2005 NMBIC Strategic Planning Session identified these sectors as the key strategic economic growth areas. The Nelson Mandela Bay Vision 2020 and the 2005 National Skills Development Strategy (NSDS) 11 influenced the outcomes of the NMBIC strategy planning session. The strategic thrusts informing the 2005 NSDS 11 are SETA's and a reshaped FET and HE sectors. The NSDS 11 identifies these three areas as critical for any human resource development strategies. One the key purposes of NSDS 11 is to maximise the potential for labour through the acquisition of knowledge and skills to work productively and competitively in order to an improved quality of life for and to put in place operational plans and necessary institutional arrangements so as to ensure that this is achieved. These inform the NMB HRD strategy and other principles entailed in NSDS 11.

The recommendations outlined below acknowledge that the systematic nature of human capital initiatives requires vigorous and well-planned innovative partnerships, resources and incentives. The assumption adopted is that education institutions, research infrastructure, training facilities, business input, financial institutions and a regulatory system form the basis of the institutional context that should ensure the nurturing of human capital.

The Nelson Mandela Bay has in the past five three years experienced an increasing rural-urban migration, that is people migrating from rural areas to the urban centre in search of better employment opportunities. Whilst there is no current study on the impact of this migration to the economy of the region, this

migration is set to increase mainly due to the widely published foreign direct investors expected in the Coega IDZ.

Thus, the thrust of the proposed NMB HRD strategy for the manufacturing, construction, chemical and energy sectors takes a holistic approach with emphasis on partnerships with key stakeholders. These stakeholders are local Further Education and Training colleges, the Nelson Mandela Metropolitan University, the various SETA's (MERSETA, CETA, ESETA, S-SETA and CHIETA), private sector, labour and civil society, strategic organisations such as the Coega Development Corporation; ESKOM etc.

7.1 THE HRD STRATEGIC LEVERS

7.1.1 Human Capital Development Initiatives

- **Learnerships, Apprenticeships and skills Programmes**

The promotion of learnerships and apprenticeships is critical to the development of skilled employees. Learnerships and apprenticeship system also promote job creation and stakeholder interaction.

The administrative demands and the hidden costs of implementing learnerships and apprenticeships require key attention, so as to alleviate the resource of these initiatives.

Stakeholders must interact and develop solutions to ensure that all skills programmes offered within the Metro are accredited and unit standard based.

The NMB needs to ensure that all instructors, assessors and curricula specialists participating in human capital development initiatives have full accreditation. A system of re-accreditation and assessment needs to be instituted and done periodically.

To ensure quality assurance, in the absence of capacity on the ETQA function, in areas such as the processing of learnership agreements; training provider accreditation and workplace approval by potential host employers, partnerships must be established with strategic entities resourced to provide such support.

With regard to apprenticeships the Nelson Mandela Municipality should jointly with the relevant SETA and other stakeholders; initiate the process of reviewing the regulations governing apprenticeships so that they once again become a an attractive training mechanism. The apprenticeship incentives must also be reviewed and other qualitative mechanisms be adopted.

- **Recognition of Prior Learning**

Cost-effective and valid RPL is needed to enable individual learners to move from one qualification to another in more efficient and effective learning pathways, which is an essential working tool for the operation of a meaningful and dynamic NQF, and the creation of a more open, accessible and relevant education and training system and a vehicle for implementing lifelong learning. In particular, RPL provision that is cost-effective and recognised by all stakeholders is an issue of national importance.

The Department of Labour unemployed database as well as the CDC database has workers registered on it as job seekers. A large number of the registered unemployed workers have a lifetime of on-the job experience in various trades. The "bush-mechanic" term exemplifies a person who has gained extensive experience in mechanical related work, but who does not have a formally recognised qualification. There is need for recognition, formalisation of such extensive experience.

Mechanisms and resources are essential for the implementation of a vigorous process of implementing RPL for the un-skilled and semi-skilled unemployed.

Implementation of RPL is depended on three critical factors, stakeholder coordination, financial resources and availability of actual facilities for conducting the trade tests.

The Nelson Mandela Bay must consider establishing and/or improving the existing three fully accredited trade centres. These are with Eastcape Training Centre, Indlela & Volkswagen. These are all privately owned entities.

The Department of Labour works closely with the trade centres. An innovative method for the smooth implementation of RPL without compromising other training programmes offered by the trade centres is essential.

A successful RPL can allows for further skills development as it allows for the recognition of a formal qualification that is unit standard based. This also enables the individuals to enter into learnership or ABET programmes in specific learning areas.

For instance, the construction sector has a large percentage of unskilled workers that could undergo RPL. However such an initiative would depend on the availability of financial resources. Through its accredited assessors and instructors and in partnership with other entities, the CETA could start the process of conducting RPL assessments. The RPL exercise would not only formalise the training and experience acquired by these workers and other ABET learners but also provide for their chances for employment.

The Nelson Mandela Metro must urgently consider putting in place a pilot Centre that would conduct RPL. The pilot RPL centre could first focus on one sector and depending on its success the model can be duplicated in other sectors. The recommendation is that the Centre be implemented in partnerships with training providers and other role-players.

- **Workplace Experience**

FET technical college graduates are predominantly unable to access workplaces. With regard to learnerships, critical to their successful is the availability of a workplace. As such a learnership is not functional if the learner does not a workplace where acquired theory and practical skills can be put to usage.

It is in this regard businesses within the sectors under review have are a critical partner in the quest for skills development and thus human resource development. Their involvement is both practically necessary as well as strategic.

Sector specific drives on the regulated requirements for learnerships, apprenticeships, and trade qualifications must be communicated to learners, relevant employers and FET colleges. Such a drive would enable all these

stakeholders to have a similar understanding of the critical role of workplace experience.

7.1.2 EDUCATION AND TRAINING INSTITUTIONS

- **Further Education and Training Sector**

The number of technical schools in the Nelson Mandela Bay is impressive. The biggest challenge facing the schools is the limited exposure and prioritisation they currently receive. Technical schools are he breeding ground for learners wishing to pursue engineering qualifications. It is critical that NMB technical schools receive urgent attention from the municipality.

The state of facilities within these schools is not desirable. A task team must be urgently established that will look at suggesting ways of revamping the capacity in the NMB technical schools.

The newly started NCV programme is the first step towards aligning FET course offerings with industry needs.

The task team focusing on technical schools must also extend its focus to FET colleges. There needs to be a clear analysis of whether the FET programmes planned and currently offered by will be able to respond to the skills gaps identified in this report.

Linked to the curricula is the need to have structured partnerships between industry and FET colleges. Amongst other things such partnerships should build in them ongoing “bridging programmes” for learners to obtain exposure to the shop floor and world of work, prior to learners registering for a specific course. A similar programme could be implemented for technical school learners as well.

Whilst effort has been made to ascertain the skills capacity of staff teaching in FET colleges more work in this regard needs to be done. The analysis must look at issues of age, qualifications and equity profile of FET staff.

- **Private Training Provider Capacity**

The Nelson Mandela Bay has a serious shortage of accredited private training providers. The shortage of private training provider faces all sectors. Promoting the development training provider capacity is essential. A model of providing resources to facilitate the establishment of centres that will ensure the training of people is specific trades is crucial. The capacitation of training provider needs to be understood as the promotion of small business sector. Initiating a training centre requires large sums of financial investments. Whilst some companies might be accredited and posses a life time of sector specific experience their growing a credible training provider might be hampered by the lack of financial resources.

The Ilitsha Holdings is a good example of a promising training provider, with the right attitude and right skills but without the financial resources.

For instance there are only two private training providers, excluding industry in-house training centres, which are accredited by the ESETA operating in the Nelson Mandela Bay area, the IETI and ETC.

The promotion of training providers is critical for addressing skills shortages. The Nelson Mandela Bay has abundant supply of labour; however there is drastic shortage of skilled and semi-skilled labour. The skills analysis section gives an indication of the type of skills that will be in short supply in the next 3-4 years. It is therefore critical that quantity and quality of training providers be increased within the Nelson Mandela Metro, if it is to be able to respond to the skills demands of the planned projects.

- **Nelson Mandela Metropolitan University**

The Nelson Mandela Metro has one university. Whilst this is a potential challenge and can result in complacency, it also presents major opportunities for both the university and the municipality and other stakeholders. As a comprehensive university, NMMU has a mandate to offer courses from NQF Level 1-12. The presence of two large and active FET colleges with vibrant engineering sections presents NMMU with an opportunity to focus on high-level skills within the broad field of SET.

South African universities have a mandate to be responsive to their local communities and economies through establishing partnerships with civil society and the private sector. Innovation and entrepreneurship are highly influenced and dependent on a vibrant higher education system as well as research and development infrastructure.

The ability to grow and increase high-level human capital is also reliant on higher education and training planning and provisions. Thus the role of the Nelson Mandela Metropole University is critical in position the Nelson Mandela Bay is preferred destination for foreign direct investment in Southern Africa, from a human resources point of view.

7.1.3 SECTOR EDUCATION TRAINING AUTHORITIES

The municipality must facilitate the establishment of a forum in which MERSETA, ESETA, S-SETA, CHIETA and CETA participate. Such a forum will allow all role players to understand the complexity of solving the skills challenges. Of critical importance it will also allow the SETAs to look at measures that could be used to improve the administration of learnerships as well as other administrative challenges.

7.1.4 BUSINESS

The critical role played by business in the creation of human capital is well documented. The business sector also plays a critical role in knowledge production, encompassing innovation. As such a vibrant business sector also promotes entrepreneurship.

The Nelson Mandela Bay Municipality must consider putting in place or facilitating the creation of sector specific forums that will bring businesses in that particular sector to share and network around issues relating to human capital development.

There also needs to be a concerted effort by the municipality to engage the business community to be active participants in the learnership programme and human capital development initiatives.

As part of the drive to encourage business participation, active regional Professional Association must be targeted.

7.1.5 HRD ROLE PLAYER GROUP

Attracting government financial resources aimed at human resource development is critical. Both central and provincial government are major stakeholders in human resource development. Concerted efforts must be put in place to ensure that the NMB is able to benefit from such financial resources.

The EDTA needs to revise its HRD Stakeholder Group to include some of the key strategic government departments as well as active civil society and youth structures.

A revamped HRD Stakeholder Group must be chaired and coordinated by the EDTA unit. Through the Trade and Investment Manager's Office of the EDTA unit, terms of reference for the HRD Stakeholder group must be developed. A further recommendation is that the HRD Stakeholder Group must have sector specific sub-structures that will be chaired by an HR person from the Metro and these will meet regularly.

Thus the EDTA will be the serve as a coordinator, bringing together the relevant stakeholders. It is however critical that the HRD Stakeholder Group includes the Department of Education, Department of Labour and the Department of Trade and Industry. The departments mentioned above are key drivers in funding skills development. Most critically such a forum will allow the Departments of Labour and Education together with the SETAs to raise common problems with quality assurance structures such as uMalusi, HEQC, ETQA etc. These departments must be approached as a matter of urgency to serve on this structure.

Critical to the HRD Stakeholder Group is the Office of the Premier together with the ASGISA & JIPSA National offices. A representative from these offices must sit on both the main HRD Stakeholder Group as well as the sector specific sub-structures. The representative will continuously engage and keep the HRD Stakeholder Group abreast about the latest developments, successes, necessary strategic interventions and challenges within the field of skills development in the province and at national level.

7.2. RECOMMENDED IMPLEMENTATION PLAN: Urgent Areas

Accountability for the implementation of these urgent areas will rest within the EDTA Unit. The unit will be responsible for ensuring that all the areas mentioned as well as those deemed to be urgent are actually implemented. The detailed action plans for these areas must be developed by the unit.

STRATEGIC PRIORITIES	RATIONALE	ACTIONS	DELIVERABLES	TIMEFRAMES
1.Human Capital Development Initiatives				
1.1 Learnerships, Apprenticeships & Skills Programmes	▪ Learnerships and apprenticeships are critical for the development of skilled employees and also promote job creation.	▪ Identify the resources and administrative demands and the hidden costs of implementing learnerships and apprenticeships. ▪ Create a cross-sector database of accredited assessors. ▪ Partnerships with ETQA entities. ▪ Create a list of host employers undertaking learnerships (18.2 Learners) in the specific sectors	▪ A service provider to facilitate the consolidation of information on learnerships taking place in the NMB Region. ▪ Provide sector and trade, specific information on all learnerships levels. ▪ Obtain an SLA between the Metro and relevant Seta's on the	Dec 2007

1.2. Recognition of Prior Learning (18.2 Learners)	▪ To certify and recognise candidates and/or learners qualifications allowing for progression from one qualification level to the next. ▪ Create an accessible vehicle for implementing lifelong learning that is cost-effective and recognised by all stakeholders.	▪ Appoint a Service Provider who will coordinate the implementation of the RPL in the specific trades. ▪ Identify Trade Centres in the NMB Region. ▪ Conduct a recruitment exercise for candidates. ▪ Identify funding sources for the entire RPL process.	▪ Assessment of candidates in specific trades, a minimum of 5 per trade. ▪ Assist candidates with the RPL administrative process. ▪ Sign SLA and/or contracts with NMB Trade Centres. ▪ Ensure candidates undertake RPL.	Dec 2007
1.3. Workplace Experience	▪ Workplace experience is a pre-requisite to a completing a learner ship.	▪ Exploit the NMB Company's database operating in the various trades. ▪ Create a list of companies currently undertaking learnerships. ▪ Obtain concrete buy-in from the difference business chambers for members to take on board 18.2. Learners.	▪ NMB to Sign an MOU with business chambers. ▪ Increase number of learners undertaking workplace training. ▪ Utilise database from the NMB FET colleges. ▪ Identify a Service Provider to coordinate and interact with host employers.	Feb 2008

1.4. Maths and Science Focus: Grade 10-12 & Teachers	▪ All technical and Engineering related skills require a solid comprehension and foundation in maths and science.	▪ EDTA to engage NMMU Science Faculty for advice on the necessary action plan. ▪ Identify pilot Technical Schools to be beneficiaries in the NMMU-EDTA Maths and Science Programme. ▪ Identify donors for sector specific funding.	▪ MOU between Municipality-NMMU-Technical School on Maths and Science Programme for Grade10-12 learners. ▪ Identify Donors for the programme	Dec 2007
2. EDUCATION AND TRAINING INSTITUTIONS				
2.1. Technical School	▪ The foundation for growing technical skills.	▪ Municipality must identify and pilot a school(s) located in previously disadvantaged areas. ▪ Resources, equipment and qualified staff, must be channelled into the school. ▪ EDTA to facilitate the twinning arrangement between the schools to a private sector company with a strong in house training facility.	▪ The EDTA unit must allocate a person to coordinate the linkage and partnership. ▪ A PPP agreement must be designed and signed.	Dec 2007
2.2. Public FET Colleges	▪ The backbone to producing technical skills. ▪ Government is dedicating recourses in growing and capacitating this education band	▪ Establish a sub-committee to look at articulation between NCV and University Programmes. ▪ The subcommittee to assess whether NCV Offerings match with the identified skills required by the region.	▪	Dec 2007

2.3. Private Training Providers	▪ Projected economic growth in the region requires accredited, reputable, resourced and equipped training facilities	▪ A policy framework on the capacitation of private training providers ▪ Policy framework must consider the capacitation of SMME & entrepreneurs in this field. ▪ Institutionalise the adoption of legally bidding joint ventures for large training contracts. ▪ Joint Ventures with NMB located entrepreneur training providers		Dec 2007
3. SKILLS DATABASE	▪ Essential to have an NMB focused database. ▪ The database allows the municipality to keep track of skills available in the region. ▪ Allows for proactive skills forecasting in critical areas.	▪ Interaction between all role-players with active database ▪ Appoint a service provider ▪ Appoint an EDTA IT staff to ensure knowledge transfer	▪ Agree on the terms and conditions for accessing and using the database ▪ Consolidate the database	Dec 2007

4. HRD ROLE-PLAYER GROUP	▪ Forum is a strategic partner to the municipality for developing and updating HR strategic interventions. ▪ Forum is a critical link between implementation and strategy development. ▪ Formalised link between the Private sector HRD structures, SETAs and Key Government Departments (DoL, DoE, DTI & DST). ▪ A key link to the Provincial PGDP HRD structures.	▪ Develop Terms of Reference for the HRD Role Player Group. ▪ Develop Terms of Reference for the Sub-committee Structures. ▪ Invite organisations to formally participate and dedicate resources to the group. ▪ Engage internal Municipal Processes for the establishment of the group.	▪ 2-meetings of the HRD Role Player Group ▪ Establish sub-committees of the HRD Role Player Group ▪ Each subcommittee must hold at least 1-meetign a term. ▪ 1-workshop focusing on the HRD Strategy and Plan.	Dec 2007

8 CONCLUSION

Skilled and efficient human resources are globally a key factor in attracting foreign direct investments. This means that skill upgrading is critical, and it must be accompanied by a process of correctly matching skills supply with demand from strategic sectors. Thus it is critical that regions proactively engage in skills upgrading so as to mitigate skills constraints as well as increase their attractiveness as preferred investment destination centres.

The Nelson Mandela Bay has a growing number of people seeking employment in the region. The increases in workseekers coming to the region are because of various reasons, mainly the ever-prosperous Nelson Mandela bay automotive sector as well as the growth of the Coega IDZ. The increase in workseekers may have negative and positive impact on the Nelson Mandela Municipality. The political pressure to provide employment will increase. However, the increase in workseekers could also help ease labour supply constraints. Thus the NMB has to ensure that these workseekers possess the appropriate skills and/or are trained and skilled in the relevant technical skills within manufacturing, construction, chemical and energy sector.

The current NMB institutional context, with regard to education and skills development has the potential to increase the number of skills, from semi-skilled to skilled. Numerous initiatives and partnerships link the education institutions to business, government; SETA's and other stakeholders like the Coega Development Corporation are in place. The potential and capacity to develop well skilled workers has a solid basis within the Nelson Mandela Bay. However, the increase in the demand for skilled workers will without doubt put a strain on the current training infrastructure and resources.

The long-standing relations between the manufacturing sector and education institutions in the Nelson Mandela Bay has benefited business requiring the engineering skills and forms a solid basis for innovative public-private partnerships in the field of knowledge sharing and production.

The potential challenge due to skills shortage is a reality that could face the implementation and operationalisation of mega projects locally, nationally and internationally. The impact will be significant for all projects requiring semi-skilled high-

level engineering skills. The ECSA statistics on registered engineers in South Africa indicates that the Nelson Mandela Metro has to consider strategies to increase the number of engineers in the region. There needs to be a strategic marketing process to position the Nelson Mandela Metro as the Eastern Cape hub for developing excellent engineers.

The initiatives that are being undertaken across South Africa by all companies across the sectors; government and other role players such as Coega to mitigate the potential human resource shortages indicates the commitment on the part of the South African government and business to drastically increase and improve the quality of its human resources. South Africa's skills shortage is one of the counties most notable apartheid legacies. The role played by initiatives such as ASGISA and JIPSA; professional bodies like ECSA; SETA projects (MERSETA, CHIETA, Services SETA); NMB Metro and the Coega Development Corporation are but some of the examples that could provide useful insight in how Alcan could address the skills challenge. Training interventions will not start in a vacuum, but will build on existing literacy and numeracy skills. South Africa has established adult basic education and training initiatives and the education system has been recently restructured. The restructuring of the HE and FET sectors allow for better alignment between industry and education institutions.

Partnerships between HE and FET; business; government and other civil society organisations is pivotal in winning the skills shortage challenge. The shortage of engineers, technicians and technologists in the different engineering fields in particular metallurgy is of major concern. In comparison to other South African universities, there are low numbers of students graduating with an engineering qualification from both the local university and further education colleges. The low numbers affect all fields of engineering. Training professional engineers and providing relevant work experience for technicians and technologists be of paramount necessity. Within the engineering field it is therefore critical that education institutions must form partnerships with the business sector.

APPENDIX A

			EAST CAPE MIDLANDS					
			Charles Goodyear Campus					
Source of Funds	Purpose of Facility	New/Old building	Equipment	Facility Users	Safety & Health Standard	Maintenance Cycle	Maintenance Staff	Techinical Staff Qualifications
Class fees,	Main building:	Main building	Administration	Admin,	Adheres to	College budget	None but	Governing
Industry	Administration	is about 60	well equipped	Lecturing staff,	the safety and	makes provision	general	Council
training	Welding,	yrs old	and all training	Learners and	health standards	for maintenance	assistants and	appointees
	Motor		facilities in	employees		work for	lecturing staff	have industry
	Machining and		building well	from industry		equipment,	helps when the	experience.
	Basic Hand		equipped			building and	need arises	Lectureres have
	Skills					College grounds		teaching
								qualifications
								with assessor
								and
								moderation
								training
Class fees	Out buildings:	Out building	Facilities in	Lecturing staff,	Adheres to the	College budget	None, but	Governing
	Electrical and	ages ranges from	building well	learners and	safety and	makes provision	general	Council
	Electronics	10 - 25 yrs	equipped	employees	health standards	for maintenance	assistants and	appointees

	workshops,			from industry		work, for	lecturing staff	have industry
	class rooms,					equipment	helps when the	experience.
	computer room,					buildings and	need arises	Lecturers have
	Student toilets					College grounds		teaching
								qualifications
								with assessor
								and
								moderation
								training
Class fees	Main building:	Historic	Fairly equipped	College	Standard Building	None due to	None due to	N/A
	- Campus	monument, 102	with furniture.	personnel: eg	brickwork is in	too limited funds	too limited	
	administration	yrs old	Poorly equipped	Admin staff &	a fair condition.		funds	
	-Tuition		with training	Teaching staff	- Windows &			
	-Examinations		aids		roof needs major			
	-Student				renovation			
	gatherings				- Building is			
					damp and			
					mouldy			
Class fees	Out buildings:	Estimated age	Fairly equipped	- Students as a	Expect for	None due to too	None due to	N/A
	- Library	is 50 years	with furniture,	Media &	garage roof the	limited funds	too limited funds	
	- PC room		Books, PC's and	Technology	building			
	- Study room		Printers	centre	structures are			
	- Garages			- College to	very solid			
				secure vehicles				

Class fees	Out buildings:	Estimated age	N/A	- College	Poor structure	None due to	None due to	N/A
	- Tuckshops	is 50 years		personnel as a	and condition,	too limited	too limited	
	- Store			store	was build with	funds	funds	
				- External	donated			
				providers as	materials			
				tuckshop				

APPENDIX B

Learnership	Total	SETA	Implementing Agency	Subtotals	2007	2008	2009
Fabrication Boilermaking, Mechanical Engineering NQF Level 2	**24**	Merseta	Coega	**24**	24		
Fabrication Boilermaking, Mechanical Engineering NQF Level 2		Merseta	ELIDZ	**0**			
Fabrication Boilermaking, Mechanical Engineering NQF Level 3	**48**	Merseta	Coega	**48**	36	12	
Fabrication Boilermaking, Mechanical Engineering NQF Level 3		Merseta	ELIDZ	**0**			
Fabrication Boilermaking, Mechanical Engineering NQF Level 4	**12**	Merseta	Coega	**12**	0	12	
Fabrication Boilermaking, Mechanical Engineering NQF Level 4		Merseta	ELIDZ	**0**			
Fitting, Mechanical Engineering NQF Level 2	**12**	Merseta	NM Metro	**12**	12		
Fitting, Mechanical Engineering NQF Level 3	**72**	Merseta	Coega	**48**	24	24	
Fitting, Mechanical Engineering NQF Level 3		Merseta	ELIDZ	**0**			
Fitting, Mechanical Engineering NQF Level 3		Merseta	NM Metro	**12**		12	
Fitting, Mechanical Engineering NQF Level 4		Merseta	NM Metro	**12**			12
Machining, Mechanical Engineering NQF Level 3	**36**	Merseta	Coega	**36**	24	12	
Mechatronics NQF Level 2	**12**	Merseta	NM Metro	**12**	12		
Mechatronics NQF Level 3	**36**	Merseta	Coega	**24**	12	12	
Mechatronics NQF Level 3		Merseta	Metro	**12**		12	
Mechatronics NQF Level 4	**22**	Merseta	Coega	**12**		12	
Mechatronics NQF Level 4		Merseta	Metro	**10**			10
National Certificate Automotive component manufacturing and assembly NQF 2 – 4	**0**	Merseta	ELIDZ	**0**			
National Certificate Manufacturing and Assembly Logistics NQF4	**0**	Merseta	ELIDZ	**0**			
Rigger, Mechanical Engineering NQF Level 3	**12**	Merseta	Coega	**12**	12		

Toolmaking, Mechanical Engineering NQF Level 2	**12**	Merseta	Coega	**12**	12		
Toolmaking, Mechanical Engineering NQF Level 3	**24**	Merseta	Coega	**24**	12	12	
Welding (all positions) NQF Level 2	**36**	Merseta	Coega	**36**	36		
Welding (all positions) NQF Level 2		Merseta	ELIDZ	**0**			
Welding (all positions) NQF Level 3	**72**	Merseta	Coega	**72**	36	36	
Welding (all positions) NQF Level 3		Merseta	ELIDZ	**0**			
Welding (all positions) NQF Level 4	**36**	Merseta	Coega	**36**		36	
Welding (all positions) NQF Level 4		Merseta	ELIDZ	**0**			
National Certificate in Vehicle Maintenance (Passenger, Light Delivery Vehicle - Level 2) 44	**35**	Merseta		**0**			
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 2}		Merseta	Amathole	**23**			23
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 2}		Merseta	ELIDZ	**0**			
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 2}		Merseta	NM Metro	**12**	12		
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 2}		Merseta	Ukhahlamba	**0**			
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 3	**12**	Merseta	NM Metro	**12**		12	
National Certificate in Vehicle Maintenance {Passenger , light delivery vehicle – level 4	**10**	Merseta	NM Metro	**10**			10
TOTALS	**523**			**523**	**264**	**204**	**55**

APPENDIX C

COEGA LEARNERSHIP PROJECT FIVE YEAR PLAN																					
PLANNED TOTAL FOR YEAR	SETA	NQF Level	2006 / 2007				2007 / 2008				2008 / 2009				2009 / 2010				5-YEAR TOTAL			
			NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL
Bricklayer NQF Level 3	CETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carpenter NQF Level 3	CETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete Hand NQF Level 3	CETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reinforcing Hand NQF Level 3	CETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shutter-hand NQF Level 3	CETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction Contracting Level 2	CETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical Operator NQF Level 2	CETA	2	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	12	0	0	12

Chemical Operator NQF Level 3	CHIETA	3	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	12	0	0	12
Chemical Operator NQF Level 4	CHIETA	4	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	12	0	0	12
Electrical Contracting and Entrepreneur Learnership NQF Level 3	ESETA	3	0	0	0	0	0	15	0	15	0	15	0	15	0	30	0	30	0	60	0	60
National Certificate in Electrical Engineering (Distribution) NQF Level 2	ESETA	2	0	45	0	45	15	15	0	30	0	0	0	0	0	15	0	15	15	75	0	90
National Certificate in Electrical Engineering (Distribution) NQF Level 3	ESETA	3	0	0	0	0	15	30	0	45	15	15	0	30	0	0	0	0	30	45	0	75

National Certificate in Electrical Engineering (Distribution) NQF Level 4	ESETA	4	0	0	0	0	0	0	0	0	0	30	0	30	0	30	0	30	0	60	0	60
National Certificate in Electrical Engineering (Electrical Construction) NQF Level 2	ESETA	2	0	135	12	147	30	45	0	75	0	15	0	15	0	15	0	15	30	210	12	252
National Certificate in Electrical Engineering (Electrical Construction) NQF Level 3	ESETA	3	0	0	0	0	0	75	12	87	30	30	0	60	0	45	0	45	30	150	12	192
National Certificate in Electrical Engineering (Electrical Construction) NQF Level 4	ESETA	4	0	0	0	0	0	0	0	0	0	60	0	60	0	60	0	60	0	120	0	120

National Certificate in Electrical Engineering (Generation) NQF Level 2	ESETA	2	0	30	0	30	0	15	0	15	0	0	0	0	0	0	0	0	0	45	0	45
National Certificate in Electrical Engineering (Generation) NQF Level 3	ESETA	3	0	0	0	0	15	15	0	30	0	15	0	15	0	0	0	0	15	30	0	45
National Certificate in Electrical Engineering (Generation) NQF Level 4	ESETA	4	0	0	0	0	0	0	0	0	0	30	0	30	0	15	0	15	0	45	0	45
National Certificate in Electrical Engineering (Transmission) NQF Level 2	ESETA	2	0	45	0	45	15	15	0	30	0	0	0	0	0	15	0	15	15	75	0	90
National Certificate in Electrical Engineering (Transmission) NQF Level 3	ESETA	3	0	0	0	0	15	30	0	45	15	15	0	30	0	0	0	0	30	45	0	75

National Certificate in Electrical Engineering (Transmission) NQF Level 4	ESETA	4	0	0	0	0	0	0	0	0	0	30	0	30	0	30	0	30	0	60	0	60
National Certificate in Measurement Control and Instrumentation NQF Level 2	ESETA	2	0	45	0	45	0	15	0	15	0	0	0	0	0	15	0	15	0	75	0	75
National Certificate in Measurement Control and Instrumentation NQF Level 3	ESETA	3	0	0	0	0	15	30	0	45	0	15	0	15	0	0	0	0	15	45	0	60
National Certificate in Measurement Control and Instrumentation NQF Level 4	ESETA	4	0	0	0	0	0	0	0	0	0	30	0	30	0	30	0	30	0	60	0	60

Fabrication Boilermaking, Mechanical Engineering NQF Level 2	MERSETA	2	0	0	144	144	24	0	36	60	0	0	0	0	0	0	0	0	24	0	180	204
Fabrication Boilermaking, Mechanical Engineering NQF Level 3	MERSETA	3	0	0	0	0	36	0	36	72	12	0	36	48	0	0	0	0	48	0	72	120
Fabrication Boilermaking, Mechanical Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	12	0	36	48	0	0	36	36	12	0	72	84
Fabrication Sheetmetal, Engineering NQF Level 2	MERSETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fabrication Sheetmetal, Engineering NQF Level 3	MERSETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fabrication Sheetmetal, Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Fitting, Mechanical Engineering NQF Level 2	MERSETA	2	0	0	72	72	0	0	24	24	0	0	12	12	0	0	0	0	0	0	108	108
Fitting, Mechanical Engineering NQF Level 3	MERSETA	3	0	0	0	0	24	0	24	48	24	0	12	36	0	0	0	0	48	0	36	84
Fitting, Mechanical Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	36	36	0	0	36	36	0	0	72	72
Machining, Mechanical Engineering NQF Level 2	MERSETA	2	0	0	57	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	57
Machining, Mechanical Engineering NQF Level 3	MERSETA	3	0	0	0	0	24	0	12	36	12	0	0	12	0	0	0	0	36	0	12	48
Machining, Mechanical Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	24	24	0	0	12	12	0	0	36	36
Mechatronics NQF Level 2	MERSETA	2	0	0	12	12	0	0	12	12	0	0	0	0	0	0	12	12	0	0	36	36
Mechatronics NQF Level 3	MERSETA	3	0	0	0	0	12	0	12	24	12	0	12	24	0	0	12	12	24	0	36	60

Mechatronics NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	12	0	12	24	0	0	24	24	12	0	36	48
Metal & Engineering Manufacturing NQF Level 2	MERSETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metal & Engineering Manufacturing NQF Level 3	MERSETA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metal & Engineering Manufacturing NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rigger, Mechanical Engineering NQF Level 2	MERSETA	2	0	0	36	36	0	0	12	12	0	0	0	0	0	0	12	12	0	0	60	60
Rigger, Mechanical Engineering NQF Level 3	MERSETA	3	0	0	0	0	12	0	12	24	0	0	12	12	0	0	12	12	12	0	36	48
Rigger, Mechanical Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	12	12	0	0	24	24	0	0	36	36

Toolmaking, Mechanical Engineering NQF Level 2	MERSETA	2	0	0	36	36	12	0	0	12	0	0	0	0	0	0	6	6	12	0	42	54
Toolmaking, Mechanical Engineering NQF Level 3	MERSETA	3	0	0	0	0	12	0	12	24	12	0	0	12	0	0	6	6	24	0	18	42
Toolmaking, Mechanical Engineering NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	0	0	24	24	0	0	12	12	0	0	36	36
Welding (all positions) NQF Level 2	MERSETA	2	0	0	153	153	36	0	36	72	0	0	0	0	0	0	12	12	36	0	201	237
Welding (all positions) NQF Level 3	MERSETA	3	0	0	0	0	36	0	60	96	36	0	24	60	0	0	36	36	72	0	120	192
Welding (all positions) NQF Level 4	MERSETA	4	0	0	0	0	0	0	0	0	36	0	48	84	0	0	48	48	36	0	96	132
Call Centre Agent NQF Level 4	Services SETA	4	0	0	0	0	12	0	0	12	24	0	0	24	0	0	0	0	36	0	0	36
Mixed Farming Systems NQF Level 1	PAETA	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Mixed Farming Systems NQF Level 2	PAETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accommodation Services NQF Level 2	THETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food & Beverage Services NQF Level 4	THETA	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tourism Guiding NQF Level 2	THETA	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL			**0**	**300**	**522**	**822**	**372**	**300**	**300**	**972**	**264**	**300**	**300**	**864**	**12**	**300**	**300**	**612**	**648**	**1200**	**1422**	**3270**

NQF Level	2006 / 2007				2007 / 2008				2008 / 2009				2009 / 2010				FIVE YEAR TOTAL				%
	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	NSF	ESETA	MERSETA	TOTAL	
NQF Level 1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0%
NQF Level 2	0	300	522	**822**	144	105	120	**369**	0	15	12	**27**	0	60	42	**102**	144	480	696	**1320**	40%
NQF Level 3	0	0	0	**0**	216	195	180	**591**	180	105	96	**381**	0	75	66	**141**	396	375	342	**1113**	34%
NQF Level 4	0	0	0	**0**	12	0	0	**12**	84	180	192	**456**	12	165	192	**369**	108	345	384	**837**	26%
TOTAL	**0**	**300**	**522**	**822**	**372**	**300**	**300**	**972**	**264**	**300**	**300**	**864**	**12**	**300**	**300**	**612**	**648**	**1200**	**1422**	**3270**	**100%**