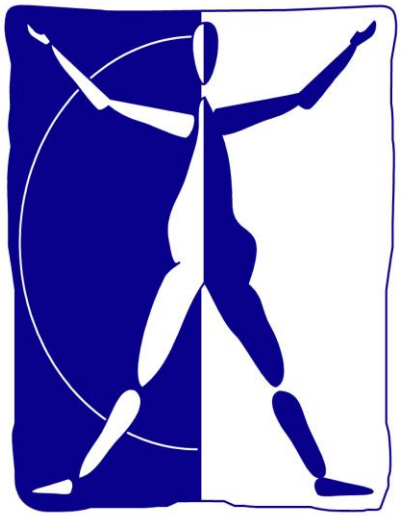

BLUEPRINT

MOLOTO RAIL CORRIDOR ECONOMIC STUDY
Final Report

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Common Terms & Acronyms

Term	Explanation
ASGI-SA	Accelerated Shared Growth Initiative- South Africa
Biodiversity	The whole variety of life encompassing all genetics, species and ecosystem variations, including plants and animals.
CBA	Cost Benefit Analysis
Communal Land	Land used by the community
Conservation	Preservation and enhancement
Cultivation	Land or fields prepared for raising crops by ploughing or fertilising
DBS	Discount Benefit Scheme
Densification	Increasing the number of households in a given area. Density is used in planning for residential development to measure the amount of housing to be developed on land.
Development Corridor	A linear zone of development flanking a transport route, where public transport facilities, mixed land uses, and people are focused
DM	District Municipality
DPLG	Department of Provincial and Local Government
DWAF	Department of Water and Forestry
EAP	Economically Active Population
Ecosystem	An ecosystem is a complete community of living organisms and the nonliving materials of their surroundings. Its components include plants, animals, and micro-organisms; soil, rocks, and minerals; as well as surrounding water sources and the local atmosphere.
Ecotourism	A form of tourism to undisturbed areas high in natural beauty or biodiversity that strives to minimise ecological impact or damage
EIA	Environmental Impact Assessment- Applications for certain types of development, usually more significant schemes, are required to submit an "environmental statement" accompanying a planning application. This evaluates the likely environmental impacts of the development, together with an assessment of how the severity of the impacts could be reduced.
EIC	Enterprise Information Centre (SEDA)
Environmental Management	The management and control of the environment and natural resource systems in a manner that ensures that there is long-term sustainability.

Term	Explanation
EPWP	Expanded Public Works Programme
GGVA	Gross Geographic Value Added
GVA	Gross Value Added
Household	The household is the basic unit of analysis in many microeconomic and government models
IDP	Integrated Development Plan
Infrastructure	Basic services necessary for development to take place, for example, telecommunications, roads, electricity, sewerage, water, education and health facilities.
Land Invasion	The illegal occupation of land in order to settle on it.
LED	Local Economic Development
LM	Local Municipality
LUMS	Land Use Management System
M & E	Monitoring & Evaluation
MDB	Municipal Demarcation Board
MEGA	Mpumalanga Economic Growth Agency
MIG	Municipal Infrastructure Grant
MPCC	Multi Purpose Community Centres
MLEF	Mpumalanga Local Enterprise Fund
MRCDI	Moloto Rail Corridor Development Initiative
NDM	Nkangala District Municipality
NEMA	National Environment Management Act
NMT	Non Motorised Transport
Nodes	Nodes are areas with high concentrations of people and economic activities. There are mixed land uses e.g. residential, retail, community services and industry, or a single land use. The land use activity in a node is of a greater intensity than the surrounding land uses i.e. the level of activity is higher in the node than outside it. Nodes are generally located at the intersection of major transport routes which provide access to the node. Nodes vary in size, configuration, function and design.
NSDF	National Spatial Development Framework
NSDS	National Spatial Development Strategy
PVB	Present Value of Benefits
PVC	Present Value of Costs
RDP	Reconstruction and Development Programme
RFI	Retail Financial Intermediaries
SDF	Spatial Development Framework
SEDA	Small Enterprise Development Agency

Term	Explanation
SMME	Small, medium and micro enterprise
SUPAs	Service Upgrading Priority Areas
TOD	Transit Oriented Development
UYF	Umsobomvu Youth Fund
WMA	Water Management Areas
YAC	Youth Advisory Centre (UYF)

SECTION ONE
BACKGROUND, BRIEF, APPROACH AND METHODOLOGY

1. Objectives of the Study

1.1 Background

The Moloto Rail Corridor Development Initiative (MRCDI) is an Accelerated Shared Growth Initiative-SA (ASGI-SA) project which intends to improve transport infrastructure and stimulate economic development in specific areas along the corridor, in particular the municipalities of Dr JS Moroka and Thembisile Municipalities of the Nkangala District. The MRCDI is a flagship project of significant importance to the ongoing development of the province. The Moloto Road (R573) also serves as an important transport route which connects Tshwane employment destinations for the people of the Thembisile and Dr JS Moroka and the Moutse area of Sekhukhune in Limpopo.

Currently, there are specific challenges which need to be addressed centred on the lack of economic development in the areas under review, combined with the inefficiencies and costs linked to people travelling long distances to work on routes that are unable to safely and effectively deal with the loads.

In particular, the transport of large numbers of people over long distances to work with related high costs and resource utilisation results in traffic congestion, loss of life and significant and escalating pressure on road infrastructure; the lack of economic opportunity in the areas under review forces people to travel long distances to work which has negative social and economic consequences.

The proposed new multi modal transport system (a rail system with feeder roads) for the Moloto Corridor has the potential to provide economic opportunity for local communities inter alia and it is critical that the macro economic aspects of this catalytic project be considered. Using the rail spine as a catalyst, it is likely that economic development opportunities will ensure, providing inward investment to the area and employment and business opportunities for local communities. Seed projects and LED programme activities can be initiated to kick start the economic development process thereby stimulating local economic activity/production, and local consumer spending. From a spatial perspective, the study will review the areas between Siyabuswa in the North East, Masube in the West, and Marapyane in the central area, as well as Kwaggafontein, Vlaklaagte and Tweefontein and KwaMhlanga and Moloto. Road feeder services from Moutse and surrounds will be included.

1.2 Project Objectives

The stated objectives of this project were:

- Produce a detailed economic development plan for along the MRCDI
- Align the plan with the Local Economic Development (LED) plans of the municipalities and surrounding areas
- Produce a cost benefit analysis (economic and financial) for at least two economic nodes along the MRCDI pertaining to the implementation of the rail spine- focus will be on those nodes with highest economic benefit potential.
- Identify skills requirements for economic development opportunities along the MRCDI
- Provide relevant and linked information arising from the study regarding required infrastructure for the implementation of the MRCDI and economic development within the two named municipalities.

2. Approach & Methodology

2.1 Phase One: Contextual Overview and Analysis

Phase One required that a thorough review and analysis of the current state of the economy and transport logistics, as well as the proposed MRCDI rail and road feeder link systems and current status quo, was undertaken. This entailed a review of literature as well as interviews with key persons. The review was undertaken at various levels, the international level, the national level and the provincial and municipal levels. Additional components of this review were the spatial and economic assessments. The spatial assessment encompassed a review of the spatial character and situation of the area, while the economic analysis reviewed the economic status quo.

2.2 Phase Two: LED Framework and Forecast CBA

Building on the outcomes of previous phase, Blueprint began the process of formulating an LED strategy and action plan for the study areas, and prioritised a number of nodes for development in line with the final assessment of economic opportunity. Full recognition has been given to the relevant policy frameworks for LED in Mpumalanga and the municipalities (IDP, LUMS, SDF) as well as private sector linkages and appetite for investment in specific sector activities. Blueprint compiled the proposed LED strategy and action plan for the study areas, and has identified major strategies and initiatives for LED promotion. This has included the identification of critical levers for development opportunities and mechanisms to improve core required skills.

The LED strategies prepared by Blueprint and tabled in this report contain clear recommendations on the development of an appropriate funding model for supporting LED in the target areas. This includes the strategies that can be employed to engage the private sector more fully as well as critical issues that affect the level of impact that the LED strategies and the leveraging of the rail link will have on job creation, enterprise development and the informal sector in the areas under review.

Special attention has been paid to the institutional arrangements for LED implementation and the role of the provincial government and local municipalities. Applying best principles and practices in LED requires a systemic approach to improving the role of key agencies, including the role of public private and community-based organisations. Consideration has also been given to skills development within communities and the role the SETAs and other agencies can play in this regard.

Finally, Blueprint has developed an implementation plan that includes mechanisms for monitoring and evaluating strategies and agencies contained in the LED activities. The LED strategy and action plan contains the following elements:

- Aims of the Strategy
- Profile of economic activity in the study areas (baseline economic analysis)
- Policy context for LED in the study area
- Catalytic potential of the proposed rail and feeder road system
- Potential economic and logistics impact of the proposed rail and feeder system
- Critical factors affecting LED
- Key stakeholders
- Principles and policies underpinning the LED strategy

- Strategic objectives for LED along the MRCDI
- Sector and activity based strategies for LED
- Institutional framework
- Resource mobilisation
- Sustainability and market development
- Implementation strategy
- Monitoring, evaluation and review

Special attention was given to the following issues during the preparation of the LED strategy and action plan:

- Black economic empowerment strategies and programmes
- Gender and youth based engagement
- Sectoral development initiatives, value chains and cluster development opportunities if relevant
- Enhancing backward and forward linkages especially in terms of procurement
- Improving the institutional arrangements for local economic development

At the end of this phase, Blueprint produced and tables a draft LED strategy and forecast CBA which was presented to the steering committee and the Cabinet Cluster. The presentation and subsequent discussion allowed all participants to review the draft and propose changes.

2.3 Phase Three: Development of Targets and Milestones (Action planning)

Based on the output of the second phase, Blueprint has amended the draft LED strategy to reflect the interests, concerns and priorities of the key stakeholders. Greater attention will then be given to planning for implementation. This will include the development of targets and milestones. At the end of this phase, Blueprint presented a final draft of the LED strategy and implementation plan for the study areas, supported by the final CBA.

SECTION TWO
SPATIAL AND ECONOMIC ANALYSIS

3. Key Findings

3.1 Spatial Analysis

3.1.1 The Moloto Corridor

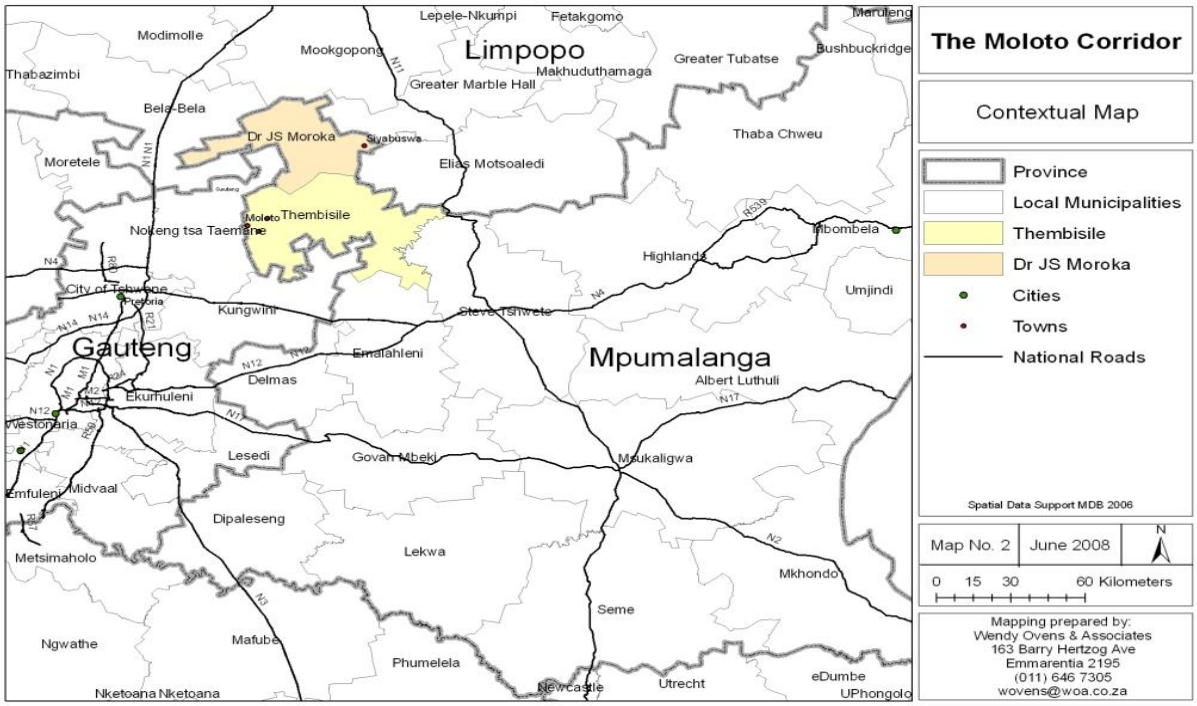
In terms of the National Spatial Development Framework (NSDF) and other policy documents, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main growth centres. Corridor development is recognised and recognized and accepted as an important policy mechanism for the spatial and economic development of the Nkangala District. The main aim is to stimulate economic activities that will create new employment opportunities and economic wealth and which will be sustainable in the long term (Nkangala IDP, 2007/2008). The national policy principles for densification of transport corridors and the concentration of services and facilities along identified high volume routes or corridors are promoted by the District Municipality. Current identified transport corridors that have either been proposed or initiated in the region are:

- The Moloto Development Corridor connecting Dr JS Dr JS Moroka Local Municipality and Thembisile local municipalities with Gauteng in the south-west and Groblersdal/Marble Hall in the north-east
- The Witbank/Middleburg (Mindleni) Development Corridor between Emalahleni and Steve Tshwete LMs
- The Maputo Corridor along the N4 national road which is part of a trans-continental initiative from Mozambique to Namibia. (Nkangala IDP, 2007/2008)
- The Sekhukhune Corridor from Dennilton to Burgersfort, Groblersdal and Marble Hall
- The Dilokong Corridor which forms an arc in southern Limpopo running east from Marble Hall

The Nkangala District has no direct ownership of the corridors besides the Moloto Corridor. The Nkangala District Municipality (NDM), has, however, identified strategies to ensure optimal exploitation of the opportunities and spin-offs created by Maputo Development Corridor, through the identification of land for development along the N4 and the LED strategy of the District.

The Moloto Corridor has significant political support and is of strategic importance as it is one of the National Flagship Projects announced by the President of South Africa in his 2007 State of the Nation Address. (Nkangala IDP 2007/2008).

Figure One: Contextual Map



Source: Wendy Ovens & Associates (2008)

The Moloto Corridor stretches along the R573 provincial road, known as the Moloto Road. It is the activity spine in the Thembisile Local Municipality. It begins at Moloto village and passes through highly populated areas such as KwaMhlanga and Kwaggafontein which are the main urban areas in the Thembisile LM area. A number of smaller settlements are either directly on the Moloto Road or are accessed from it. At Siyabuswa in Dr JS Moroka Local Municipality development the Moloto Corridor, continues in a north-western direction along the R568 with Senotlelo, Marapyane and Seabe as the main centres. Then it continues further west to Nokaneng, Mmametlhake, Phake and Masobye. The corridor diverts to the east from Moteti towards Dennilton. It leaves the KwaNdebele area and enters rural residential communities. It then it turns north-east through commercial agricultural areas that are sparsely populated until the corridor reaches Elias Motsoaledi Local Municipality (Groblersdal) and then continues to Marble Hall. This latter part from Dennilton can be considered as a separate corridor as it also includes the mining area of Burgersfort. It is known as the Sekhukhune Corridor. It then arcs towards the west, in Limpopo Province, to become the Dilokong Corridor.

3.1.2 The Study Area

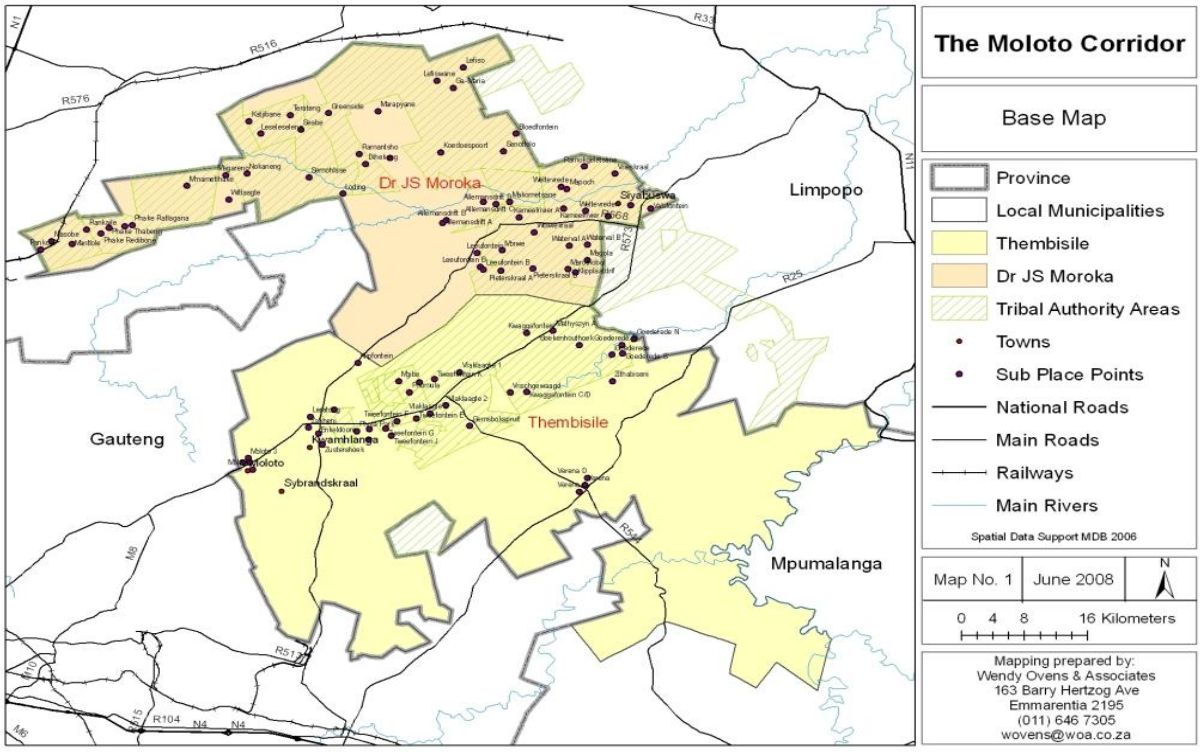
Mpumalanga Province is entirely landlocked. It shares provincial borders with Gauteng and Limpopo and international borders with Swaziland and Mozambique. The Province consists of three District Municipalities: viz; the Nkangala District Municipality (NDM), Ehlanzeni and Gert Sibande District Municipalities.

The NDM consists of approximately 160 towns and villages. According to the MDB, the area of the NDM is approximately 17000 km^2. The NDM consists of 6 local municipalities: Delmas, Dr JS Moroka, Emalahleni, Emakhazeni, Steve Tshwete and Thembisile Local Municipalities. (Nkangala IDP, 2007/2008).

Dr JS Moroka Local Municipality is situated in the extreme north western portion of the NDM and Gauteng. It consists of 59 villages with Siyabuswa, Senotlelo, Libangeni, Loding, Marapyane, Seabe, Nokaneng, and Pankop as the main centres. Siyabuswa is the largest town with a population of 26274. Traditional leadership is an entrenched system in the area. Thembisile Local Municipality consists of 57 towns/villages and 30 wards in 5 zones. KwaMhlanga, Moloto, Verena, Kwaggafontein and Mathys Zyn Loop are the main centres. It lies 80 km North East of Tshwane and 80 km North of Witbank.

The Moloto Corridor falls within the Nkangala District Municipality (NDM) and two of the Local Municipalities, namely Thembisile and Dr J S Moroka Local Municipalities (LMs). Consequently these comprise the area under consideration in this study. The NDM, demarcated as DC31 by the Municipal Demarcation Board (MDB), is located in the Mpumalanga Province.

Figure Two: Map of Study Area



Source: Wendy Ovens & Associates (2008)

The land coverage of each local municipality (in terms of area) is reflected in the table below.

Table 3.1: The area and number of wards per local municipality

Municipality	Demarcation Number	Area (km2)	Number of Wards
Delmas	MP 311	1567.69	8
Dr J S Moroka	MP 316	1416.42	30
Emalahleni	MP 312	2677.67	32
Emakhazeni	MP 314	4735.58	7
Thembisile	MP 315	2384.29	30
Steve Tshwete	MP 313	3976.42	24
NDM	DC 31	17000	131

Source: Blueprint (2008) adapted from various[1]

3.1.3 Population

In terms of population, Nkangala district municipality contains 32.68 per cent of Mpumalanga's population. Both Thembisile and Dr J S Dr JS Moroka LMs have approximately a quarter of the district's population each (25.4 per cent and 23.8 per cent respectively).

Table 3.2: Population and Households

Municipality	Population	Population as % District	# Households (HH)	HH as % district	# Rural HH	Rural HH as % of District	# Urban HH	Urban HH as % district	Rural HH as % Total	Urban HH as % Total
Nkangala District	1,020,586	100	246,049	100	107703	100	138,337	100	**43.8**	**56.2**
Delmas	56,208	5.5	13,390	5.4	3,166	2.9	10,224	7.4	**23.6**	**76.4**
Emalahleni	276,413	27.0	74,916	30.5	7,374	6.9	67,544	48.8	**9.8**	**90.2**
Middleburg	142,772	14.0	36,228	14.7	7,700	7.2	28,534	20.6	**21.3**	**78.8**
Emakhazeni	43,007	4.2	9,724	3.9	3,361	3.1	6,366	4.6	**34.6**	**65.5**
Thembisile	**258,873**	**25.4**	**58,207**	**23.7**	**41,622**	**38.7**	**16,567**	**12.0**	**71.5**	**28.5**
Dr JS Moroka	**243,313**	**23.8**	**53,584**	**21.8**	**44,480**	**41.3**	**9,102**	**6.6**	**83.0**	**17.0**

Source: Blueprint (2008) Adapted from various[2]

The district of Nkangala has more urban than rural households. However, within the DM the situation varies greatly between local municipalities. The final two columna of the table above show the proportion of rural and urban households as a percentage of the total number of households in each municipality, respectively. Dr JS Moroka LM is the most rural municipality, with 83 per cent of its households being in rural areas (i.e. not in a town). Both Dr JS Moroka and Thembisile LMs are predominantly rural (83 per cent and 71.5 per cent respectively).

[1] Source: Physical Planning Strategy for Nkangala District Municipality and the Local Municipalities of Thembisile, Dr JS Dr JS Moroka Local Municipality and Emakhazeni. Report 2: Municipal Capacity assessment: Draft report May 2006. Prepared by Wendy Ovens and Felicity Kitchin

[2] Based on the 2001 census. Source: Physical Planning Strategy for Nkangala District Municipality and the Local Municipalities of Thembisile, Dr JS Dr JS Moroka Local Municipality and Emakhazeni. Report 2: Municipal Capacity assessment: Draft report May 2006. Prepared by Wendy Ovens and Felicity Kitchin

3.1.4 Biodiversity

Four aspects of biodiversity were the focus of the State of the Environment Report (SOER) for Nkangala District Municipality:

- **Loss of Biodiversity**

Biodiversity is defined as … "*The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems*". (Convention on Biological Diversity as cited in The State of the Environment Report (SOER), 2006)

45 per cent of the Nkangala District Municipality natural habitat has been lost. This is higher than the provincial average which is 36 per cent. 54 per cent of the Nkangala District is in a natural state. Grasslands are in a very poor condition with more than half having been lost. The natural functioning of the grasslands ecosystem has been compromised. The condition of the savannah biome is slightly better than the grasslands with indigenous forests. Both Thembisile and Dr JS Moroka Municipalities have the same high potential for invasion by alien plant species. This can result in loss of soil through erosion and loss of water quality and quantity.

Thembisile has 14 recorded Red Data plant species and 2 Vulnerable (rapidly declining) species. There are four Red Data mammal species in Thembisile that are categorised as of Urgent Threat status. These are sable antelope, pangolin, oribi and tsessebe.

- **Sensitive areas**

Rivers in Mpumalanga have been classified on a scale from Vulnerable to Endangered and Critically Endangered. 65 per cent of Nkangala's rivers are Critically Endangered. The provincial average is 49 per cent. The rivers are impacted to a large extent by land use changes. In Thembisile 79 per cent of rivers are Critically Endangered and 21 per cent are Endangered. In Dr JS Moroka Municipality 70 per cent of the rivers are Endangered and 30 per cent are Vulnerable.

- **Biodiversity use and value**

The main use of biodiversity is eco-tourism. While there are a number of nature reserves in Nkangala, according the SOER there "*…is an obvious potential for increased wildlife tourism and infrastructure upgrade in these two Local Municipalities. The proximity of surrounding rural communities also provides many opportunities for social upliftment through the presence and wise management of these MTPA reserves."* The conservation of biodiversity in these nature reserves would benefit from the physical integration of the reserves where possible. There are no data for trade in medicinal plants in Nkangala.

- **Conservation of biodiversity**

There are 20 vegetation types in Nkangala. Only four are adequately protected and eight have no protection. In Dr J S Moroka LM the majority of land is covered by savannah vegetation. Thembisile Local Municipality is characterised by large areas of both grassland and savannah vegetation.

3.1.5 Water Ways and Bodies

Rivers in the area are part of the Olifants River system that drains towards the northeast and eventually enters the Indian Ocean.Water bodies and wetlands cover small areas in all the local municipalities.

3.1.6 Soil Condition

Relative to the situation in the rest of South Africa, light to severe soil degradation occurs in the Nkangala District. The average situation in the District appears to be better than the soil degradation situation in the Province as a whole. In the Dr JS Moroka Local Municipality moderate soil degradation has modified the biology and greatly reduced vegetation productivity. In the Thembisile Local Municipality, severe soil degradation occurs. This means that the veld ecology has been largely destroyed and only limited veld productivity remains. (State of the Environment Report , 2006) Few trees, indigenous or alien, are seen in the study area. It is not known if deforestation has occurred due to trees being chopped down for use as fuel and other purposes. One consequence of lack of trees is that good quality topsoil in particular, is not held in place on the land.

3.1.7 Air Quality

The main pollution sources within the study area are domestic fuel burning and motor vehicles. No major investigation of air in Nkangala has been undertaken. The quality of air in the Witbank / Middleburg area is of concern due to mining and industrial activity. Studies have consequently focused on this area. Monitoring of air quality in the Nkangala District is performed on a fragmented basis, focussed in and around Witbank and Middleburg, and no co-ordinated monitoring network exists. Although the Nkangala District as a whole may not experience compromised air quality, there are areas where the presence of sources under the influence of specific climatic conditions, may lead to poor air quality. There are however insufficient available data to substantiate this. None of the local municipalities currently has a specific air quality management plan or strategy to handle air quality problems. Air quality issues in all areas are being addressed on an ad hoc basis.

3.1.8 Environmental Management

Environmental management refers to the management and control of the environment and natural resource systems in a manner that ensures that there is long-term sustainability. The principles for environmental management that are contained in legislation (Natural Environment Management Act, 1998) include:

- People-centred development
- Equitable consideration of physical, psychological, developmental, cultural and social interests
- Consideration of avoidance, minimisation or remediation of aspects which impact on sustainability
- An integrated approach to environmental management
- Environmental justice
- Equitable access to environmental resources

Environmental education and awareness programmes are the responsibility of the local municipalities. Proactive planning by all spheres of government for vulnerable communities in the case of natural and other disasters is a legislative requirement. Disaster Management plans should be drawn up in conjunction with the community. The major natural disasters in Nkangala are flooding and strong winds. Disaster preparedness in Thembisile Local Municipality is indicated by the recent construction of a fire station which includes a Disaster Centre. A fire substation is planned for Dr JS Moroka Local Municipality. Thembisile Local Municipality has outdated by-laws on environmental management. Dr JS Moroka Local Municipality has a number of environmental policy guideline documents such as waste management.

3.1.9 Settlement Patterns

During the apartheid era KwaNdebele was the homeland for the Ndebele people. The settlement pattern reflects the planning ideology of the day. Settlements were isolated from one another. Very little diversity of land uses was permitted. Consequently settlements are primarily residential areas with schools, churches and minimal retail space. The relatively high proportion of land used for settlements in Dr J S Moroka and Thembisile Local Municipalities reflects the political history of the area. In Thembisile settlements are clustered along the Moloto Road and around Verena in particular. The concentration of settlements in DR JS Moroka is around Siyabuswa and in a linear pattern to the west of it. Residential expansion is promoted in the following locations in Thembisile:

- Around the Moloto road between Moloto and KwaMhlanga
- South of Enkeldornoog B (infill development between KwaMhlanga and Enkeldoornoog)
- Between the T573 and northern extensions of Tweefontein (A, B, C, D, K, N and M)
- The vacant area between Vlaklaagte 2 and Gemsbokspruit A
- Adjacentto the R573 between Vlaklaagte 1 and Kwaggafontein B
- The area to the south and east of Verena (currently an informal settlement)
- Around Vlakfontein
- Adjacent to the informal settlement in Ekangala

3.1.10 Housing Patterns

The Nkangala District has a population of over one million people, with approximately 246,000 households. Numerous families and individuals do not have access to adequate housing. Although a total of 15,622 houses have been build since 2000, there is a backlog of between 75,000 and 89,000 houses in the District (Department of Provincial and Local Government, 2005, The Gaffney Group, 2004). The provision of housing, therefore, remains one of the biggest challenges in the Nkangala District.

In Thembisile, 75.7 per cent of the pollution lives in a house or structure which is located on its own piece of land. This has major implications for the size and management of the settlements. It is more cost effective to provide infrastructure and services to areas of concentrated development rather than dispersed sites. The same logic applies to the scattered villages where infrastructure provision and maintenance is costly. There is, therefore, a need for infill strategies where new development links existing developments. 14.5 per cent of the Thembisile population live in informal dwellings especially in KwaMhlanga and Moloto. KwaMhlanga C is an undeveloped site with about 1,000 stands. It is anticipated that this development will cater to mixed income levels. In Moloto there are 547 sites available for development with potential additional sites in Extension K. In addition there are 750 RDP homes to be built but due to land claims on the land, the project has been stalled. The purpose of the Discount Benefit Scheme (DBS) was to transfer land from the state to municipalities in order to facilitate housing construction. However, the fact that documentation is not available on much of the land has stalled development. Housing development has occurred in KwaMhlanga and Tweefontein K on sites not belonging to the developers. The matter is not resolved. Issues regarding housing raised at the stakeholder workshops include the following (Binedell et al., 2005):

- There is a general shortage of adequate housing. This leads to the establishment of informal settlements (shacks and mud houses) that are not serviced as the vast majority are not legally established.

- There is poor planning and planning that is not implemented
- The quality of the RDP houses is poor
- There are unfinished houses (Public Housing Programme)

Residential areas have infrastructure of varying quality. This is discussed in detail in the section on Infrastructure.

3.1.11 Agriculture

Current land use in the Nkangala District is dominated by agriculture. In the southern part of the District, crop farming and some cattle farming are the major enterprises, while in the northern part of the District it is cattle and game farming. Subsistence farming (mixed farming and livestock) is the major enterprise in the north-western part, with associated rural residential land use; while in the eastern part, agriculture is complemented by eco-tourism and forestry (Nkangala District Municipality, 2004a; Nkangala District Municipality, 2005). The agricultural land east of Verena is being farmed by black and emerging farmers.

Large differences exist between the two LMs in terms of land use. In Dr JS Moroka Local Municipality land use is more or less equally split between settlements, crop production, grazing land and conservation.

In Thembisile Local Municipality settlements and conservation each account for approximately 10 per cent of land use. (Hoffman & Todd, 1999a, State of the Environment Report, 2006). Grazing land and crop production make up approximately 80 per cent of the land use in Thembisile. Grazing land and crop production account for approximately 80 per cent of the land use in Thembisile. Cultivated areas (permanent and temporary dry and irrigated land) cover less than 15 per cent in Dr J S Moroka and Thembisile Local Municipalities combined (State of the Environment Report , 2006). There is much subsistence crop production in Dr JS Moroka Local Municipality where very little commercial crop production occurs. Cultivated areas (permanent and temporary dry and irrigated land) cover less than 15 per cent in Dr J S Moroka and Thembisile Local Municipalities combined (State of the Environment Report , 2006). There is much subsistence crop production in Dr JS Moroka Local Municipality where very little commercial crop production occurs.

There is small scale maize and stock farming activity taking place in Thembisile. Some commercial farmers lease land. According to the Thembisile Local Municipality website approximately 108,899 hectares of state-owned land municipal area are occupied by semi-commercial leases with options to purchase. Yet there is much unused state land in Thembisile. There is a redundant co-operative at Letolo as well as a redundant poultry farm. Small-scale agricultural projects do exist, some of which are funded but not operational. One municipal project was the training of goat farmers.

3.1.12 Mining

Although not important in terms of extent of land being utilised, mines (opencast, tailings and waste dumps), quarries, bare rock and soil cover less than 1 per cent of the land area), mining is an important activity in the Nkangala District, especially from an economic perspective. The District has a high mining potential, with a high occurrence of various minerals in Thembisile and Emakhazeni Local Municipalities (Nkangala District Municipality, 2004a; Nkangala District Municipality, 2005; Emakhazeni Local Municipality, 2005). Small diggings are scattered throughout the study area, mainly for sand. There is

mining activity midway between KwaMhlanga and Ekandustria near Schoongezicht. The existing mines are Bron Mine, Ndebele Mine and Refractory Mineral Mine. Illegal mining is taking place at Boekenhouthoek and Kwaggafontein. No Environmental Impact Assessments (EIAs) have been undertaken for mining activity.

3.1.13 Nodal development

Nodes are areas with high concentrations of people and economic activities. There are mixed land uses e.g. residential, retail, community services and industry, or a single land use. The land use activity in a node is of a greater intensity than the surrounding land uses i.e. the level of activity is higher in the node than outside it. Nodes are generally located at the intersection of major transport routes which provide access to the node. Nodes vary in size, configuration, function and design.

Nodes normally form over time. They pass through various stages of a cycle, growing, reaching maturity, declining, being dormant and then, growing again. A number of factors such as economic climate, the spatial context, the policy environment and political factors can all impact on the growth and function of nodes.

Nodes promote a compact form of development which is advantageous for the provision of infrastructure by municipalities as services have to be supplied to a concentrated area rather than a large dispersed area. It is also beneficial to the community as economic and social services and facilities are concentrated within one location.

Mpumalanga provincial government is promoting Multi Purpose Community Centres (MPCCs), now called Thusong Centres, at strategic locations such as major intersections, nodes, intermodal transfer facilities. The purpose of the Thusong Centres is to provide a one-stop facility for community services such as clinics, pay points, libraries and post offices. Retail and other economic activities will be attracted to the number of people accessing the Thusong Centres and will cluster around them either creating or stimulating nodal development. The proposed Thusong Centres in Thembisile and Dr JS Moroka LMs are aligned with the proposed Moloto Rail Corridor.

The two main business nodes in Thembisile are at KwaMhlanga and Kwaggafontein. KwaMhlanga is a fairly large developing node. Kwaggafontein has a vibrant retail and business node. Ten possible sites have been identified for MPCCs: Moloto, KwaMhlanga, Enkeldoornoog, Vlaklaagte , Tweefontein , Kwaggafontein, Boekenhouthoek, Goederede, Verena, and Schoongezicht. The MPCCs (or Thusong Service Centres) could serve as the impetus for nodal development.

In J S Moroka, there is no primary node although a number of small isolated nodes are emerging mainly at the intersections of major routes. According to the Dr JS Moroka Local Municipality Spatial Development Framework, Vaalbank node has retail and municipal land uses and a transportation terminus. Marapyane has a transportation terminus and retail facilities and other mixed uses. The Bloedfontein node is at a major intersection while Masobye is growing naturally. There are a filling station and offices in the node and a transportation terminus in the vicinity. Matjiesgoedkuil is a small industrial node. Walldal A is another industrial area bordering on Greater Groblersdal. Siyabuswa has the highest concentration of activities, both formal and informal. In addition smaller nodes are found throughout the municipal area along the transportation routes.

3.1.14 Industry

The Nkangala District Municipality is promoting future industrial areas in Thembisile and Dr JS Moroka Local Municipalities. In Thembisile, there are four existing industrial areas with Kwa Mhlanga being the largest. The other three are at Vlaklaagte 2, Kwaggafontein B, Tweefontein. All have a few small / medium enterprises. The Nkangala Spatial Development Framework (SDF) identifies the KwaMhlanga industrial area as having the most potential due to the surrounding economic activity. The other areas identified by it for industrial activity are in the vicinity of Tweefontein, at Kwaggafontein and at Siyabuswa.

3.1.15 Tourism

Tourism activities take place in Thembisile and Dr JS Moroka, although at a low level. The focus of tourism is on cultural and historic sites, and on eco-tourism. Cultural / historic sites include the Kgodwana Ndebele Village which has reconstructions of dwellings and arts and crafts, such as weaving and beading, are demonstrated. There is a historic tree in Siyabuswa, Ikageleng school in Marapyane and the royal graves and cattle enclosure at Loding. In addition there is the Loopspruit Winery is situated on the KwaMhlanga-Ekanagala road. There is an unused guest house at Loopspruit. There is an arts/craft/information centre at the intersection of the Watervaal and Kameelrivier roads. These tourism activities utilise minimal land.

A greater land area is utilised by the nature reserves which provide potential for eco-tourism. These include the Mdala, Mkholwane, Mkhombo and SS Skosana nature reserves. Loskop Dam Nature Reserve is located in both Thembisile and Steve Tshwete LMs. It is the most popular game reserve in Nkangala. However, the existing facilities, except for Loskop, are dilapidated. In addition the roads in the tourism belt are in poor condition.

Tourist accommodation is available at the nature reserves. There is the Mkhombo campsite, Mdala self-catering lodge and SS Skosana self-catering lodge. The low number of accommodation establishments is attributed to no tourism activity having occurred in the former homeland areas.

3.1.16 Land Use Trends

Hoffman & Todd (1999a) recorded land use area trends for six land uses in the following table:

Table 5.3: Land Use Trends in the LMs

Land Use	Dr J S Moroka	Thembisile
Settlements	Increased by more than 2% pa	Increased by more than 2% pa
Crop Production	Decreased by less than 2% pa	Decreased by less than 2% pa
Grazing Land	Decreased by less than 2% pa	Decreased by less than 2% pa
Forestry	Stable	Stable
Conservation	Stable	Stable
Other uses (mining)	Stable	Increased by less than 2% pa

Source: Hoffman and Todd (1999)

There was a major increase in land use intensity of settlements in both Dr JS Moroka and Thembisile LMs. Land use intensity of other uses (mining) increased moderately in Thembisile and no major changes occurred in Dr J S Moroka. The following are the land use trends as listed in the State of the Environment Report (2006):

- Change from communal land to full title.
- Pressure on agricultural land for eco-tourism related recreation and leisure activities.
- Increase in illegal and informal activities on agricultural land.
- In urban areas municipal land is increasingly allocated for small scale farming and urban agriculture.
- Rezoning in certain urban areas of land from 'residential 1' to 'residential 2' reflects the need for higher density residential development.

3.1.17 Land Tenure

The vast majority of land in both Local Municipalities is state-owned. In both Thembisile and Dr JS Moroka large tracts of land are held under communal land tenure under the control of the Tribal Authorities. The system is deeply rooted in culture and tradition and has many social implications. There are six main Tribal Authorities. These served as local government during the apartheid years. The Tribal Authorities had an independent tribe ruled by the iNgwenyama [king], iNkosi [chief] and councillors. Land was state-owned and held in trust on behalf of the tribe. Tribal members occupy specific land parcels allocated by the chief. There is communal land for grazing and the use of natural resources such as thatching grass or medicinal plants. Land has no commercial value and the fact that rights of occupation can be revoked makes tenure insecure. The individual has no personal property rights. The land allocated for personal use cannot be sold or utilised as collateral. (Hoffman & Todd, 1999a and State of the Environment Report, 2006).

In Thembisile a fairly large portion of land, mainly in the north east, with on section in the south east, is under Tribal Authority control. Most of the urban areas in Thembisile lie in traditional authority areas. The urban areas correspond fairly closely to the areas of high population, although it is important to note that some high population areas are not considered to be urban. 78 per cent of the population of Dr JS Moroka lives in a traditional authority area. Most of the urban areas lie in traditional authority area, and the high population areas correspond fairly closely to the urban areas.

Tribal Authorities may allocate parcels of land for purposes which conflict with the Spatial Development Frameworks (SDF). Each municipality has an SDF which is part of the Integrated Development Plan (IDP) and which gives direction on the appropriate location of different land uses. The SDF is based on planning principles such as densification with a view to supporting public transport or nodal development to bring a variety of compatible land uses together in a compact area which is easily accessible to pedestrians. The control that Tribal Authorities have over land allocation can impede the implementation of the SDF by the municipalities. In Thembisile most people own their homes. 65 per cent of people have paid for their homes, 27 per cent live rent free and 5 per cent live in homes that have not been paid for. The settlements in Thembisile can be categorised according to their legal status.

- Towns and villages that are legally proclaimed with an approved general plan,
- Not legally proclaimed but with an approved general plan
- Not proclaimed and no approved general plan
- Informal settlements. Most informal settlements have general plans and only 8 have been proclaimed.

This categorisation is important as it impacts on the availability of land for development. The legal transfer of land can only occur in areas that are legally proclaimed and which have approved general plans. Some villages are still registered as farms. This poses a problem as tenure cannot be established.

3.1.18 Land Reform

Virtually the entire municipal area is subject to land claims and is state owned. There are 133 claims on 29 properties by 82 claimants. The total land area of Mpumalanga is 79,490,000 hectares. To date 2,702, 660 hectares or 3.4 per cent of the total land area has been transferred as part of the land reform programme. This is below the RDP target set in 1994.

According to the Land Claims Commissioner, 1,624 of the 6472 claims lodged in Mpumalanga have been settled. This has benefited approximately 34,600 people at an estimated cost of R180 million (Commission on Restitution of Land Rights, 2005).

During the 2004/05 financial year, 30 proposals were submitted in terms of the Redistribution Programme in the Nkangala District. Seven farms, covering an area of approximately 7,579 hectares, were transferred to beneficiaries at an estimated cost of approximately R4.5 million. The remaining 23 proposals have not been processed due to problems relating to lack of funds from the beneficiary side, pending reports and recommendations from land valuators, pending business proposals and a lack of financial resources by upcoming farmers.

In Thembisile Local Municipality only two tenure upgrading projects have been finalised with the conveyancing complete. These are at Tweefontein IA and Vlaklaagte 2. There are additional tenure upgrading projects in the Tweefontein complex and 7 other areas which have not been completed. The entire central part of the Dr JS Moroka Local Municipal area is subject to land claims. There are 67 claims on 23 properties. There are also claims on the farms Allemansdrift 162 JR, De Beersput 152 JR and Troya 151 JR.

3.1.19 Land Issues

The following are the important issues to be managed in terms of economic development, with respect to land. (Nkangala District Municipality, 2004b; Binedell et al., 2005):

- Land transformation is slow
- There are conflicts between inappropriately located land uses. For example there are illegal taverns next to schools
- Farm land is decreasing due to underground and opencast mining activities
- Land zoned for agricultural use is being used for other purposes, such as industry
- There is major competition between land for residential purposes and agricultural production and grazing
- Industrial areas have been allocated but are not in operation because of high rental costs and a shortage of resources. Where funds do exist, availability, accessibility and communication are problematic
- State land is not optimally used for agricultural production. Much of it is lying fallow and cannot be planted due to insufficient funding
- Land conservation strategies that promote management of land uses are not in place.

The issues facing the Dr J S Moroka Local Municipality in particular are as follows:

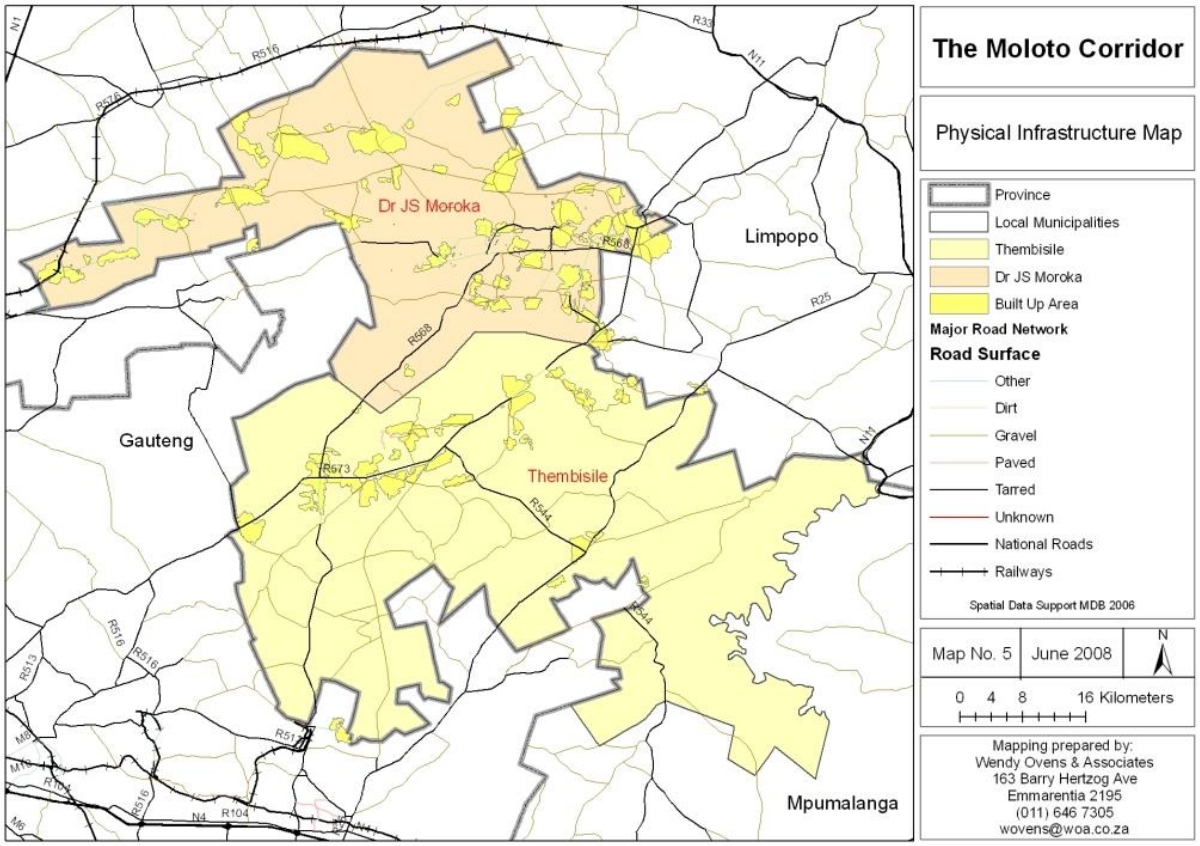
- Most people in the community do not have security of tenure as most areas are under the control of Tribal Authorities.
- No legal framework is in place to manage land use (no Town Planning Schemes or Land Use Management Schemes). This implies that there are no zoning certificates, and therefore no rezoning of property.
- Properties are consequently illegally changed from 'residential' to 'business' zoning (Libanngeni, Siyabuswa ABCD and A1.)
- Informal settlements are very scattered. This makes it difficult and costly to service. Services are vandalized, and illegal connections take place.
- Population growth is exceeding the capacity of infrastructure services.
- Site allocation is an issue as Tribal Authorities allocate sites and there is not always community consensus on the allocation.
- The Municipality cannot regulate or control the growth of informal settlements.
- Business developers are controlling growth- they are not locating in the nodes identified in the Spatial Development Framework.
- Business sites are bought, but are not developed, sometimes due to land speculation.
- Municipal planning has been given to the District Municipality (26 May 2003 Provincial Gazette) due to lack of planning capacity.
- There is land invasion taking place

3.1.20 Infrastructure

Historically, in the KwaNdebele homeland, infrastructure was not distributed to all settlements and where it was provided, it was of a basic standard. Few settlements had piped water, sanitation or electricity. This legacy remains. All spheres of government have been involved in programmes to provide basic infrastructure services to all communities. While much has been achieved, there are still enormous backlogs in the provision of housing and infrastructure.

Service Upgrading Priority Areas (SUPA) have been identified in the SDF for capital investment in service backlogs (for water, sanitation and electricity). The large conglomeration of settlements in the Siyabuswa and KwaMhlanga areas have been identified in the Thembisile and Dr JS Moroka Local Municipalities due to the high population numbers and the huge backlogs in service provision.

Figure Three: Road and Rail Infrastructure



Source: Wendy Ovens & Associates (2008)

3.1.21 Water and Sanitation

Although there has been an increase in the volume of water available in the Nkangala District and a decrease in the volume of water required by different sectors, the volume of water required still exceeds the volume of water available. According to the 2001 Census, 69 per cent of all households in the Nkangala District had access to piped water inside the house or on the stand. Most of the formal towns have access to piped water, with the exception of some of the settlements in Dr JS Moroka. The rural areas obtain water from dams or boreholes.

In Nkangala District, 45 per cent of all households make use of flush/chemical toilets and the number of households with flush/chemical toilets increased by nearly 21,000 units between 1996 and 2001. The majority of households in Thembisile (89.9 per cent) and Dr JS Moroka (84.3 per cent) made use of pit latrines (IDP Report, 2005).

The Nkangala District boundary runs through two of South Africa's Water Management Areas (WMAs), namely the Inkomati and the Olifants WMAs. Each of these WMAs is subdivided into subwater management areas (sub-WMAs). There are four sub-water management areas in the Nkangala District. Dr JS Moroka Local Municipality lies within the Middle Olifants sub-WMA. Eighty per cent of Thembisile Local Municipality is in the Middle Olifants sub-WMA while the additional southern portion (20 oer cent) is

in the Upper Olifants sub-WMA. So although the water management structures are in place, water supply is insufficient.

The limited data available on groundwater and surface water quality indicate that water quality of these resources is decreasing, although it is generally still fit for human consumption and for sustaining aquatic ecosystems for the most part of the year. The presence of faecal coli form bacteria in some water samples in the Nkangala District is of concern. (SOE, 2006)

In Thembisile Local Municipality approximately 6,000 households (12 per cent of the population) have water below RDP standards. According to the Department of Water and Forestry (DWAF) standards the Municipality uses more than double the amount of water than should be used. This could be due to leaks, wastage, misuse and illegal connections. The Thembisile LM believes that there is insufficient bulk water supply. The supply is augmented by Rand Water via Mamelodi-Bronkhorstspruit line. In addition there are management issues with the Ikangala Water Board lacking capacity.

Sanitation in Thembisile also needs attention as 40,000 households have no sanitation system or it is below RDP standards. The majority of people use pit latrines. Only KwaMhlanga and Tweefontein K have waterborne sewage systems. There are 86,394 households of which 3,491 have VIP toilets and 1,970 have waterborne systems. The backlog for VIP toilets is 82,903 and for waterborne toilets it is 84,424. Thus, the total backlog is 167,327 toilets. (Thembisile IDP)

In Dr J S Moroka Local Municipality water and sanitation is the biggest problem faced by the Municipality Half the villages still need RDP level water service. 32 villages have water reticulation. 22 villages have sufficient infrastructure to have metering, but no meters have been installed (JS Moroka IDP) The main reasons for the water problems in J S Moroka are a) insufficient bulk supply b) the need for upgrading of the bulk infrastructure and, in some areas, c) lack of proper water demand management systems. The infrastructure is typically old and in need of replacement. In addition the purification plant at Mdjutjana also supplies other municipalities and there is no management of quantities. As a result there is no accurate financial control over water supplied. (Dr JS Moroka IDP).

Water quality can also be problematic. Seepage and leakage from it latrines contaminates the high water table. Water from boreholes is particularly susceptible to being of poor quality. 11.6 per cent of the households in Dr JS Moroka LM have access to sanitation on a sewer system. 18 Villages in Dr JS Moroka have VIP toilets. Kwa Phaahla, Makopanong and villages around Siyabuswa don't have proper sewerage systems. Sanitation infrastructure needs upgrading as sewer lines are blocked. The table below summarises the water and sanitation backlog per local municipality within the District.

The basic infrastructure backlog in Dr JS Moroka and Thembisile requires an investment of R576m. Of this R208m is for water and R368m for basic sanitation services (Nkangala District IDP Report 2004/05)

Table 3.4: Water and sanitation backlog per local municipality in Nkangala District

Water Service Authority	Water Needs in Households %	Cost in Million Rands per WSA	Sanitation Needs in Households %	Cost in Million Rands per WSA
Dr J S Moroka	32-39	91	78-84	231
Thembisile	18-19	58	82-88	225
Delmas	10-17	6	20-30	15
Emalaheleni	11-16	32	21-27	75
Steve Tshwete	12-16	18	7-19	24
Emakhazeni	11-15	3	17-25	7
Total		**208**		**576**

Source: Blueprint (2008) Adapted from various[3]

There is a need to extend the Thembisile water distribution supply to areas which have no supply currently. These are mainly informal areas and new developments around Zakheni, Phola Park, Sun City, Thokoza and Sakhile and isolated areas around Tweefontein and Vlaklaagte (Thembisile IDP).Water meters are required in parts of Tweefontein F, Kwaggafontein C and D, Verena, Machipe and Enkeldoornoog. In addition Thembisile Local Municipality requires the services of an engineer to manage and maintain the water system.

3.1.22 Power

There are high numbers of households using animal dung, paraffin and wood, and these are indications of high poverty levels.

Table 3.5 2001 Fuel utilisation in Thembisile and Dr JS Moroka

Fuel	Cooking		Heating		Lighting	
	Dr JS Moroka	Thembisile	Dr JS Moroka	Thembisile	Dr JS Moroka	Thembisile
Electricity	24,000	23,000	26,000	21,000	50,000	52,000
Wood	16,000	3,500	15,000	4,000		
Paraffin	9,000	12,500	4,000	4,000		300
Coal	4,000	19,000	7,500	28,000	200	
Gas	1,000	1,000	350	300	200	200
Animal dung	250	250	200	200		
Solar	100	200	100	100	50	50
Other	100	100	1,500	2,000	100	200
Candles					4,000	6,000

Source: www.demarcation.org.za

Approximately 80 per cent of the community in Thembisile has access to electricity. In Dr JS Moroka,of a total of 55,555 households, 51,666 have Eskom electricity from the Amandla Substation.. Bulk supply is generally adequate except for outages due to network overloading. Illegal connections and use of faulty appliances contribute to overloading. Eskom is upgrading the substation.

[3] DWAF; Revised IDP 2005/2006 and Nkangala District Municipality Water Blueprint, 2005.

Tribal Authorities allocate new stands without taking electricity into account. The new areas are not always proclaimed townships and so there are no registered land owners. Consequently the townships cannot be electrified. This is the case in Moripe Gardens. Further issues are the lack of street lighting and the supply of free basic electricity which is impeded by the lack of a reliable database of beneficiaries. A new reticulation network is needed in 5 wards and upgrading is needed in 7 wards

In terms of backlog, priority has to be given to areas where house connections do not exist. In Thembisile this includes Phola Park/Jordan, Sun City, Thokoza extension, Verena and small parts of Vlaklaagte 1.

There are areas where no public lighting is available. This is the case in all of Moloto, Mountain View, Zakheni, Mandela and Luthuli, Sun City, Jordan and Enkeldoornoog (Themalethu / Buhlebuzile), Thokoza and Tweefontein N. (Thembisile IDP). Areas that require public lighting upgrades are KwaMhlanga, Tweefontein south and Tweefontein north. The plan is to provide the entire length of the Moloto Road with mast lighting. In Dr JS Moroka Local Municipality the backlog is:

- New reticulation network for Wards 1, 2, 29, 20, 28
- Upgrading and extension of the reticulation network in Wards 7, 12, 21, 18, 25/23/19
- Installation of Post Connections in Wards 1, 3, 4, 5, 8, 7, 9, 10, 11, 13, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26, 30, 28, 29, 17, 27
- Network strengthening in all areas supplied from Amandla Power Station
- Installation of high mast lights in all wards
- Maintenance of high mast lights in Wards 16, 15, 21, 19, 23.

3.1.23 Roads and Storm Water

Historically unless settlements were located near the major provincial roads, the access roads as well as the internal roads were left un-tarred and little provision was made for storm water drainage. The major provincial routes are tarred, as are the main roads within the larger settlements. Internal circulation routes are generally un-tarred and often in poor condition. Rain aggravates the condition of un-surfaced toads as the storm water runoff is not catered for and it forms ruts in the roads.

National and provincial roads are generally in good condition but will need maintenance soon. There are 2,720 km of municipal roads in Dr JS Moroka and most of these need maintenance. Priority for surfacing (tar and gravel) has been given to the roads used by buses and taxis roads. In Dr JS Moroka this accounts for 210 km and only 55km of road is tarred. Other issues relating to roads are:

- The lack of road names
- Overgrown verges making visibility difficult
- Roads not being fenced and animals straying onto the roads
- Poor by-law regulation e.g. billboards, impounding vehicles, informal traders
- Need to register learner transportation with the Road Board

Storm water drainage is only formalised on tarred roads in formal townships. These receive little maintenance and most are blocked. Thembisile has a storm water master plan which has not been put into action. The main routes are:

- R568 from Kwa Mhlanga to Siyabuswa and Marble Hall
- R573 (the Moloto Road) from Tshwane through Thembisile to Siyabuswa. It is the most important road in Thembisile with over 25000 commuters using it daily. Bus is main mode of transport along it. It is a provincial road. Although it has been upgraded there is a very high accident and death rate on this road.
- Route P95/1 (R25) from Bronkhorstspruit to Verena and Groblersdal
- R544 from Thembisile though Verena to Emalahleni
- R568 from Kwa Mhlanga to Ekangala
- R568 is the road between Siyabuswa and Bronkhorstspruit
- R544 from Vlaklaagte to Witbank
- R25 runs north east from Bronkhorstspruit to Groblersdal
- Intersection of R544 from Vlaklaagte, Tweefontein to Witbank, intersects the R25 (Bronkhostspuit to Groblersdal) at Verena / Endzundza

3.1.24 Social Facilities

- **Cemeteries** - There are numerous cemeteries throughout the two Local Municipality areas. (There are 28 cemeteries in Thembisile and a regional cemetery at Vlaklaagte 2). In some areas new cemeteries are needed. Tribal Authorities allocate land for cemeteries without consultation. Some cemeteries have no burial registers. Most are unfenced, have no ablution facilities and are not maintained. Tribal Authorities, particularly in Dr JS Moroka, allocate land for cemeteries without consultation with the officials. There is a need to consolidate the cemeteries and to coordinate management.
- **Sport and recreation** -Existing sporting facilities are mainly for soccer and netball. They are usually associated with schools and are generally not in good condition. There are 5 sport and recreation facilities in Thembisile and a sports stadium at KwaMhlanga. Additional varied sporting and recreation facilities are necessary.
- **Safety and Security** -There is a lack of policing due to inadequate resources, facilities and equipment. Response time is slow. Crime rates are high. There are 4 police stations in Thembisile at KwaMhlanga, Tweefontein, Verena, Kwaggafontein. Each serves a few villages. Yet there is a large area that is not served including Mathys Zyn Loop, Bundu and Goedrede. A satellite police station is needed in Dr JS Moroka Local Municipality.
- **Education** -There are no facilities for learners with special needs. There are a number of private schools throughout the area. It is assumed that they are funded by external sources. In Thembisile there are 73 primary schools, 17 combined schools and 40 secondary schools. All villages are well served. A Technical College and the Ndebele Teachers Training College are situated in Siyabuswa. These are the only tertiary institutions in the study area.
- **Health and social services**- In Thembisile Local Municipality there is one hospital and 18 well distributed clinics. In Dr JS Moroka there is 1 hospital for 258,000 people. According to the accepted health standards there should be 2 hospitals for this number of people. Clinics are required in 5 wards and a mobile clinic needed for 3 wards. The standard of health facilities is on average, poor. Neither local municipality has any HIV /AIDS policy.
- **Waste Management** - Waste management is problematic in both Thembisile and Dr JS Moroka Local Municipalities. There is illegal dumping and littering. Waster removal is not carried out. As a result there are uncontrolled and illegal dump sites. There is a lack of proper landfill sites and there is no

facility for medical waste disposal. 3 landfill sites are required in Dr JS Moroka. There are no by-laws on minimum waste disposal standards.

- **Disaster Management** - No disaster management plan exists for either local municipality. There are fire stations at Kwaggafontein and Siyabuswa.
- **Other**- Most people live near a telephone land line. Cell phones are used by less than 30 per cent of the population. Small libraries and community halls are scattered throughout the area. There are not sufficient. This situation should improve as these facilities will be included in Thusong Service Centres. A few post offices exist. New post offices are being constructed at Verena, Tweefontein and Moloto. There are extensive local government buildings throughout the area.

3.1.25 Transportation

The most common form of transportation in both Thembisile and Dr JS Moroka is by foot. Yet pedestrians are not catered for as there are no footpaths, pedestrian crossings or sidewalks in the larger centres. In the same way bicycles, which is the other common form of non-motorised transport (NMT), are also not accommodated in the road system, (no bicycle lanes), or at the major destination points such as retail nodes and public transport termini where there are no storage facilities for bicycles. After NMT the next most common form of transportation is by bus and then taxi.

There are 583 Putco buses carrying 40,000 commuters between Thembisile and Tshwane daily along the R573. The service is not efficient, effective, safe or economical. The highest bus subsidy for any bus route in the country is paid by the National Department of Transport for busses on this route. It totals in excess of R550m p.a. The R573 is colloquially known as the “killer road”. It has been widened and but volume of vehicles has increased and there is still an unacceptably high accident rate.

There are 6 taxi ranks in Thembisile. These are at KwaMhlanga (Phola Park), Tweefontein, Enkeldoornoog B, Kwaggafontein, Mathys Zyn Loop and Verena. Informal taxi ranks are located at Vlaklaagte2 Crossing, Boekenhouthoek, Vezebuhle, Moloto, KwaMhlanga, Mathys Zyn Loop and Kwaggafontein. Illegal taxi ranks also exist in Dr JS Moroka. Commuter facilities throughout the two local municipalities need upgrading. Bus shelters are inadequate. The majority have been vandalised. They do not provide seating or adequate shelter from the elements. The areas around the shelters are not paved.

3.1.26 Health Facilities

The closest hospital to Thembisile and Dr JS Moroka is the Philadelphia Hospital in Dennilton. Dennilton is in Limpopo province, north east of Siyabuswa. (It was originally was located within Mpumalanga but after a demarcation review the area was placed within Limpopo). Philadelphia Hospital is a satellite campus for MEDUNSA, the medical faculty of the University of Limpopo. It is a large teaching facility with a number of specialised services such as a 24-hour emergency service, an eye clinic, a TB clinic, an outreach programme to surrounding villages and an HIV-AIDS clinic. The latter offers antiretroviral treatment, voluntary counselling and testing, prevention of mother-to-child transmission and post-exposure prophylaxis.

3.1.27 Spatial SWOT Analysis

STRENGTHS	WEAKNESSES
• Commercial nodes exist • Adequate no. Private Schools in area • Political support for the corridor • Existing emerging nodes • High Concentration of people • Some well established residential areas	**Land** • Traditional Authority Land - lack of security of tenure • Lack of commercial Farming • Scattered nature of settlements – makes it difficult to service • Conflict between land uses • No optimal use of land • J S Moroko – lack of institutional capacity • Lack of adequate housing **Legal Framework** • No EIA • Lack of land conservation strategies • J S Moroko – no legal framework in place (TPS and LUMS) • No plan for informal settlement upgrading • Waste management not existence • No disaster management plans **Infrastructure** • Lack of capacity – bulk and reticulation • Illegal connections • Not meeting RDP minimal standards • Affordability – from demand side and supply side • Poor quality of houses • Large infrastructure backlogs • Backlog in RDP water level services • Insufficient bulk supply of water • Boreholes – water quality issue • Old infrastructure • Sanitation is below RDP standards • Illegal electrical connections • High accident rate on Moloto Road • Road maintenance – poor • Unmanaged / uncontrolled cemeteries • Lack of sport and recreational facilities • Illegal taxi ranks **Environment** • Deforestation • Poor quality coal and paraffin –safety and pollution

OPPORTUNITIES	THREATS
• Tourist Attraction sites • Higher DU density • Olifants river system – irrigation potential • Unused state agricultural land • Airport in Delmas • Rail • Solar power and renewable energy • Proximity of Tshwane • Proximity to Marble Hall for agro-processing	• Illegal and informal land uses • Land claims • Population growth exceeds carrying capacity of services • Air quality may be a problem in the future

Source: Blueprint (2008)

It is clear from the foregoing analysis and the SWOT as shown that there are economic opportunities which are available to Dr JS Moroka and Thembisile- these will be enlarged upon in the section later on in this report on the economic status quo of the area. However, the most significant constraints- from the spatial perspective- to be dealt with so that the economic opportunity that the proposed corridor will unlock can be accessed are infrastructure and land related.

3.2 Economic Context

The context within which LED should operate in the Nkangala District and consequently within the local municipalities of Dr JS Moroka and Thembisile, is grounded in certain key national and provincial policies.

At the national level, the Accelerated Shared Growth Initiative for South Africa (ASGI-SA) is a critical policy which has, inter alia, committed to halving unemployment and poverty by 2014. The policy has as stated goals, the reduction of unemployment to below 15 per cent, and the halving of the poverty rate to less than one-sixth of households. However, it is acknowledged that this will not be achieved without sustained and strategic economic leadership from government, and effective partnerships between government and stakeholders- labour and business.

Government's investigations, supported by some independent research, indicate that the growth rate needed for South Africa to achieve these objectives is 5 per cent average annual growth rate between 2004 and 2014. The targets have been set in two phases, based on a realistic assessment of the capabilities of the South African economy, Phase one, between 2005 and 2009, seeks an annual growth rate that averages 4,5 per cent or higher. Phase two, between 2010 and 2014, targets an average annual growth rate of at least 6 per cent of gross domestic product (GDP).

In addition to these growth rates, ASGI-SA's social objectives require the improvement of the environment and the development of more opportunities for labour-absorbing economic activities. More broadly, ASGI-SA requires that the fruits of growth are shared in such a way that poverty comes as close as possible to being eliminated, and that severe inequalities between rich and poor are further reduced.

The ASGI-SA vision of South Africa's development goal is one of a vigorous and inclusive economy where products and services are diverse, more value is added to products and services, costs of production and distribution are reduced, labour is readily absorbed into sustainable employment, and new

businesses proliferate and expand. ASGI- SA also requires that economic growth is placed on a more balanced footing in two important respects.

Firstly, recent economic growth for South Africa has been based on a combination of strong commodity prices, strong capital inflows and strong domestic consumer demand, given impetus by anti-poverty measures, growing employment and rising asset prices. The effect of this combination has been to strengthen the currency which makes it difficult for exporters outside the commodity sector or those who compete with imports to remain competitive. This has led South Africa to a trade deficit of 4,3 per cent of GDP in 2005. While the trade deficit is well financed by capital inflows, it nonetheless demonstrates the challenge for South Africa of competing effectively outside of commodities.

Secondly, an imbalance has arisen due to the fact that although the social grant programme has given significant impetus to poverty reduction and income redistribution, approximately one third of all South African households are not yet able to benefit directly from economic advances. Bringing these households into the mainstream economy will considerably enhance growth potential- if it can be achieved.

In order to achieve sustainable economic growth at around 6 per cent per annum, these two imbalances must be addressed. In order to address the constraints which perpetuate the imbalances, South Africa must address in particular ***t****he cost, efficiency and capacity of the national logistics system****.*** *(*Accelerated and Shared Growth Initiative - South Africa (ASGI-SA).

"*Backlogs in infrastructure and investment, and in some cases market structures that do not encourage competition, make the price of moving goods and conveying services over distance higher than it should be. Deficiencies in logistics are keenly felt in a country of South Africa's size, with considerable concentration of production inland, and which is some distance from the major industrial markets*". (Extract from **Accelerated and Shared Growth Initiative - South Africa (AsgiSA): A summary** at http://www.info.gov.za/asgisa/)

From the provincial perspective, the Mpumalanga Five Year Strategic and Performance Plan (2004-2008) notes that the Department of Economic Development and Planning (DEDP) mandate no longer focuses only on economic development but also includes economic planning. In essence, the Mpumalanga DEDP is expected not only to facilitate economic growth and development but also to shape the trajectory of growth and development. To meet the objectives of creating work, fighting poverty and promoting equality, the DEDP is required to pay more attention to the following programmes:

- Encourage more investment in key economic sectors
- Facilitate Broad-based Black Economic Empowerment which also benefits communities, particularly the Youth, Women and people with disabilities as well as workers and small businesses
- Promote learnerships
- Enhance skills development
- Encourage the use of labour intensive methods in sectors of the economy

3.2.1 Demographics & Location

The local municipalities of Thembisile and Dr JS Moroka lie in the North West corner of Nkangala District Municipality. The two local authorities are positioned so that they are effectively "separate" from the greater District, as can be seen in the map below. The main transport routes between the key economic nodes (Gauteng, Limpopo, the Kruger National Park, Maputo and the heavy industry centres of Mpumalanga) bypass this corner of Nkangala. The two municipalities are spatially sidelined and also disadvantaged by an absence of the major natural resources (coal and forestry) which have supported economic development in the remainder of the District.

None of the dominant economic sectors for Mpumalanga feature prominently in the economies of either Dr JS Moroka, or Thembisile. The main natural resources in Nkangala district (coal and forestry) are largely absent from Thembisile and Dr JS Moroka. Thembisile and Dr JS Moroka are characterised largely by informal agriculture (livestock grazing and growing of vegetables) and trade, and have very limited tourism facilities located in small parks and reserves that fall under Mpumalanga. Both local municipalities are relatively densely populated compared to the remainder of the District. In an environment of limited economic growth and few economic opportunities (see below) this puts considerable pressure on resources.

However, the absolute population of both local authorities is fairly small (a combined total of less than 500,000 in 2006). The data indicate an increase of 7.5 per cent in the population of Thembisile from 1996 to 2006 but over the same period the population of Dr JS Moroka *declined* by 14 per cent. Over the same period, the population of the greater Nkangala district increased by 11.5 per cent. These different patterns in population growth suggest that there is migration out of the two local municipalities, and people look for economic opportunities in other areas. The sharp decline in the population of Dr JS Moroka is a very good indication of just how limited the economic opportunities in that area actually are.

The table below indicates the change in the total population of each of the three areas from 1996 to 2006, and the change in the population of those people aged 20 – 49, who are the main component of the workforce.

Table 3.6: Change in population: Persons aged 20 - 49

Year	Nkangala	Thembisile	Dr JS Moroko
1996	419,393	92,783	93,857
2006	487,315	107,117	75,987
Change	**67,922**	**14,334**	**-17,870**

Source: Blueprint (2008). Adapted from Global Insight data

It is clear that people of working age are leaving Dr JS Moroka, in search of other opportunities. The picture looks worse if it is noted that in 1996, there were 64,302 people in DR JS Moroka aged between 10 and 19 but those same people, ten years later, who would fall into the 20 – 29 year band, are not there. In 2006, there were only 34,981 person in the 20 – 29 year age band. This implies that almost half of the youngest participants in the labour force exited the local municipality between 1996 and 2006. It also implies that the municipality urgently requires a youth-focused development strategy. The social impact of this migration of young people out of an area can contributes to a cycle of poverty, as the most

productive members of a society leave. The challenge for both local authorities will be to generate sufficient employment and/or entrepreneurial opportunities to keep young people in the area.

3.2.2 Economic Profile- GVA Growth

The table below shows real growth in Gross Value Added[4] (GVA) for Mpumalanga, Nkangala, Thembisile and Dr JS Moroka, for selected years. It is clear that both Thembisile and Dr JS Moroka have lagged behind Nkangala in terms of economic growth. Despite an improvement in economic growth since 2000, the impact of la long period of lower-than-average growth rates means that both these local authorities have lost considerable ground when compared against the district, and against the province.

Table 3.7: GVA Growth – Change from the previous year (constant prices)

Year	Mpumalanga	Nkangala	Thembisile	Dr JS Moroka
1997	+3.6%	+6.1%	-6.8%	-2.5%
2000	+3.4%	+2.2%	+1.3%	+2.2%
2002	+2.9%	+3.8%	+1.5%	+1.3%
2004	+4.0%	+3.1%	+3.4%	+2.3%
2005	+3.9%	+4.4%	+2.8%	+1.9%
2006	+3.8%	+2.9%	+3.4%	+5.3%
1996 - 2006	+36.1%	+35.9%	-4.8%	+0.6%

Source: Blueprint (2008). Adapted from Global Insight data

This, in turn, implies that the relative economic position of the inhabitants of Thembisile and Dr JS Moroka has deteriorated since 1996. A tremendous effort will be required to reduce that gap.

Another way of looking at regional growth is to consider how GVA per capita has developed. This indicator gives us information on how well the economy is doing in terms of meeting the requirements of improving standards of living. The table below shows how GVA per capita has developed in the four regions, using *constant* prices, in order to remove the effects of inflation.

Table 3.8: GVA per capita (Rands): Constant (2000) prices

Year	Mpumalanga	Nkangala	Thembisile	Dr JS Moroka
1996	R18,290	R22,623	R4,993	R3,286
2006	R21,552	R27,103	R4,362	R3,776
Change	15.13%	16.52%	-14.46%	12.97%

Source: Blueprint (2008). Adapted from Global Insight data

The economies of Thembisile and Dr JS Moroka are extremely small in comparison to Nkangala district and the remainder of Mpumalanga and the situation is getting worse. In 1996, the per capita GVA of Thembisile was 22 per cent of the Nkangala per capita GVA, and that of Dr JS Moroka was 14.5 per cent. By 2006, those ratios had declined to 16.1 per cent and 13.9 per cent respectively. The main reason why the per capita GVA of Dr JS Moroka has increased slightly from 1996 is because of the decline in the population of the area described above. This also may suggest a heavy reliance on social grants as the

[4] Gross Value Added can be used as a measure of the economic activity of a region or an area in terms of the output of the region or area. It differs from GDP in that it excludes indirect taxes and subsidies.

main source of household income. This poor performance on the part of the two LMs is a reflection of the much richer resource and industrial base found in the rest of Nkangala district. The key to the different economic fortunes of Thembisile and particularly Dr JS Moroka can be found in the detailed sectoral analysis of these economies, below.

3.2.3 Economic Profile- Sectoral Analysis

The structure of the economy of an area generally holds the key to its economic prosperity or poverty: Those areas where the economies are heavily weighted in favour of high-growth sectors (such as the financial and business services sector in the City of Joburg) will enjoy higher levels of economic growth than those areas where the economies are weighted in favour of low-growth sectors. The economic development challenge is to identify potential high-growth sectors where a particular area is able to be competitive, and then position it do so. The economy of Nkangala District Municipality is dominated by the following sectors:

- Heavy industry (steel and electricity production)
- Coal mining
- Forestry
- Tourism (in the centres of Dullstroom and Machadadorp)

The table below gives an indication of the most important economic sub-sectors in Nkangala district, and in Dr JS Moroka and Thembisile, in 1996, 2000 and 2006:

Table 3.9 Key Sector Share of GVA – 1996, 2000 & 2006

1996 – Sub-sector share of total GVA (%)			
Sector	**Nkangala**	**Thembisile**	**Dr JS Moroka**
Agriculture	3.4	1.2	2.4
Coal mining	**24.6**	3.2	0.0
Metal production	**13.1**	3.1	0.2
Electricity generation	**12.5**	3.9	1.7
Retail trade	4.7	**20.2**	9.5
Transport	4.6	7.9	7.1
Finance & Insurance	5.0	1.6	1.6
Public Administration & social services	5.2	**12.8**	**11.9**
Education	6.1	**22.8**	**41.9**
2000 – Sub-sector share of total GVA (%)			
Sector	**Nkangala**	**Thembisile**	**Dr JS Moroka**
Agriculture	2.5	1.1	2.1
Coal mining	**29.0**	4.8	0.0
Metal production	**10.8**	1.7	0.1
Electricity generation	**10.8**	3.6	1.2
Retail trade	4.3	**14.9**	6.1
Transport	4.1	5.2	4.0
Finance & Insurance	5.8	1.2	1.1
Public Administration & social	5.4	**17.3**	**14.9**

services			
Education	5.9	**29.3**	**49.9**
2006 – Sub-sector's share of total GVA (%)			
Sector	**Nkangala**	**Thembisile**	**Dr JS Moroka**
Agriculture	2.1	1.0	1.9
Coal mining	**29.2**	5.1	0.0
Metal production	**11.1**	1.7	0.1
Electricity generation	**9.3**	3.3	0.9
Retail trade	3.8	**12.7**	5.0
2006 – Sub-sector's share of total GVA (%)			
Sector	**Sector**	**Sector**	**Sector**
Transport	3.9	4.7	3.5
Finance & Insurance	6.8	1.4	1.2
Public Administration & social services	5.3	**18.5**	**15.5**
Education	5.5	**30.0**	**49.7**

Source: Blueprint (2008). Adapted from Global Insight data

The table shows that Nkangala District economy is skewed in favour of coal mining, metal production and electricity production. These sectors have shown strong and consistent performances over the past few years, and the current energy crisis will continue to support coal mining and electricity generation. As a result, the share of financial and insurance services has also increased, as the local economy becomes wealthier. At the same time, the share of the public sector (administration and education) has declined in favour of the private sector.

However, it is clear that those high-growth sectors that have contributed to Nkangala's improving economic performance do not contribute to the economies of Thembisile and Dr JS Moroka, particularly the latter. This is a direct result of the lack of natural resources in the LMs and the fairly isolated position of the two local municipalities, which have made them relatively unattractive destinations for private sector investment.

The single biggest component of the economies of both Thembisile and Dr JS Moroka is the public sector, particularly education (i.e. the employment of teachers). *This is cause for major concern* as it indicates that the major employer in both LMs is the government. *Even more worrying is that, since 1996, the share of the public sector has increased. I*n Thembisile, the share of the public sector in 1996 was 35.6 per cent. This increased to 48.5 per cent in 2006. In Dr JS Moroka, the corresponding figures show an increase from 53.8 per cent to 65.2 per cent. This latter figure means that, in 2006, ***almost half of all economic activity in Thembisile and almost two thirds of all economic activity in DR JS Moroka was derived from the public sector (government)***, instead of the private sector.

This forces the conclusion that the current ability of these economies to generate increased income and employment opportunities is extremely limited. A dramatic restructuring of the economy will be required in order to address the high level of unemployment and low incomes in these areas, and this presents a formidable challenge. The tables below offers additional information about the rate of growth of each of the nine major sectors, from 2000 to 2006, in Thembisile and Dr JS Moroka:

Table 3.10: Thembisile Sectoral Growth Rates: 2000 – 2006 (% change from the previous year at constant prices)

Sector	2000	2001	2002	2003	2004	2005	2006
Agriculture	+4.2	-15.1	+21.6	-3.9	+1.7	+7.2	**-10.9**
Mining	+1.6	+6.0	-2.3	+3.3	-1.4	+6.5	-2.1
Manufacturing	+2.6	-8.2	+3.6	+2.1	+5.1	-3.3	-2.7
Electricity, gas & water	+7.3	-8.5	+1.2	+0.6	-1.7	+2.8	+3.2
Construction	-27.1	+4.2	+5.6	+5.9	+8.7	+5.7	**+8.8**
Trade & Accommodation	+1.7	-5.7	+1.8	+7.0	+6.3	+3.1	+4.0
Transport & Communication	-1.1	-5.8	+2.0	+13.5	+5.6	+3.0	+1.8
Financial & Business Services	-9.9	-2.6	-1.5	+3.0	+6.4	+2.9	**+10.3**
Public Sector & other services	+2.9	-0.2	+1.4	+2.3	+2.4	+2.6	+4.2

Source: Blueprint (2008). Adapted from Global Insight data

Although the table shows lower growth over time for Thembisile in the public sector, this growth is taking place from a large base as indicated in the prior tables. The continued reduction in the agriculture sector and increasing dependence on government grants and government jobs is worrying, and when this is coupled with the emigration of young people from the LM, a cause for major concern.

Table 3.11: Dr JS Moroka sectoral growth rates: 2000 – 2006 (% change from the previous year at constant prices)

Sector	2000	2001	2002	2003	2004	2005	2006
Agriculture	+4.6	-14.0	+18.3	-4.3	+1.9	+5.1	**-8.2**
Mining	+9.1	-0.9	+3.2	+15.4	-0.1	+3.9	-0.7
Manufacturing	+2.8	-5.4	+2.3	-4.6	+1.3	-1.9	-0.3
Electricity, gas & water	+8.6	-7.9	-1.4	-3.8	-5.7	+1.5	+1.2
Construction	-24.5	+8.3	+5.3	+1.0	+4.9	+6.4	**+11.8**
Trade & accommodation	+5.0	-2.0	+1.5	+1.6	+2.5	+3.6	+6.5
Transport & Communication	+2.9	-1.4	+2.4	+8.0	+1.8	+3.7	+4.7
Financial & Business Services	-6.9	+1.3	-2.1	-3.0	+2.5	+3.9	+25.3
Public Sector & other services	+2.7	+0.6	+0.6	+2.3	+2.7	+1.3	+4.9

Source: Blueprint (2008). Adapted from Global Insight data

Several things are clear from the tables above. In the first instance, both of these local economies are heavily skewed in composition towards those sectors that are growing at a low rate, i.e. the public sector and community services.

Even when the data problems are taken into consideration there is still a high level of volatility experienced across these local economies. There are large swings in growth rates across many sectors. This is an indication of the lack of sustainability of many enterprises, and the high-risk foundation of the local economy. An environment of slower national economic growth, rising food prices, significantly higher fuel prices and higher interest rates is likely to put pressure on micro enterprises and individuals across these local economies, and hence there will be a major need for SMME and entrepreneurial support into the future.

In Dr JS Moroka in particular, the level of activity in the construction and the trade sector jumped sharply in 2006, to rates above those recorded for Nkangala as a whole. Although these two sectors together made up less than 10 per cent of the local authority's economy, they are important sectors in terms of indicating current and future personal income. The jump in the rate of growth in Dr JS Moroka in 2006 is due almost entirely to a strong rise in the community services sector. The increase in this sector, together with a good increase in per capita income in 2006 (see below) indicates an increase in social expenditure and is probably the main reason behind the relatively high GVA growth rate of Dr JS Moroka in 2006. Clearly this is not a sustainable source of future economic growth.

Revitalising the economies of Thembisile and Dr JS Moroko will not only require that the economies be re-structured, but that the "productive" (i.e. non government) sectors become more efficient and effective than they currently are.

3.2.4 Economic Profile-Unemployment, Employment and Skills

The single most important LED challenge is the ability of the local economy to generate job opportunities and or entrepreneurial opportunities that lead to sustainable increases in personal income. Unfortunately the factors listed above have contributed to the two LMs becoming an island of poverty and limited opportunity within Nkangala, particularly Dr JS Moroka. The inability of the local economies to create new economic opportunities has already resulted in a decline in the economically active population in the area and the migration of young people out of the region.

The table below shows the development of the unemployment rate, from 1996 to 2006, in Thembisile and Dr JS Moroka. The unemployment definition used is the expanded definition, which includes discouraged job seekers.

Table 5.12: Economically Active Population (EAP) & Unemployment Rate (%)

Year	Thembisile		Dr JS Moroko	
	EAP	Unemployment	EAP	Unemployment
1996	83,553	47.1%	72,578	52.7%
2000	101,225	53.3%	78,708	64.3%
2002	106,110	62.0%	77,674	76.9%
2004	108,448	65.0%	75,072	86.2%
2005	112,126	60.6%	75,713	84.1%
2006	113,375	58.7%	74,824	84.0%

Source: Blueprint (2008). Adapted from Global Insight data

Under usual circumstances, the EAP of an area should increase over time, reflecting the fact that the population is growing. However, the decline in the population of Dr JS Moroka is reflected in a decline in the EAP since 2000. Additionally, the fact that the unemployment rate in Dr JS Moroka is still above 80 per cent, despite a declining EAP, is an indication of an increasingly major problem. Any decline in the unemployment rate since 2004 is due largely to an increase in employment by the public sector (and in Dr JS Moroka also because of the decline in the EAP), with some limited gains across a few other sectors.

It is absolutely critical to the development of an economic revitalisation strategy for these two LMs, that we note that there are clearly large numbers of chronically unemployed and those who have never worked at all in both LMs but particularly in Dr JS Moroka. Job-creation solutions for those who have been unemployed for very long periods of time and those who have never had a job at all are difficult, because of the challenges that such people face in integrating themselves into formal employment. Those who have been unemployed for longer than a three-year period tend to have lost any skills advantages they may previously have had. As a result, a very strong up-skilling and re-skilling strategy will be required if there is to be any hope of success of economic revitalisation. Such a strategy will need to include life skills and other similar skills, to prepare people who have never worked at all, for the world of work.

The employment overview- that is, an analysis of where those who are fortunate enough to be employed are sectorally deployed, is shown below. The table below shows the number of people *formally employed* (it excludes the informal sector) in each of the main nine sectors and in households, in 2006. It also indicates the change in employment from 1996 to 2006, in Nkangala and the two LMs.

Table 3.13: Formal Sector Employment: 1996 - 2006

Sector	Nkangala		Thembisile		Dr JS Moroko	
	2006	1996-2006	2006	1996-2006	2006	1996-2006
Agriculture	18,269	-955	993	-11	1,101	-89
Mining	43,245	+8,356	471	+43	28	+3
Manufacturing	33,995	+5,514	1,784	-1,574	427	-510
Electricity, gas & water	9,713	+2,415	337	+73	248	+20
Construction	12,488	+5,012	589	-135	468	-178
Trade & Accomm	29,138	+11,694	1,531	-427	633	-279
Transport & Comm	8,788	-112	488	-549	275	-396
Finance & Bus Services	14,338	+6,684	825	-15	633	-89
Community Services	40,007	+12,951	8,196	+2,797	8,217	+2,543
Households	21,276	+1,517	1,616	+167	1,748	+102
TOTAL	**231,256**	**+53,254**	**16,829**	**+371**	**13,764**	**+1,099**

Source: Blueprint (2008). Adapted from Global Insight data

Although Thembisile and Dr JS Moroka both saw new job creation between 1996 and 2006, the rate of job creation was much lower than that for the overall Nkangala district. In addition, the rate at which new jobs were and are being created is much slower than that required to reduce the unemployment backlog. Finally, almost every single new job opportunity in Thembisile and Dr JS Moroka was created in the public sector. This suggests that there is a very low level of private-sector/industrial/commercial type skills in these local authorities for a job creation strategy to build on.

There are other business activities that people are engaged in, apart from those that are included under this type of formal employment. Some data[5] estimate that there were around 6,500 people operating in

[5] Sources include: Quantec, Stats SA, Global Insight

the informal sector in Thembisile in 2006 and around 4,900 people in the Dr JS Moroka informal sector in the same year. Most of these people were engaged in small-scale retail trade and personal services. In addition, there are probably a considerable number of people in both local authorities engaged in survivalist agricultural activities. This may be a very useful base of skills, activities and competencies upon which to base job-creation plans.

3.2.5 Economic Profile- Skills Base

Nkangala District Municipality has a relatively youthful population structure. 33 per cent of the population falls within the age group 0-14 years. Black South Africans represent 91 per cent of the population and white South Africans represent the remainder. At 52%, the female population in the District Municipality is slightly larger than the male.

Table 3.14: Population Growth Breakdown- Nkangala and LMs (2006)

Age Category	Delmas	Dr JS Moroka	Emalahleni	Emakhazeni	Steve Tshwete	Thembisile
0-14	1.1	-1.2	1.1	0.9	0.5	-0.2
15-29	-0.4	-2.6	1.8	1.2	0.7	-0.7
30-49	0.4	-1.6	1.3	1.3	0.5	0.2
50-64	2.6	1.2	4.1	3.0	3.4	2.7
>65	1.9	0.6	3.0	1.9	2.6	1.3

Source: Nkangala District Municipality LED Plan (2006)

In Thembisile and Dr JS Moroka, there is a decline in the numbers of people between 15-29 and 30-39 indicating an out migration of younger economically active people. When this is combined with the information available on education, a picture emerges of a population where there are fewer young people, and those who remain tend to be uneducated or poorly educated.

The table below is based on data collected during the 2007 Community Survey undertaken by Statistics South Africa. There are some problems with the reliability[6] of the Community Survey data, since it was based on sample data collection. For example, the tables below cover the population aged 20 years and older.

Table 3.15 Level of Education in the LMs

Area	No education	Less than Gr 12	Grade 12	Tertiary[7]	TOTAL
Thembisile	32,220	84,127	21,578	6,109	144,034
Dr JS Moroka	29,916	64,868	21,144	9,337	125,265

Source: Blueprint (2008). Adapted from Stats SA 2007 Community Survey data

[6] There is some 10 per cent deviation between the total population figures for Dr JS Moroka suggested by the Community Survey data (a higher figure), and the Global Insight population data. However, this is not significant enough difference that the overall trend data in the Community Survey is not useful. The numbers for Thembisile are much more aligned.

[7] The definition of "tertiary" is wide, and includes persons who have any type of diploma or certificate, whether or not they also have a Grade 12.

Despite its much higher levels of unemployment and lower economic growth, the overall level of skills in Dr JS Moroka appears to be higher than in Thembisile. Although this data should be approached with quite some caution it does suggest that possibly the high level of unemployment in Dr JS Moroka is more a function of lack of opportunity, than a lack of skills. This will be checked in the interviews Blueprint is undertaking in the LMs. The unemployment rate in Dr JS Moroka is higher than in Thembisile, but the levels of education are fairly similar.

Furthermore, information sourced from the Department of Education in Mpumalanga (2007) confirms that the drop out rate of pupils in Nkangala schools is very high. The number of learners who complete Grades 11 and/or 12 is extremely low relative to the number of learners who enter the system. Additionally, for those students who do actually complete Grade 12, there is very little progress on to tertiary education level.

Unfortunately, there are very high numbers of people who have no education at all, or less than a Grade 12. These very low levels of education indicate that a portion of the growth and job creation strategies must focus on absorbing large amounts of relatively unskilled people. For example, in Dr JS Moroka in 2007 the level of functional illiteracy was 55 per cent, and in Thembisile, it was 56 percent.

Finally, a brief analysis of these figures on the basis of gender indicate that women in both LMs are more likely to have no education than men, even though they are just as likely to have a tertiary qualification and *more* likely to have a University degree. This suggests that women-focused job creation strategies must focus on relatively unskilled working opportunities for the most part.

3.3 Economic Options

The Moloto Rail Corridor Development Initiative (MRCDI) can provide a number of much-needed economic development opportunities to the inhabitants of Thembisile and Dr JS Moroka. This report begins the process of considering how these development opportunities can best be identified, and how they can be integrated into existing LED plans. Economic development strategies in Thembisile and Dr JS Moroka will, as they develop in future reports, be guided by the following:

3.3.1 Need for Labour Intensive Opportunities

As documented in our economic analysis section, both LMs face the challenge of how to deploy a chronically unemployed workforce with a low level of skills.

Large scale projects represent one option, but create challenges of their own. In the first instances, most large-scale projects are capital intensive with limited ability to create jobs. However, they can often create entrepreneurial opportunities for small enterprises through local procurement. When considering possible large scale projects it is critical to consider how much value they will add and also, very importantly, how that value will be allocated among various stakeholders. Often, larger and high-tech projects are intimidating for the community that must “own” them. Such projects often ignore the skills and abilities that people already have and greatly reduce the sustainability of the project once the original design team has left. Thembisile and Dr JS Moroko will need a model that will allow the LMs to leverage a solid socio-economic return on each Rand spent in job creation.

3.3.2 Need to Capitalise on Existing Resources and Assets

The high failure rate of development projects is often attributed to two important factors: Firstly, they often do not build on a foundation of existing resources, and secondly they often can be dismissive of existing local skills and abilities. Building on existing activities, rather than requiring people to start completely new ventures has the benefit of reducing the "no income impact". If people build on existing activities, they are generally able to keep earning an income from these activities. However, projects that start with completely green fields businesses often have an initial period where project participants do not earn any income at all (this is particularly the case with agricultural projects), and this is often a reason for project failure.

In both LMs informal activities include activities such as livestock ownership and vegetable farming. Our field visit to the area indicated that there are a number of pockets of excellent quality cattle, and quality vegetables. There are also several sources of agricultural irrigation. In addition, the tourist resources of the area are not being used for maximum benefit to the local community.

3.3.3 Need for Special Attention to Women and Young People

Women represent the majority of the people in the LMs, and are more likely to be unemployed. Similarly, young people are either unemployed or leaving the area. Strategies need to be developed to address these issues

3.3.4 Need to Support Entrepreneurs within a Cooperative Environment

Many economic development projects, in rural or under developed areas, that have aimed to create jobs and uplift communities, have worked on the basis of establishing community cooperatives, or similar structures. These groups schemes often disappoint: In an environment of collective benefit, but no individual responsibility, attrition rates of members tend to be high and the failure rate of projects correspondingly so. Increasingly, the designers of poverty-alleviation and economic development projects are designing in to such interventions the creation of rewards for individual effort, while retaining the benefits of a cooperative, such as greater buying power and market access, and a supportive environment. Other problems with cooperative structures lie in the very limited ability of cooperatives to raise funding, or to dispose of assets.

The economic development projects in Thembisile and Dr JS Moroka will need to focus attention on creating appropriate institutional structures that facilitate and reward individual entrepreneurial efforts, within a supportive management and access environment.

3.3.5 Creating opportunities for SMMEs

The conventional wisdom is that big projects can create downstream and/or side stream opportunities for small enterprises. In many instances this is the case, but in the two LMs under review, there is very limited existing economic activity and very limited numbers of skilled people or people with business experience. In situations such as this, the reality is often very different. The "step up" required where people with very low skills levels have to shift from never having been employed and/otr have never engaged in any informal business activity, to a successful SME integrated into a sophisticated supply chain, is often very difficult. Nonetheless, the development of sustainable and successful SMEs is one of the cornerstones of building a more equitable and participatory economy.

One important option for consideration with regard to the MRDCI and SMME development is the potential creation of a more effective logistics and supply chain structure along the Moloto Corridor. In many instances (and most particularly in agribusiness) the greatest barriers to entry are supply chain issues: small producers are not able to access retail supply chains (and hence markets) because of remote location and long distances to be travelled. The creation of agricultural production and processing nodes alongside the key MRCDI nodes may therefore offer significant opportunities for smaller organisations to enter the agribusiness sector.

One example of such an opportunity is the establishment of stock holding pens. In these pens, located alongside railway sidings, cattle and other livestock can be brought by farmers to be fattened in a communal environment and this could offer a consolidated market for small feed merchants, animal health providers and other similar enterprises. The animals will provide a renewable supply of fertilizer in one location, which will create opportunities for small scale fruit and vegetable farmers. The location of the stock pens alongside a railway siding will allow the livestock owners relatively easy and cheap access to livestock markets, if an abattoir and processing facility is also located along a railway siding, in an identified node. The location of a quality controlled meat processing and/or meat retail outlet in proximity to this facility will significantly reduce the cost of transporting that meat, and offer additional processing/retail opportunities to small businesses. The access the Moloto Corridor will offer to the large market of Tshwane, will further enhance such economic opportunities.

These kinds of activities will contribute to reducing expenditure leakage out of the area: ultimately, consumer expenditure will be reallocated towards products and producers from the immediate area, creating a virtuous cycle of local spending for the benefit of the communities.

3.3.6 LM Role- Catalytic and Facilitative

It is important to keep the role of the local authorities in perspective. Participation in the local economy is not the role of the local government institutions. However, local government has a critical catalytic and facilitative role to play, without which economic development cannot success. As catalyst, local government has the job of kick starting economic activity in an area and also, facilitating increased economic activity. The most important tool at the disposal of the local government in this regard is to facilitate greater market access, largely through the provision of suitable infrastructure- this includes hard basic infrastructure, such as roads and water reticulation, hard advanced infrastructure such as reliable and accessible telecommunication and soft infrastructure such as the structuring of skills development programmes that ensure that appropriate and needed skills are developed.

It is not the role of local government to be a participant in the local economy, through the ownership and/or direct or indirect management of any enterprises. In the section below which identifies the economic opportunities created by the MRCDI within the two municipalities under review, we have described what the catalytic/facilitating role of local giovernment could be.

3.3.7 Need to Deal with Soft Issues

Both Thembisile and Dr JS Moroka are characterised by low levels of economic activity, and chronic unemployment. In such circumstances it is very common that communities have low self esteem, and a generally pessimistic outlook. Increasingly it is becoming clear that building a strong base for economic growth in such communities requires more than just creating job and/or entrepreneurial opportunities. It

also requires a focus on the "softer" issues that contribute to a sense of community pride, self-worth and self esteem.

Therefore, the integration of cultural, sporting and social activities and resources into a wider economic development strategy is an important issue that should not be ignored. Resources allocated to such areas should be viewed as facilitating economic development, in addition to their primary goal of improving social services. The development of cultural, sporting and social facilities should, of course, include all members of a community, but it is particularly important that they focus on young people that have never been employed and offer appropriate support services (such as crèches) for women who need to work.

3.3.8 Better utilisation of the EPWP will support LED

The Expanded Public Works Programme (EPWP) allocations from national government are likely to increase in coming years, as poverty-alleviation policies gain momentum. The EPWP is seen primarily as a job creation initiative. Therefore, EPWP activities and reporting (monitoring and evaluation) are centred on the number of job opportunities created. Thembisile and Dr JS Moroka should maximise the potential economic impact of the EPWP by adding an additional set of criteria to the selection of EPWP projects: specifically, project selection should also require that the project includes ***the building of infrastructure that will add to a particular community's ability to create higher, sustainable economic growth, in the identified growth sectors***. If this additional requirement is added to the criteria for identifying EPWP projects within Thembisile and Dr JS Moroka, it will allow district and local government authorities to leverage an important source of capital investment.

3.4 Important Macro-economic Trends

There are several medium- to long-term global macro economic trends that are relevant for Thembisile and Dr JS Moroka municipalities. These deal largely with the way in which agricultural markets and logistics are expected to develop in the future. Many of the development opportunities in the two LMs are likely to be linked to agriculture, and the MRCDI is primarily a project designed to facilitate better logistics which will reduce the cost of market access for goods.

3.4.1 Economies Become Localised

Although the past eight months has seen the petrol price decline, as the global economy recovers in 2010, so transport costs can be expected to resume their upward trend. At this point, bio-fuels do not yet offer much alternative since they still require high amounts of petroleum-based products in their production. The result is that transportation costs will continue to rise, and it will no longer be economically viable to transport any but the highest-value goods over a long distance.

In order to keep the cost of basic items at a level where people can afford them, communities will have to become much more self-sufficient, making better use of their natural resources. It will become less viable for people to travel long distances for low-paying job opportunities (although travel by rail to Tshwane will be less expensive and dangerous than travel on the roads). Strategies should therefore focus largely on creating local opportunities. The implications for economic development strategies are:

- Projects that focus on exports out of the region (for example to Tshwane) should be certain that the value of the products to be exported will still be viable if the cost of transportation (of both inputs **and** outputs), doubles.

- There are good opportunities for development projects that focus on local production for local markets. Rising transport costs will encourage consumers to shop closer to home, and these opportunities should be taken up.
- Business opportunities will become greatest around integrated logistics points within nodes.
- Greater use will have to be made in future of public transport such as rail, which allows the transportation of a wider range of goods at a lower price than road transport. Therefore, the implementation of an *integrated goods and passenger railway network* is vital.

3.4.2. Demand for Affordable Food will Increase

The global food crisis is well documented, as are rapidly rising local food prices. This presents a number of new opportunities for the agricultural sector in the LMs, as long as water reticulation issues are resolved. However, it also implies that producers need to investigate alternative methods of production that will keep prices down. Conventional agriculture, which is heavily dependant on petroleum-based inputs such as fertilizers and pesticides, is becoming increasingly costly. As a result, farmers need to focus on sustainable methods of production, such as organic cultivation. Additionally, given the water availability limitations outlined in the spatial analysis above, it may be useful to consider niche production methods, such as hydroponics. A recent survey in Kenya[8] indicates that farmers that have switched to organic methods are able to reduce their costs by around 50 per cent, given rapidly rising fertilizer prices. The organic market also offers more opportunities for farmers than conventional production, especially in the large Tshwane market which is accessible to both LMs

3.4.3 Shorter Value Chain Agriculture Opportunities

As a result of both the factors described above (increasing localisation and higher demand for affordable food), shorter value chains that bring producers and consumers closer together will become more common. There is a significant difference between the farm gate price of much agricultural produce, and the price that consumers pay particularly when some kind of processing/preservation has taken place.

Shorter value chains imply that producers will take over a greater part of the value chain (including processing and retailing). The end result will be that consumers have access to lower-cost products, and farmer incomes are higher. This is a trend that is gaining ground in the UK and Ireland, as farmers and consumers see the value for both parties. Shorter value chains offer excellent opportunities for small-scale farmers to increase their incomes with only a marginal increase in production.

3.5 Local Economic Development Opportunities linked to the MRCDI

3.5.1 Agri-Business & Agro-Industry

The trends that are beginning to impact on the agriculture sector as well as availability of suitable land (and water resources) indicate that agriculture, agri business and agro industry could offer a number of excellent development opportunities within the LMs, if the land issues and skills issues are resolved. Generally, agricultural development projects have focused on creating intensive, large-scale operations, and start with the assumption that small communal farming is not economically viable. However, existing small scale farmers have some experience in the type of low-cost farming that is going to become increasingly prevalent, and should be supported in this regard. The key to successful agribusiness projects in the area may be to focus on the following issues:

[8] Source:

- *Creating an "incubator-like" environment* where small farmers can learn improved farming methods as well as explore new crops and new markets;
- *Communal marketing, quality management, food safety and logistics structures.* These are the areas where small farmers often face serious barriers to entry. Locating these support structure in close proximity to the planned retail nodes will increase access to markets, and create additional opportunities for small businesses in areas such as animal feed provision, fertilizer sales, and small scale packing and processing.
- *Building on existing strengths*. For example, almost all of the beef produced in South Africa comes from commercial feedlots. These are dependant to a large extent on the petroleum price, since they feed concentrates (maize) and transport calves over long distances. These factors are likely to put upward pressure on prices. There are a number of communal cattle farmers in Thembisile and Dr JS Moroka, and an initial brief survey indicates that many (although not all) of these cattle are in good condition and are suitable beef breeds. In terms of the MRCDI, the rail network should make provision for the transportation of animals in suitable livestock cars to an approved abattoir. Other livestock such as sheep could also be included in such a project.
- *Developing support/ancillary services around livestock production*: These could be around the low-cost production of supplemental food stuff for "finishing" livestock. There are plans for a cassava production project in Thembisile. Cassava leaves are an excellent source of animal feed, containing almost as much protein as lucerne. The other ancillary services are around slaughter and processing of livestock. There are many opportunities for small farmers and SMEs in this regard, and growing market demand.
- *Supporting diversified food production*: This would include products such as vegetables, grains and fruits. Many people in the areas are already engaged in these activities. Therefore, interventions might focus on increasing the knowledge of organic and sustainable production methods to improve productivity; the introduction of new/additional high-value crops to supplement existing products; increasing the ability to store/preserve/add value to production. Currently products have a very short shelf-life, and this increases the vulnerability of these producers to market fluctuations. Interventions here would include packing/processing facilities, small-scale milling facilities for grains, etc. These offer many opportunities for SMEs.
- *Developing farmer owned retail outlets.* This is an important step for farmers to make in increasing their income. It is also an important part of a strategy to ensure that consumers have access to affordable source of food. These retail outlets would best be situated along the route of the MRCDI, to make it easy for consumers to access products.

3.5.2 Tourism

The area has good potential for tourism, and the MRCDI will make the area much more accessible. Thembisile and Ds JS Moroka are located within relatively easy driving distance of Johannesburg, Pretoria and OR Tambo international airport. However, the current nature reserve/game park tourism infrastructure is very limited, with fewer than 70 beds available per day. Drastic measures are needed to increase the economic development impact of these facilities. The various local authorities should consider a policy of leasing the facilities to private operators for free or at a nominal rental, on condition of having to achieve a range of pre-determined targets in the areas of employment, training, bed nights and occupation rates. This might create a fairly low-risk low-cost method of increasing the economic value of these assets.

There are definite opportunities in the development of a cultural tourism route, and this type of tourism is becoming increasingly popular with wealthier foreign tourists. Attracting these tourists is key, since their per capita spend tends to be substantially higher than average. However, there are a number of important issues that must be considered and integrated into a cultural tourism strategy:

- Although the area is not very far from key arrival destinations of tourists, they will not travel the distance for only a few hours' of activities/entertainment and some limited shopping. Therefore, a cultural tourism "destination" should be just that: Somewhere where there is sufficient entertainment for the average visitor to spend at least two days. (The more intensive the destination, the greater the opportunities for a much larger number of SMEs to benefit.)
- The type of tourist that this sort of destination attracts wants to have an experiential and "alternative" experience. *They are not travelling the distance merely to watch a routine dancing/singing display, or to shop for some craft items (no matter how good).* They want to feel that they have been immersed in a different culture, and had the opportunity to experience an alternative way of live and alternative points of view.
- Although these tourists are looking for an insight into an alternative, they are also very often wealthier and older people, and do not want to be presented with below average accommodation, food or service.
- The safety and security of tourists in the area cannot be negotiable.

4. Cost Benefit Analysis (CBA) Assumptions

4.1. Background

Cost Benefit Analysis (CBA) is typically used by the public sector to evaluate the value for money of a proposed market intervention or project. The aim is to gauge the efficiency of the proposed intervention, versus the current position (status quo). Building a CBA requires calculating the monetary value of all initial and recurring expenses, and comparing that against expected returns. Monetary values can be assigned to both tangible and non-tangible impacts. A CBA will convert expected future expenses and benefits to a present value, using the selected discount rate. The result is a Present Value of Benefits (PVB) and a Present Value of Costs (PVC) which can then be compared.

4.2 Assumptions

Before the CBA mode is populated, Blueprint has prepared the basic assumptions for presentation to the steering committee. Certain assumptions must be made prior to population of the model, to determine what data will be collected and how it will be prioritised. Set out below is a set of assumptions to inform the calculation of a CBA for the Moloto Rail Corridor Development Initiative.

Since certain of the benefits around job creation, income, etc cannot be quantified at this point, Blueprint recommends that we estimate what the value of these should be under the various cost results in order to reach a positive CBA outcome. These estimates will then be used as the basis of an M&E system for calculating the impact of the MRCDI, and assessing progress.

4.2.1 Discount Rate to be applied

The projected costs of the MRCDI and related activities will be in actual terms, and therefore a *nominal* discount rate will be applied to these amounts to calculate a present value. However, the benefits will be valued at constant (2008) prices, and so a *real* discount rate will be applied to these amounts to calculate a present value.

Blueprint recommends using national wholesale interest rates, with/without an expected Consumer Price Inflation deflator as the most neutral discount rates. In this regard, a nominal rate of 10 per cent per annum and a real rate of 4 per cent per annum will be used, based on the assumption of average wholesale interest rates of 10 per cent over the selected time period, and an average annual inflation rate of 8 per cent.

4.2.2 Time Frame

The time frame over which the value of costs and benefits will be calculated is important, since costs tend to be accrued in the short term, and benefits tend to accrue in the long term. A time frame for the implementation of the MRCDI is still to be confirmed and consequently Blueprint recommends that this time period (x) plus 15 per cent (as a project overrun allowance) plus an additional seven years (to realise the economic potential of the project) be added and that this becomes the CBA time frame. Therefore, the time frame to be used for the CBA is proposed as: *projected time frame for implementation of the MRCDI + 15 per cent + seven years.*

4.3. Costs and Benefits

It is necessary to determine which costs and benefits should be included in the model. The desire to be as accurate as possible must be counter-balanced against practical considerations: Certain costs and benefits (particularly benefits) of such large-scale projects are intangible, and therefore hard to measure. The monetary value of constructing 100 metres of railway line can be costed fairly accurately, but how do we cost the improvement in the quality of life arising from shorter travelling times? Certain intangibles have to be excluded from the model, on the basis that they are simply too difficult to value.

Set out below are Blueprint's recommendations as to which costs and benefits should be included in the model. On the costs side of the equation, the following will be included:

- Actual costs of implementing the MRCDI road and rail network (which forecast ahs not yet been completed).
- Projected costs of economic development strategies and projects specifically developed as a response to the MRCDI.

On the benefits side of the equation, the following will be included; employment and income and other benefits as outlined below. Employment benefits will accrue through:

- New direct permanent job opportunities created.
- New direct temporary job opportunities created.
- New indirect permanent job opportunities created

Job opportunities created in existing and new organisations will be included. The creation of "indirect" job opportunities must be included because the demand for raw materials, the spending of incomes earned by employees and the spending by Government of its tax revenues obtained from the individuals and SMEs that have benefits from the project will all contribute to economic growth and job creation. For the purposes of this calculation, the "job multiplier" (i.e. the ratio between indirect and direct job creation) will be set at a fairly conservative 4:1, implying that 4 indirect jobs are created for each direct job.

It is important to weight jobs by the income that they attract, since a higher income will have a greater multiplier impact on the economy. Therefore, we recommend that a "job opportunity" will count 100 per cent (i.e. one unit) when it is associated with a monthly gross income of R2,200 (the new upper limit set for the receipt of social grants). Jobs associated with higher or lower incomes will count pro rata. For example, a job that attracts an income of R4,400 will count as 2 jobs, and one that has an income of R1,100 will count as half a job (this will also reflect the fact that higher-income jobs create more indirect job opportunities.)

- **The "value" of a new direct job** (permanent or temporary) for the purposes of the Cost Benefit Analysis will thus be: *value = Actual monthly income x period of time for which the job exists*
- **The time period for the job** will be calculated as the number of months from the start date of the job opportunity until the expiry of the pre-determined time frame set for the CBA. The "value" of indirect jobs will be calculated as: *value = [(Total monthly income of all direct new jobs)/(R2,200 x total number of new direct jobs) x 4] x period of the project in months*
- **The calculation of the income associated with a particular job** will be calculated through a combination of direct observation and industry and job category standards.

In addition to the visible project benefits of increased employment and higher income, there are several intangible benefits that must be included. We recommend that the following intangible benefits be included:

- **Reduced travelling time, in terms of impact on productivity.** Passengers who travel short distances to work are more productive during the work day. This results in benefits both for the organisations that they work in, and personal benefits since these individuals are in a better position to do well, and to receive promotion and other advancement.
- **Reduced travelling time, in terms of impact on social fabric and family life**. Reduced travelling times
- **Safer journeys** and reduced road deaths.
- Access to more conveniently located retail and leisure facilities along the route.
- Access to more affordable sources of food

4.3.1 Accuracy Allowance

Large infrastructure projects such as road and rail projects often tend to have final costs that are significantly higher than projected costs. Therefore, a useful CBA must include various scenarios testing whether the Cost-Benefit relationship is still the same with budget overruns of 40 per cent (base case), 30 per cent (best case) and 60 per cent (worst case) on the projected costs of the MRCDI rail and road network (studies indicate that rail projects tend to overrun by more than 40 per cent and road projects by about 20 per cent). Therefore, the CBA will have in fact **four sets of results,** based on four alternatives

for project costs. At the moment, the projected cost for the MRCDI is R8.6 billion. The CBA will be calculated on the following cost assumptions, for that portion of the costs that are associated with the delivery of the MRCDI transport infrastructure:

Table 4.1 CBA Scenarios

Scenario	Cost (R millions)
One – project on budget	R8,600
Two – 30% budget overrun	R11,180
Three –40% budget overrun	R12,040
Four – 60% budget overrun	R13,768

Source: Blueprint calculations (2008)

SECTION THREE
LED STRATEGY- SPATIAL & ECONOMIC

5. Local Economic Development Strategy – Spatial Recommendations

5.1. Background- Development Concepts

A number of development concepts have spatial implications which are important to an LED strategy for the Moloto Corridor. These are:

- Development Corridor
- Nodal Development, including Transit Orientated Development (TOD)
- Integrated Multi-modal Public Transport System

The proposed Moloto Rail Development Corridor will have spatial and economic impact on Thembisile and Dr JS Moroka local municipalities. Land use and transportation are inextricably interlinked. Together they can support or work against successful economic development. Consequently the relationships between space, development, transport in general and the stations have been investigated in order to ensure that the recommendations are holistically appropriate.

5.1.1 Development Corridor- Definition

- *A development corridor i*s a strip along which development of various types of economic and/or social clusters occur due to the existence of transportation. It is termed a corridor as it allows access from one area to another. In this way a corridor improves mobility and access to economic and social activity.
- *Transportation is the backbone of a corridor*. There should be a minimum of 2 transportation modes which work in conjunction with and support one another, within a corridor.
- *The land uses along a corridor are more intensive than the land uses beyond it.* Development is clustered at points along a corridor much like beads on a string. These points are referred to as nodes. The intensive development is a precondition for viable public transport as the potential riders are concentrated in nodes along the corridor and the nodes form destination points for the public transport.

Corridors can operate at various levels from the local neighbourhood to metropolitan and inter- regional levels. At all levels corridors have to be considered within the broader context in which they are located. Development corridors can only work if they meet certain preconditions as follows:

- **There has to be connectivity between the major nodes.** Corridors are based on transportation. Transportation has to have a point of origin and a destination. The purpose of a corridor is to provide greater access between these points and to all the points between them.
- **There have to be adequate densities.** The concentration of people and economic activity in an area, or node, creates higher densities of land use activities. These concentrations form the basic threshold to support economic activity and public transport. High residential and business densities have to be encouraged at nodes along the corridor.
- **There have to be significant land uses.** Land uses such as economic, residential and social should be located within nodes to support their development and strengthen their functionality. Land uses which occupy large spaces should be located outside nodes. Crop farming or grazing for animals are examples of land uses which should occur between nodes along the corridor.

- **There has to be multi-modal transportation.** Transportation is the basis of a corridor. A range of transportation modes are required in a corridor as they have to work together to support one another. For example people have to get to stations to catch a train. They may walk to the station, use a bicycle, an animal drawn vehicle, catch a bus or minibus-taxi or drive there. The options have to be available and provided for. Stations, if rail is the major mover of people, have to have facilities for road-based transport to offload and collect passengers and storage for bicycles has to be available. Together all forms of transport provide greater access for people to a variety of activities and places.

5.1.2 Implications for the Moloto Development Corridor

The proposed railway line between Siyabuswa and Tshwane, roughly along the route of the Moloto Road, is the foundation of the Moloto Rail Development Corridor. This Corridor contains rail and road-based transport as the main movement modes to support corridor development. The existing towns along the route are the nodes. This is what has been identified as the primary corridor and is the proposed first phase of the railway line.

The primary corridor has to be supported by secondary corridors connecting other residential areas and more distant settlements with the primary corridor. The connection between the primary and secondary corridors is based on a good road-based system. Busses and/or minibus-taxis which are reliable, safe, affordable have to connect settlements which do not have railway stations or are not within easy walking distance of railway stations, to the stations. In this way rail becomes accessible to all residents of Thembisile and Dr JS Moroka. One of the proposed road-based feeder and distribution routes runs from Siyabuswa and Marble Hall thus linking to the largest and closest economic centre to the northern part of the study area, even though it is outside of it.

5.1.3 Nodes- Definition

Nodes are an integral component of development corridors and have specific characteristics as follows:

- **Nodes are areas with high concentrations of people and economic activities.** There are mixed land uses e.g. residential, retail, community services and industry, or a single land use. The land use activity in a node is of a greater intensity than the surrounding land uses i.e. the level of activity is higher in the node than outside it. Nodes are generally located at the intersection of major transport routes which provide access to the node. Nodes vary in size, configuration, function and design. A hierarchy of nodes is usually found within an area, from the very small emerging nodes to well established nodes.
- **Nodes grow over time.** They pass through various stages of a cycle, growing, reaching maturity, declining, being dormant and then, growing again. A number of factors such as economic climate, the spatial context, the policy environment and political factors can all impact on the growth and function of nodes. Thus nodes within a specific area or region will all be in different stages of development and have different characteristics.
- **Nodes promote a compact form of development which is advantageous for the provision of infrastructure** by municipalities as services have to be supplied to a concentrated area rather than a large dispersed area. Land uses in nodes are usually a mix including places to live, work, shop, play and learn. It is also beneficial to the community as economic and social services and facilities are

concentrated within one location making accessing them, particularly by pedestrians, convenient and safe along pedestrian linkages. The high number of people in nodes attracts economic activity.

- **Nodes that are located at strategic locations along a corridor strengthen the development of the corridor** as they concentrate economic and social development together and integrate development with the transportation modes which form the foundation of the corridor. Nodes are thus an important element in the spatial structure of any area.
- **Nodes are the main connection points of the corridor.** They are also the points of redistribution for public transport. It is important that nodes are well located in order to be accessible by all modes of transport and to facilitate the change between transport modes.

5.1.4 Transit Orientated Development (TOD)

TOD is a high density mix of land uses located within a predetermined walking radius of a railway station. TOD is purposely designed to facilitate access to railway stations by bringing people to live and work in close proximity to them. Public transport relies on high numbers of users or riders to be effective. TOD provides the large numbers of people which makes public transportation systems viable. TOD is in fact, the development of nodes that are specifically designed to achieve land use and transportation integration within corridors.

Public transport and land use can be mutually supportive. Public transport can be a catalyst for both development and redevelopment. Land use planning can provide designs which promote public transport ridership by making development compact, intense and dense around public transport facilities such as stations.

5.1.5 Implications for the Moloto Development Corridor

A clear nodal structure is vital to the future spatial planning for both Thembisile and Dr J S Moroka municipalities and the MRDC It is fortuitous that existing nodes are already aligned to the Moloto Road in Thembisile, located at major intersections. They are, therefore, located in a linear fashion along the proposed Corridor. The nodes are in various stages of development, i.e. a nodal hierarchy exists.

The high numbers of passengers that travel by train make the areas around stations viable places for economic activity to be situated. It is preferable for the MRDC stations to be located where existing well developed retail and/or other economic activity occurs. In this way the economy can be supported and strengthened. Stations should not be located where they will become competition for existing development, unless the size and spatial configuration of the urban area justifies a second station or where the existing development is out of position in terms of its strategic central position for easy and direct accessibility to the general public. The Big Tree development outside the Moloto Village is an example of these circumstances.

The Feasibility Study (April 2007) on the Moloto Rail Development Corridor has identified areas that could qualify for a reclassification in terms of its nodal development potential directly as a result of the intended public transport system. These are:

- Buhlebesizwe (Vlaklaagte 2) where linkage and transfer from Verena takes place

- Makola and Marothobolong (Makola Station) where high volume linkage and transfers will take place from all local communities located to the west of the main corridor and south of the Mkombo Dam (Madlayedwa, Kameelpoort, Pieterskraal, Mapotla)
- Senotlelo and Marapyane where similar transfers from more remote areas to the north and north-east will take place.

The Feasibility Report (April 2007) states that nodes on the lower end of the hierarchy might move up the hierarchy if they are well positioned for high volume public transport interchange transfer activities.

The two main business nodes in Thembisile are at KwaMhlanga and Kwaggafontein. KwaMhlanga is a fairly large developing node. Kwaggafontein has a vibrant retail and business node. Ten possible sites have been identified by the Feasibility Study (April 2007) for MPCCs: Moloto, KwaMhlanga, Enkeldoornoog, Vlaklaagte, Tweefontein, Kwaggafontein, Boekenhouthoek, Goederede, Verena, and Schoongezicht. The MPCCs (or Thusong Service Centres) could serve as the impetus for nodal development.

In J S Moroka, there is no primary node although a number of small isolated nodes are emerging mainly at the intersections of major routes. According to the Dr JS Moroka Local Municipality Spatial Development Framework, Vaalbank node has retail and municipal land uses and a transportation terminus. Marapyane has a transportation terminus and retail facilities and other mixed uses. The Bloedfontein node is at a major intersection while Masobye is growing naturally. There are a filling station and offices in the node and a transportation terminus in the vicinity. Matjiesgoedkuil is a small industrial node. Walldal A is another industrial area bordering on Greater Groblersdal. Siyabuswa has the highest concentration of activities, both formal and informal. In addition smaller nodes are found throughout the municipal area along the transportation routes.[9]

5.1.6 Integrated Multi- Modal Public Transport System- Definition

A corridor has to be based on a minimum of two complementary forms of transport. In particular public transport has to be included in the transportation plans and in the spatial plans of a corridor. *Public transport is essential as it is the most economical means of moving large numbers of people.* Where the population is poor, private vehicles are not affordable. Private vehicles, where they are affordable, create traffic congestion, mobility becomes impeded and there are negative environmental impacts with air pollution occurring. Consequently public transport is promoted as the preferred means of travel in both urban and rural areas internationally. Public transport has to be viewed as a system with a number of components. Each component has to function smoothly for the entire system to operate optimally. The following are the *critical constituent components* of a public transport system:

- **A public transport system has to be multi-modal.** In terms of the Moloto Rail Development Corridor the transport modes will be the rail system, busses and possibly, mini-bus taxis i.e. rail and road-based systems.
- **Each of these public transport modes should operate independently as well as in conjunction** with the other modes to form an integrated system.

[9] A profile of the nodes in the study area is provided in the Annexures to this report

- **An Integrated Multi-modal Public Transport System has to provide for the smooth and effective interchange between modes.** The interchange areas should be located at the stations. This means that planned drop off and collection points are required at or near stations for busses and mini-bus taxis. In considering the location and design of the interchange areas, the passengers' safety and comfort has to be the central consideration.
- **Users of public transport have to travel to access the public transport.** This is usually done on foot, by bicycle, wheelchair or on animal drawn vehicles. These modes are collectively known as Non-motorised Transport (NMT). An Integrated Multi-modal Public Transport System has to use the pedestrian as the basic unit for planning. For example, entry to a station has to be planned for the safety and comfort of pedestrians, not only for the ease of access of vehicles. Ramps have to be provided for the disabled and secure storage facilities provided for bicycles.

5.1.7 Implications for the Moloto Development Corridor

The feasibility study (April 2007) used the above requirements for a Multi-modal Public Transport System along with a number of technical considerations for the proposed stations and adjacent transfer facilities, and for the identification of a road-based feeder and distribution routes. *The outcome is that railway stations, with adjacent transfer facilities, have to be strategically located in order to effectively integrate with the node and the various land uses.*

Prime considerations for station positions are access and proximity to the most densely populated areas as well as the integration with other modes of transport and the entire transport network. Positions that are in close vicinity to major road intersections that already serve as major connecting points could provide effective access to stations. Finally, existing transfer facilities, if they are well located and developed, may be appropriate locations for stations to be positioned. The following is a list of stations proposed by the feasibility study, in Thembisile and Dr JS Moroka. It should be noted that there is no dense development presently occurring around these stations and therefore there is available land for nodal development around these stations.

- **Thembisile:** Moloto, KwaMhlanga, Thembalethu, Tweefontein, Buhlebesizwe, Vlaklaagte, Kwaggafontein, Mathys Zyn Loop
- **Dr JS Moroka**: Matshiding/Makola, Siyabuswa, Mthambothini, Senotlelo, Marapyane, Seabe, Nokaneng, Mmametlhake, Phake, Masobye

A road-based network of feeder and redistribution routes has to be designed in a manner that would optimise accessibility for the majority of people to the public transport system. The new road based network should provide for moving people from a specific community to a specific station which has been determined as closest and most assessable to it. The design of the new feeder routes was based on the alignments of the existing bus routes serving specific local communities. New routes should provide the same minimum accessibility to public transport as is provided by the existing service.

5.2 Key Issues-Spatial Strategy

5.2.1 Land Claims

Most of the land in Thembisile and Dr JS Moroka is state owned and the central areas are under the control of tribal authorities. According to the Land Audit Report which tables information on land claims which have been submitted, the following data are relevant.

Figure 5.1: Land Restitution Claims Submitted per Municipality

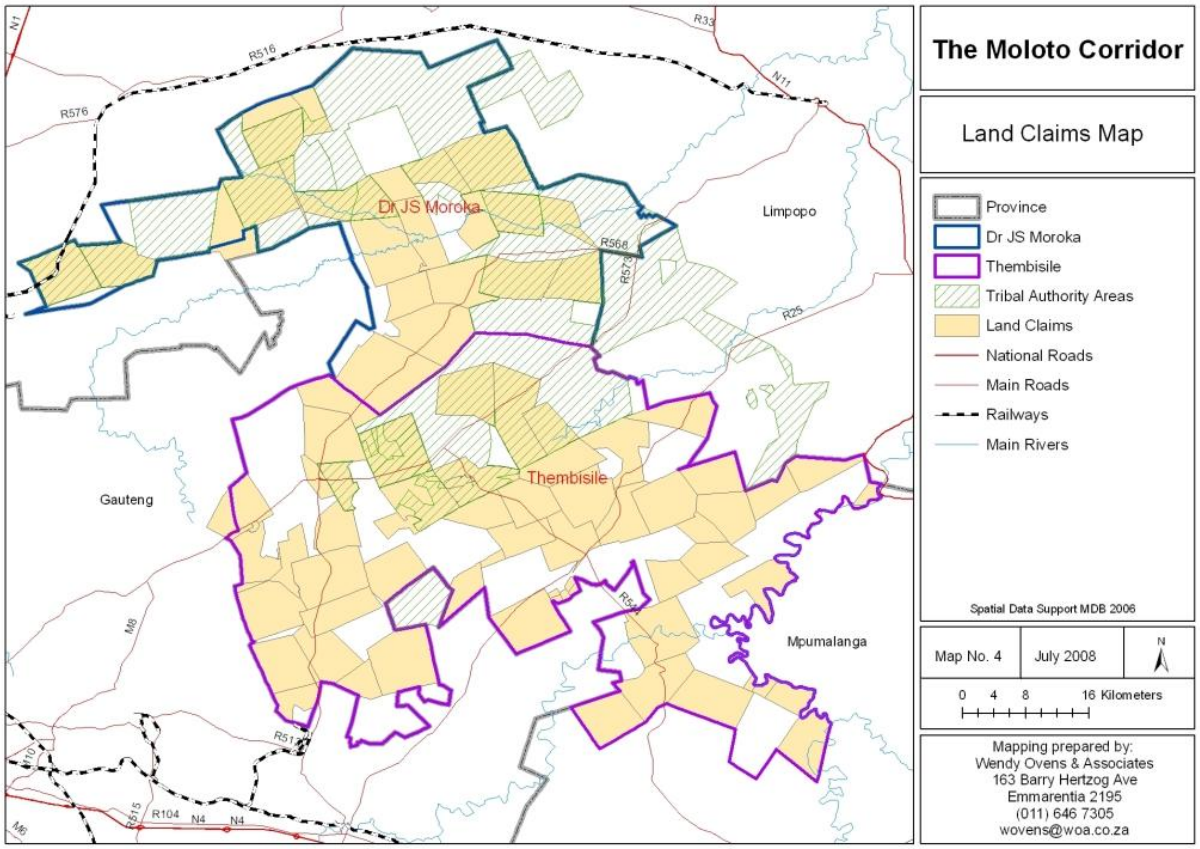
Number of properties	Project Name	Number of Claims	Claims Settled	Outstanding Claims
Thembisile				
29	KwaMhlanga	82	35	47
14	Mkobola	24	16	8
10	Witbank	18	4	14
1	Mbibana	3	-	3
1	Middleburg	1	-	1
5	Other claims	5	4	1
60	**TOTAL**	**133**	**59**	**74**
Dr JS Moroka				
12	Mbibana	56	22	34
8	Mathanjana	8	2	6
3	Mdutjana	3	1	2
23	**TOTAL**	**67**	**25**	**42**

Source: Land Audit Report (2007)

There are 83 properties in the two local municipalities but over 200 claims. In Nkangala overall, there are 271 properties and 721 land claims. Most of the land being claimed in Thembisile and Dr JS Moroka is state-owned.

The land being claimed in the northern parts of Thembisile and Dr JS Moroka is mainly used for cattle and game farming, with some crop farming. A fairly large portion of the land claimed in the Thembisile and Dr JS Moroka areas form part of nature reserves (Land Audit, p 6). A narrow strip of land that is claimed in northern Dr JS Moroka is suitable for crop farming as it is part of the Springbokvlakte which has rich soil. *Almost the entire Thembisile municipal area is subject to land claims*. There are 133 claims on 60 properties. Most are in and around KwaMhlanga with 82 claimants on 29 properties.

Figure Four: Current Land Claims Status



Source: Wendy Ovens & Associates (2008)

Almost the entire central area of Dr JS Moroka is subject to land claims, including some of the urbanized areas. There are 67 claims on 23 properties. A large number of claims are for the farms Allemansdrift 162JR, De Beersput 152 JR and Troya 151 JR. The claims for Allemansdrift and Kammelpoort 202 JR should have been finalised by this point but there is no confirmed report of this available. Over half the land restitution claims have not yet been settled. They are mostly on the strategically located central land. *Development of the MRCDI will be significantly hampered by unresolved land issues.*

5.2.2 Land Use & Infrastructure

Human settlements are in general clustered along the Moloto Road in Thembisile with a few settlements to the east. In Dr JS Moroka the settlements are situated in an arc formation stretching from the extreme west of the municipality to Siyabuswa. Settlements vary in size and in terms of how they function. The smallest settlements are residential areas with perhaps, a primary school and retail store. There are a few large settlements which offer a range of higher order services including retail facilities, municipal offices and social facilities such as clinics and secondary schools.

The road system is generally in poor condition. The Moloto Road is the major north south route. It is not designed for the current, and growing, number of vehicles it carries. Few local roads are tarred. Busses are the main form of public transport. Due to the high bus subsidies it is the most economical form of public transport. The R573, the Moloto Road, is the major route through the study area. The number of

vehicles using it is growing by approximately 4 per cent per year. It was designed for a much lower carrying capacity. There is a high accident and death rate along this road.

There is a general shortage of adequate housing which has resulted in informal settlements. The majority of these are not served with infrastructure. The quality of RDP housing is poor. There are unfinished houses and a large housing backlog. Land tenure issues impede housing delivery.

There are 4 poorly functioning industrial areas in Thembisile (Kwa Mhlanga, Vlaklaagte 2, Kwaggafontein B, Tweefontein) and some industrial activity at Siyabuswa. A few retail centres are to be found in the larger centres.

Infrastructure provision is not to required standards in all areas. There are huge backlogs in terms of sanitation and potable water. There is insufficient bulk water in Thembisile where there are areas with no water supply. Water and sanitation are the biggest issues in Dr JS Moroka where there is also insufficient bulk water. In addition water quality can be problematic.

Large backlogs exist in electricity supply where there are areas of no supply and areas where upgrading of the reticulation network requires upgrading. Lack of public lighting is an issue.

The natural environment has potential strengths such as the number of nature reserves in both Thembisile and Dr JS Moroka. In both Thembisile and Dr JS Moroka Municipalities the rivers are in poor condition, there is high potential for invasion by alien plant species and soil productivity is low due to severe degradation. The vast proportion of land is used for grazing and crop production which is in the form of subsistence farming. Small scale illegal mining occurs.

5.2.3 The Proposed Railway Line and Railway Stations

The source for this information is the Moloto Rail Corridor Development Initiative: Detailed Feasibility Study. (April, 2007 Interim Report: Volume A. Executive Summary)

The Railway Line

The first phase of the Moloto Rail Development Corridor has been approved by Cabinet. This is the section between Tshwane and Siyabuswa. A number of scenarios were investigated for Phase 2. These included:

- The continuation of the railway line west from Siyabuswa to Masobye.
- The Sekhukhune Corridor which runs east from Siyabuswa to Burgesfort and on to Marble Hall.
- The Siyabuswa to Marble Hall connection.

The various analyses demonstrated that *the Siyabuswa to Masonye extension to the Moloto Rail route is not financially feasible* (page 53,). The additional capital investment is R1022m, while the nett operating costs increase by 5.1 cents for each Rand invested. The financial results are supported by the fact that travel time by rail along this route would be greater than the time currently taken by bus. *The Siyabuswa to Marble Hall* connection was also found not to be financially viable and the Sekhukhune Corridor requires further investigation.

The Railway Stations and Nodes

The feasibility study also reviews the development potential and land use budget around each of the railway stations (nodes or TODs) along the Moloto Rail Corridor Route. The analysis in the study was based on the size and spending power of the community within a 5 kilometre radius around the stations. This was considered to be the catchment area for the stations. 23 stations were identified. (Refer to Annexures for detailed table). A large residential component exists in the area around each station site.

The total community of 713 000 people within the catchment areas would be able to support approximately 214 000m² of retail floor space divided between the stations. In addition there would be an informal trade market at each station comprising about 2.3 ha in total. The nodes would be able to accommodate approximately 21 300m² floor space. A range of community facilities, retail and office uses could be located within the nodes. Some of the community facilities may be existing facilities that would be relocated to the station node.

Because it is important to ensure that a hierarchy of nodes develops, not all nodes would contain the same facilities and services. Consequently higher order community facilities such as magistrates offices, hospitals and tertiary educational facilities would be located only in the two largest stations/nodes namely KwaMhlanga and Makola-Siyabuswa.

As an Integrated Multi-modal Public Transport System is promoted it is also important to address the needs of road-based public transport at each station in order to ensure ease of transfer for the passengers. Consequently facilities such as bus and mini-bus taxi ranks, bicycle storage and repair units, filling station and day-care facilities are ideal land uses near railway stations.

5.3 Land Use and Infrastructure Recommendations

Six main recommendations emerge from the Blueprint analysis and findings.

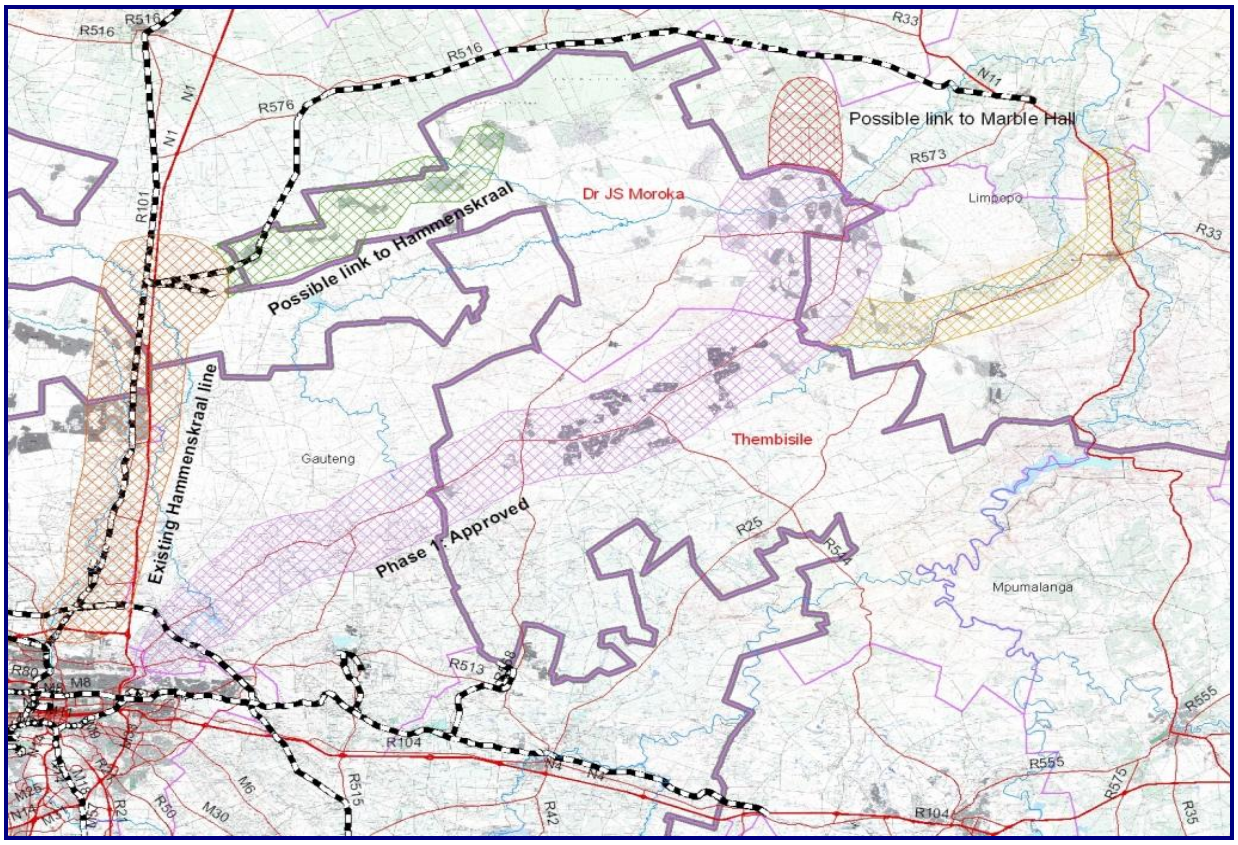
5.3.1 Support Rail

Phase One of the Moloto Rail Corridor should be supported. This is the railway line between Tshwane and Siyabuswa. The potential Siyabuswa – Masobye rail connection should not be supported. Masobye is situated in the extreme north west of Dr JS Moroka, close to the existing Hammanskraal line which runs north from Tshwane along the N1 highway. Masobye could be connected by rail to this existing line.

According to the feasibility study "*CTMM considers the reintroduction of the Hammanskraal line as a high priority. This is similar to the view of the National Department of Transport, but different from the SA Rail Commuter Corporation which rates the Hammanskraal system as a Priority C project. Given this situation, it is obvious that the West section of the Moloto system (Masobye or Pankop to Senotlelo or Siyabuswa) would complement the feasibility of the Hammanskraal line and vice versa*."

Blueprint proposes that Senotlelo or another point west of Siyabuswa should be the origination point of the Hammanskraal line and that it will move via Masobye, via Pienaarsrivier and Hammanskraal to Pretoria. A feasibility study for such a combined system is required.

Figure Five: Recommended Rail Linkages



Source: Wendy Ovens & Associates (2008)

The investigation in the feasibility study revealed that the rail section in western parts of Dr JS Moroka (Siyabuswa to Masobye) specifically, is very much dependent on the possible implementation of the Hammanskraal-Tshwane line which represents a commuter volume market about half of the Moloto market size. Implementation of the section between Siyabuswa and Masobye should therefore be considered for implementation when the rail system between Hammanskraal and Tshwane is also introduced. The feasibility of the last mentioned system is a critical factor for the feasibility of the Masobye section. It will take longer for commuter to travel from Siyabuswa to Tshwane via Masobye than via Moloto and will cost more.

Blueprint advises that the Siyabuswa – Marble Hall rail connection issue should be revisited due to the proximity of the towns and the functional integration potential that exists. Marble Hall is a larger origin/destination point for the Rail Corridor. The focus of the Siyabuswa – Marble Hall connection should be on passengers and light freight. The existing rail service to Marble Hall and the proposed Sekhukhune Rail Corridor focus is on the transportation of bulk freight which serves mining and agriculture. This connection would create economic opportunities in the opposite direction, thus movement along the entire length of the corridor. The fact that Marble Hall is closer than Tshwane implies social advantages in terms of cheaper transportation costs, and shorter travelling time.

5.3.2 Integrated Multi-modal Public Transport

A multi-modal public transport system has to be promoted to work in conjunction with rail. The road-based system has to provide a feeder and distribution system to and from all settlements and the closest station. By doing this it is also providing access to the facilities and economic opportunities at the station nodes. The provision of inter-modal transfer facilities in the vicinity of railway stations is essential. Non-motorised transport has to be accepted as an integral component of Integrated Multi-modal Public Transport. Safe and secure NMT facilities need to be incorporated into all transport designs.

There are many existing settlements, particularly in Dr JS Moroka, that will not be within walking distance of the proposed railway stations, for example, the Allemansdrift and Leeufontein settlements in Moutse in Dr JS Moroka and Verena in Thembisile. All the settlements that are situated at a distance from the stations must have access to the stations via a special road-based system. The Feasibility Study proposes that there be a link from each settlement to the closest station. This proposal is supported. The road surfaces may require upgrading. The provision of the feeder and distribution service, plus upgrading of the roads on which it will run, should be part of the contract for the construction of the Moloto Railway line and stations.

5.3.3 Corridor and Nodal Development

Nodes and corridors are in line with Principle 6 of the National Spatial Development Perspective and Blueprint supports the concept of nodes or Transit Orientated Development underpinning the rail stations within the context of a Corridor. The Moloto Rail Development Corridor has to be developed through the development of a hierarchy of nodes around stations and having the nodes form “beads on string”.

All nodes need to be properly designed in order to ensure that the scale of development supports easy access and comfortable pedestrian movement, that there is an appropriate mix of land uses and that they are suitably positioned in relation to one another and the node as a whole. A zero-tolerance policy towards illegal land uses should be adopted.

The large numbers of people who congregate in the nodes due to the public transport are an attraction for private sector investment. Land uses within nodes should, therefore, include retail (formal and informal), offices, and community facilities from police stations to Thusong Service Centres and government offices. A range of high density residential development is a necessity in and around nodes in support of the public transport. It should include a variety of tenure options. Nodes are almost always initiated through public sector investment. The private sector responds to this opportunity. It is therefore important to concentrate investment in infrastructure in nodal areas.

Industrial activity is normally not compatible with other land uses. The industrial areas identified in the analysis should be supported for large, dirty, noisy manufacturing and industrial activity of a regional scale. It is important to ensure access to rail facilities for the industrial areas. Not withstanding the promotion of industrial areas, there may be potential for small light industrial activity in nodes. The nodes that are identified for major development as being at the top of the hierarchy are:

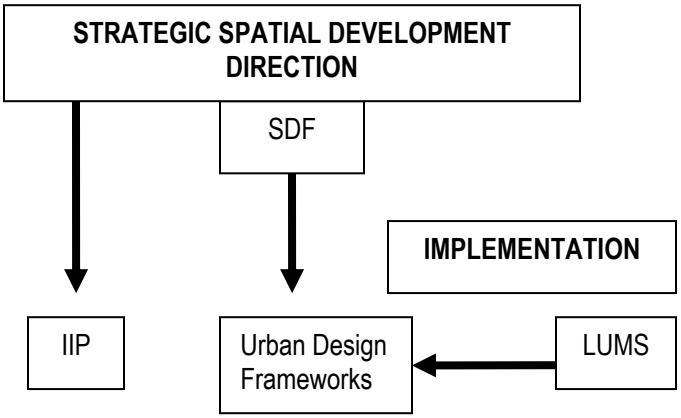
- KwaMhlanga
- Kwaggafontein
- Mokola / Siyabswa
- Marapyane and/or Masobye.

There are a number of reasons that nodal development should be promoted:

- Viable public transport needs a large percentage of the riders or users to be are within walking distance of the bus/taxi stops and train stations. This means that higher density residential development is required in nodes.
- The concentration of large numbers of people in a node is attractive to the private sector.
- Municipal services can be provided and maintained more cost effectively in a limited geographical area as compared to servicing dispersed small settlements.

Local municipalities can promote nodal development by:

- Consulting with all stakeholders, including tribal uuthorities and politicians, to ensure that there is buy-in to the concept and to make certain that everyone is willing to work towards the same goals.
- The nodes, and a hierarchy of nodes, have to be identified in the Spatial Development Frameworks (SDFs) and in the Integrated Development Plans.
- Infrastructure provision has to be focused on the primary nodes. Integrated Infrastructure Plans (IIPs) need to be drawn up for each local municipality and need to be aligned to the nodes contained in the SDF. It has to indicate which bulk services need to be improved in order to provide new or upgraded reticulation. A timeframe for the provision of the services has to be included in the IIPs when services. The IIPs are technical documents which have to be drafted by engineers.
- A detailed Urban Design Framework (UDF) is required for each node. The local context, the local geotechnical and environmental conditions, the existing movement patterns etc. need to be taken into account for the design of each node. There is no universal design which can be replicated. The principles for optimal functioning of nodes have to be applied to each node individually.
- Urban design frameworks have to indicate sites for a variety of land uses from public sector facilities to areas for private sector investment such as business, retail, entertainment and residential uses.
- Even if the SDF, IIP and UDFs are in place, and there is a perception of insecure land tenure, there will not be private sector investment. It is essential, therefore, that concurrent to the SDF, IIP and UDFs being prepared and approved, there is a move to finalise outstanding land claims. Many of these claims are on land being promoted for nodal development. The unresolved land claims will impede the development of the railway line, stations and nodes. Political pressure, from provincial and national spheres of government, has to be brought to bear on the Land Claims Commission to complete restitution as a matter of urgency.
- The Land Use Management Systems (LUMS), which are currently being drawn up for both Thembisile and Dr JS Moroka, are management tools to be used for directing and administering development and land use changes. It is essential that the LUMS are designed in a manner that will facilitate nodal development.



- The local municipalities have the ability to ensure that the above preconditions for good nodal development are in place. Private sector development will respond to well functioning nodes and will invest in them.

Nodes take time to develop and mature into vibrant economic and social places. The Moloto Railway stations can be a catalyst to kick start nodal development. However, that impetus has to be garnered and utilised by the local municipalities to greatest effect by managing the development around the stations.

5.3.4 Recommended Node One: KwaMhlanga

This node should be developed as an *educational node.* There is a need for educational facilities within the study area of a vocational and tertiary nature and it recommended that they be concentrated within a particular node. The reason this node was chosen for this purpose is that it is a fairly large and highly-populated developing node. There are approximately residential 1000 stands still to be developed. It is anticipated that this development will cater to mixed income levels. It is also a possible site for a Thusong Service Centre. Although the education facilities will be utilised by students from both local municipalities, the large local population is important in providing learners. In addition the central location of KwaMhlanga makes it very accessible.

Blueprint recommends the implementation of a skills development hub in the KwaMhlanga node which will focus on the education and skills required by the local economy and which will be flexible with regards to the skills being taught. For example there is potential for commercial farming (including hydroponics) so agricultural skills could be taught. Various skills relating to the development and maintenance of the railway could be included as could plumbing and electrical maintenance skills. Due to the potential for tourism in the area, tourism skills including language training could also be considered. ICT repair and maintenance skills, and on a personal level, childcare skills, could be other options. The eventual inclusion of a satellite campus of the Gert Sibande EFT college in Witbank could be investigated. However, *service provision backlogs need to be addressed before educational facilities can be developed*.

5.3.5 Recommended Node Two: Kwaggafontein

Blueprint recommends that Kwaggafontein be developed as a node with retail and business potential. It is highly populated with business and retail activity already taking place. This existing activity needs to be expanded. It is a proposed area for a Thusong Service Centre. In terms of infrastructure, water meters are required.

5.3.6 Recommended Node Three: Makola/Siyabuswa

Blueprint recommends that this node be developed as a multi-modal transportation and retail node. This is at the end point of the first phase of the MRCDI. It is suitable as a transportation node as this is where high volume linkage and transfers will take place from all local communities located to the west of the main rail corridor (Madlayedwa, Kameelpoort, Pieterskraal, Mapotla). These communities will be serviced by a road-based feeder and distribution system. In addition people travelling north to Marble Hall would transfer here. In addition the potential future Sekhukhune Corridor could also connect here.

The large numbers of people who will be making use of the transport facilities make it an ideal place to expand retail. In addition the level of illegal business taking place at the moment indicates that there is a need for retail space for both the informal and formal sectors. The need for a multi-modal public transport interchange facility will be required as well as other transport-related infrastructure such as bus shelters.

5.3.7 Recommended Node Four: Marapyane

Blueprint suggests that this node has future potential. There is already mixed land use taking place, including retail and a transportation terminus taking place. There is however, a backlog in infrastructure services.

5.3.8 Recommended Node Five: Masobye

Masobye has also been identified as a possible future node. It is node that is growing naturally with many social and economic activities already present.

Note that if Marapyane and Masobye are both towns that will have to be investigated in terms of the proposal to link the western settlements of Dr JS Moroka into the existing Hammanskraal railway line. It may result in either one of the towns, or both of them being identified as the best place to terminate the rail. This could have an impact on the nodal development of the towns in the future.

5.3.9 Land Tenure & Ownership

Development cannot occur unless land tenure issues are resolved. It is recommended pressure is brought to bear on the Land Claims Commission to settle all outstanding land claims as a matter of urgency. In order to effectively deal with this issue, there needs to be a definite policy statement as well as committed time frames in which to deal with the land claims. If this is not done, it will lead to uncertainty in the area which would in turn have developmental implications. Agreement has to be reached with Tribal Authorities on the land use proposals for all areas along the Development Corridor to ensure that there is consensus and that conflicting developments do not take place.

5.3.10 Infrastructure

The reliable delivery of infrastructure is a precondition for economic development. It is recommended that addressing the backlogs, particularly for water and sanitation, bulk and reticulation, in both Thembisile and Dr JS Moroka Municipalities be treated as a priority. The provincial Water for All Programme, which one of the Big Five, should assist in respect of water supply. Municipal Infrastructure Grant (MIG) funds have to continue to be directed at addressing water and sanitation backlogs.

Telecommunications infrastructure is critical at all the main nodes. Wireless and mobile infrastructure which is reliable and fast, and which permits email and internet access, is required. Discussions should be held with the major mobile service providers around possible infrastructure investment.

It is important not only to provide the infrastructure, but to allocate funds in the operational budgets for the continuous operation and maintenance of the infrastructure.

5.3.11 Natural Environment

The natural environment is degraded in both Thembisile and Dr JS Moroka. Further deterioration has to be prevented. It is recommended that the existing Nature Reserves, sensitive environmental areas and places of cultural heritage significance be protected and regarded as 'no go' development areas except for sensitive small-scale development that will enhance their sustainability. Such developments should only be implemented after EIAs have been concluded as these are non-renewable resources and must be treated as such. The Heritage, Greening Mpumalanga and Tourism strategy, another provincial Big Five programme, should be utilised to support sustainable management of natural resources. This is particularly important due to the poor state of rivers and soil in both Municipalities.

5.4 Critical Success Factors

Development in support of the MRCDI will not succeed unless the following risks are addressed in order of priority:

- Land tenure issues
- Infrastructure backlogs, particularly in water and sanitation
- Nodal development has to be supported, planned and enforced. Land uses that should take place within nodes should not be permitted outside of them as it could dissipate the intensity of nodal development and cause the failure of the nodes. The location of informal land uses has to be managed.
- An Integrated Multi-modal Public Transport System has to be implemented

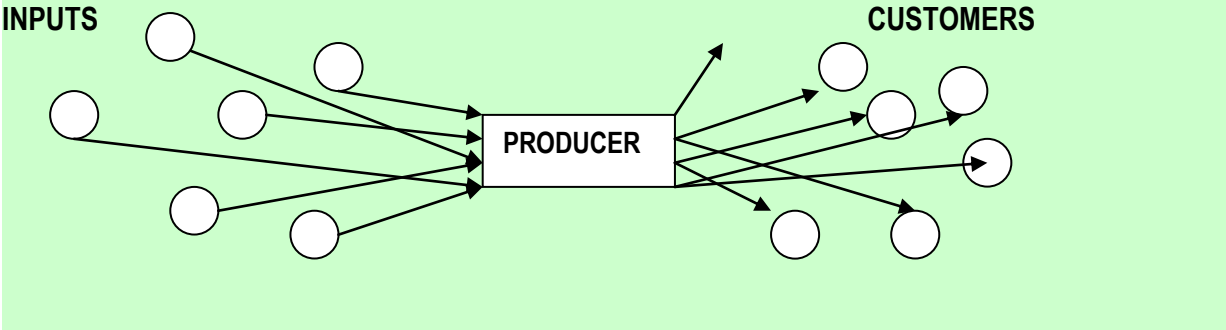
6. Local Economic Development Strategy- Sector Recommendations

6.1 Catalytic Economic Potential of the MRCDI on Local Economic Development

The MRCDI can provide a number of much-needed economic development opportunities to the inhabitants of Thembisile and Dr JS Moroka. The potential of the MRCDI is based on the fact that, for historical and geographic reasons, logistics (i.e. the ability to move people and goods around in a manner that supports and facilitates economic growth) is a key barrier to economic development. Although it seldom receives enough attention, logistics is a critical success factor in almost any economic

development initiative. The reason for this is that in a modern trading economy there is almost invariably a spatial separation between the raw materials required to produce a product, the producer of an item, and the consumer of that item. Logistics is the business end of what is generally referred to as "market access", as shown in the figure below.

Figure Six: Market Access Flows



Source: Blueprint (2008)

The reality is clearly more complex than indicated above, as those who are supplying inputs also have suppliers and customers, as do the "customers" in this example. However, it is intended to illustrate the point that producers of goods (and services) do not operate in a vacuum, but as part of a highly complex system, which becomes more complex as an economy grows and develops. As a general rule, the more urbanised and globally integrated a society becomes the greater the distance between participants. It is the development of a modern and integrated transportation system (together with communications technologies) that has facilitated higher economic growth by allowing trade in goods and services. Very often, development planners pay far more attention to what will be produced, rather than the entire system in which that producer will operate as well as what will be produced.

6.1.1 A History of Economic Isolation

The history of apartheid planning has severely complicated the existing spatial separation of producer and consumer in a modern economy: both workers and consumers were forcibly removed from the most "economically logical" places for them to be, and re-positioned in places specifically chosen for geographic and economic isolation. This spatial distortion is evident throughout South Africa, but particularly in those areas previously designated as "homelands". It is into this category that Thembisile and Dr JS Moroko fall.

Under the homeland system people were removed from productive resources and markets. This disadvantaged people in a number of ways. In the first instance, their ability to produce goods and services is limited, and in the second place, if they are somehow able to overcome this disadvantage, their ability to sell the goods produced is very limited.

Therefore, just as the policies that resulted in poverty and deprivation in Thembisile and Dr JS Moroka had a very strong spatial component, so any sustainable solution must also contain a strong element of rectifying those spatial issues. A system needs to be created that allows people to participate in the wider economy in a manner that erodes the effects of previous isolation. This is the catalytic role that the MRCDI can play and it will be achieved through facilitating better market access.

6.1.2 The Key Role of Market Access in Supporting Growth and Reducing Poverty

Poor management of the market access issue is the most likely cause of failure of and economic development initiative. Development and LED planners tend to neglect the issue of market access in two key ways:

- Planners tend to focus on the production of goods and services, rather than how those items will actually be sold; and
- Many planners do not take the holistic nature of market access into account. "Market access" is about much more than selling an item produced.

Rural households interact with markets as both buyers and sellers, since very few rural households are able to produce every one of their requirements. Poorer households tend to engage in more than one type of economic activity as a way of surviving. They tend to interact with markets as sellers in several ways. The more limited their access to markets, the more limited their options in devising more diversified and thus lower-risk economic strategies.

Small rural producers and businesses often face market-access based barriers to entry that effectively exclude them from markets, *even though they may have the necessary production skills* and are able to produce a competitive product or service. The problem is that space matters in the current economic environment: the ability to produce a quality and competitively priced product or an attractive service that fills a market requirement is a necessary, but not sufficient requirement for economic success. In reality, a product or service can only be considered "produced" when it arrives in a market.

The recent sharp increases in the cost of oil, and South Africa's overwhelming dependence on road transport, has increased the risk that rural communities will become even more disadvantaged in their ability to access markets. This is effectively a spatial apartheid caused by the real practical obstacles of the existing transport infrastructure. Under this scenario, rural communities can become even more isolated, and slide deeper into poverty.

6.1.3 Realising the greatest impact of the MRCDI

One of the main obstacles to economic development faced by the inhabitants of Thembisile and Dr JS Moroka is market access. Although the MRCDI will significantly improve the transportation of people more effectively and more safely to workplaces in other locations, the true potential of the MRCDI for the two local municipalities lies in its potential to unlock latent economic activity through improved access to markets. The economic impact of the MRCDI will be realised by the implementation of an effective combination of the following:

- **Improved logistics flows** (shorter and more reliable transport methods and lower costs of transport) between the producers of Thembisile and Dr JS Moroka and consumers in other areas. This will not only make the suppliers more reliable, but will also reduce their cost of getting goods to markets. All of these, in turn, will contribute towards a "cost of business" dividend that will increase the comparative competitive advantage of the area's producers.

- **The concentration of transport routes into a corridor allows many opportunities around the development of economic nodes**, based on the movement of people, goods and services. This facilitates economies of scale, and creates more market opportunities.
- **Better access to and navigation around the area** makes services such as tourism easier to sell.

In summary, the economic potential of the MRCDI lies in its ability to create an *integrated* local economy, which is much more productive than the current structure of isolated communities. The twin themes of integration and localisation underpin the LED strategies contained in this report.

6.1.4 Structuring the MRCDI

The ability of the MRCDI to catalyse economic growth in the target area through improved market access will be determined to a great extent by the way in which the project is structured. Achieving this goal requires that there is pro-active planning around the following areas:

- A detailed understanding of the real logistics issues faced by *producers and service providers.* This requires that an informed assessment of market access issues be included in each business development opportunity profile, as has been done in the relevant section below. **This will include planning for the efficient movement of goods as well as people through and across the area**.
- A detailed understanding of the market access issues faced by rural consumers of goods and services.
- A detailed understanding of the market access issue faced by the potential consumers of the goods and services produced by the target communities.
- An integrated nodal-linkages approach to economic planning, rather than isolated projects at disparate locations.

This triumvirate of stakeholders requires careful balancing and prioritisation. Neglecting any one of these "pillars of market access" will threaten the entire LED strategy. When planning for economic development occurs in the future the following major considerations should inform the plans:

- Local government is an important source of services for poor rural communities. However, when planning of the delivery of these services, there is often not enough attention given to how they will be accessed by resource-challenged persons. For example, in areas such as Thembisile and Dr JS Moroka, skills development and the support of SMMEs is a very important issue. However, if the location of training workshops for the unemployed does not specifically consider the fact that the unemployed cannot afford to travel long distances to attend training, these initiatives will not reap the required results. In these circumstances, mobile workshops would be far more effective. In the case of SMMEs, planning should take account of the reality that business owners can only attend training and/or access support services after normal business hours, so as not to disrupt business activities. Therefore, it may make much better sense to locate such service centres in residential areas, and keep them open late at night, so that they can be accessed by people returning after a day's work.
- Rural consumers tend to be poorer, and so high transport costs to access shops can have a significant impact on the disposable income that they have to purchase goods and services. This is a negative effect for everyone since there is less money to spend on goods. When private companies apply to the local authority for planning permission for a retail or similar facility, it must be clear that cost-effective access for consumers is a priority in the location and structure of the facility. This will require a partnership between private developers and the local authority, in order to ensure that both parties will

benefit. The developmental focus should be on the nodes outlined in the spatial section of this report. Local authorities could also consider making more accessible sites available to larger retailers that they might not otherwise consider, through a package of incentives such as reduced rates, good security, subsidised transportation etc. When this is combined with an integrated producer support programme (as detailed below) the positive impact on a local community can be profound.

- The planning of transportation routes tends to focus largely on the transportation of workers at peak times to their places of employment, and (although to a lesser extent) on the transportation of goods to markets. Very seldom do transportation planners consider how a particular strategy will impact on the ability of people to access basic goods and services, such as education and healthcare. Very often, the people that most require these services (the young, the elderly and/or the sick) are those that face the greatest difficulties in accessing them because of inadequate access to transport. Route planning does not tend to take these requirements into account. Therefore, the planning of transportation routes should also focus on how remote communities can access basic services at all times.

In summary, transportation development strategies should not be viewed just as a means of facilitating economic development through a more effective transportation of productive workers and goods for sale, but also as a direct tool in addressing poverty.

6.2 MRCDI Local Economic Development Strategy- Key Success Factors

There are a number of key issues that will determine whether or not the LED strategy for the MRCDI is in fact able to achieve its objectives, and so contribute to the overarching development goals of the local authority, the district, the province and the entire country. For the purposes of this report, the key critical factors have been identified as:

6.2.1 Key Success Factor One-Customised approach

The key development challenges facing Thembisile and Dr JS Moroka (how to increase employment opportunities, raise personal incomes, etc) are common across South Africa. However, the base of resources, spatial factors and the market conditions in these two areas are different. It is very important that development initiatives are based on the local conditions in a particular area, and the capacity of the local economy, as determined by the available skills base and financial and other resources. Closely related to this is the temptation to copy successful initiatives in other areas. Although it is certainly worth investigating and understanding successful developments, the mere fact that an initiative has done well in one area does not automatically imply that it will do well in another. There are many, many factors that determine whether or not a particular venture will succeed, and it is highly unlikely that all of them are present in two locations.

6.2.2 Key Success Factor Two-Sustainability

A high percentage of economic development initiatives fail and do not have the positive impact on employment and income that was hoped for. Failed initiatives not only waste valuable and scarce resources, they also contribute to a cycle of entrenching poverty, since poor communities come to believe that they cannot succeed. The long-term sustainability of a development project and ultimately its success, are closely related to the following:

- Thorough baseline research to test both the ability of participants to deliver goods and services to the required standards, the level of competition, and the existence of a real market opportunity.
- Prior commitment from buyers, in sufficient quantities and at required prices.
- Consideration of logistics issues, such as transportation of goods to market.
- Access to sufficient capital to ensure that the project can survive even in adverse cash flow circumstances.
- An accurate understanding of the income and income timing requirements of the project participants, and the matching of this to projected project cash flows.

6.2.3 Key Success Factor Three-Strong focus on market development and access for goods and services

In general terms, the single most important reason why development initiatives (and private businesses) fail, is because they cannot access markets in sufficient quantity, and at a reasonable cost. Projects that do not focus on market access will fail. (More detail on market access, which is a complex issue, is contained below).

6.2.4 Key Success Factor Four-Identification of opportunities in the Municipalities with long-term comparative advantage

It is not sufficient that there is a perceived market opportunity in a particular sector, if the proposed market participants do not actually have a competitive advantage in that sector. For example, tourism is often perceived as a sector for economic development. However, just because a particular site or destination appears to have tourism potential does not guarantee that it will in fact be able to draw business away from a competing tourism destination in another area. In this way it is vital that LED strategies consider how identified development opportunities rate against their competitors, rather than considering them in isolation.

6.2.5 Key Success Factor Five-Development opportunities must be viable in commercial market terms

Over the longer-term, development initiatives will only be sustainable if they make good commercial sense. Although many initiatives will not present an attractive commercial investment opportunity at inception, and will therefore require support from a non-commercial source such as the local authority, if they cannot develop into enterprises that are attractive to commercial investors, they will inevitably eventually collapse, since they will not be able to access capital for grwoth. Therefore, it is absolutely vital that, when designing and implementing economic development projects, the ability of the project in question to generate a commercially competitive return is considered. From an LED strategy perspective, the aim of development projects should not just be to generate employment, but to create competitive business enterprises. This is the only way in which private-sector capital can be leveraged, and the success of initiatives be guaranteed. This requires that all LED initiatives are assessed on the broad principles that would apply to new business proposals in the private sector

6.3 MRCDI Local Economic Development Strategy- Strategic Objectives

The local authorities of Thembisile and Dr JS Moroka need to address the problem of chronic unemployment and high levels of poverty, created in large part by the lack of economic development opportunities in these areas. The lack of economic development, in turn, is partly the result of limited productive resources in the area. The fact that Thembisile and Dr JS Moroka do not have the same

economic profile (particularly in terms of natural resources) as the remainder of Mpumalanga (or even of Nkangala) has also resulted in the economic development strategies for the Province being of less relevance for the two local municipalities.

One of the most important aims of the LED strategy for these two areas will be to develop an independent economic development approach, based on the specific comparative advantages in the areas, which are quite different from those of the rest of the Province**.** The proposed development of the MRDCI is one of those comparative advantages. The strategic objectives of this LED framework have reference to:

- The broad policy environment described ;
- The guiding principles described; and
- The development challenges facing Thembisile and Dr JS Moroka as described.

The incorporation of a target date for the attainment of strategic objectives is a key issue in successful planning: Without a target date, there is little to sharpen the focus on implementation. However, this LED framework is specifically intended to be linked to the roll out of the MRCDI, for which no detailed implementation plan has yet been developed. In order to develop time based targets therefore, we have assumed the date of 2014 pro tem as this is the same time line as ASGI-SA for the attainment of key development targets. Once the detailed budgets and feasibilities have been completed a more precise time line can be developed. Accordingly, the strategic objectives of this LED Framework are as shown below. By 2014 (within 6 years):

- To create 1,500 direct and indirect **permanent** employment opportunities (including self-employment) in Thembisile and Dr JS Moroka.
- To create 35 per cent of those employment opportunities for persons under the age of 30.
- To increase per capita income by a real 25 per cent
- To contribute to an increased real annual GVA growth rate of 7.5 per cent.

The sector and activity-based strategies described below are intended to contribute towards the attainment of these objectives but it is important to reiterate that the spatial environment within which these activities occur cannot be ignored and spatial and infrastructure interventions will need to run parallel to economic development interventions.

6.3.2 Sector and Activity based Strategies

The sector and activity-based strategies outlined hereunder are specifically chosen to a) make the best use of the existing natural resources and skills in the target area; b) leverage the improved market access and logistics gains that are expected to flow from the MRCDI; and c) take advantage of real market opportunities. The ability of the local authorities of Thembisile and Dr JS Moroka to take full advantage of these strategies will, in large part, be determined by how well the details of the MRCDI are implemented. The key opportunities identified are in:

- Construction
- Wholesale and Retail Trade
- Agribusiness/agro-industry

- Tourism

Opportunities in construction will be related to the period during which the MRCDI is being built, whereas the trade, agribusiness and tourism opportunities will be maximised once the construction is complete, and the MRCDI is operational. These are, therefore, consecutive areas of growth, rather than parallel, although there will of course be a long-term positive impact that results for SMMEs that benefit from the construction phase.

The over-arching strategies are set out below. Detailed implementation plans for two of the identified opportunities are outlined in the Annexures to this report.

6.3.3. Agri-business/Agro-Industry

The spatial analysis outlined earlier in this report comments on the water availability and quality issues, and the problem of soil degradation in the local municipalities under review. Notwithstanding these issues, and assuming that the water infrastructure issues will be addressed timeously, the economic analysis suggests that agriculture offers a number of excellent development opportunities. The focus should be on smaller-scale cooperative type agricultural operations and/or hydroponics. The proposed agribusiness strategy has four main components that will apply across a range of products:

- A low-cost production model based on traditional and sustainable methods (except for the hydroponics [10]option)
- A benefit-sharing model based on rewarding individual effort, within a supportive cooperative environment;
- A market access model based on local markets, and a greater share of the value chain for producers; and
- A spatial component, linking agricultural producers with the nodes targeted for development along the MRCDI, and in turn, linking customers to those same nodes.

Each of these strategies is discussed in more detail below:

6.3.3.1 Low-cost production based on traditional and sustainable methods

As the price of many conventional framing inputs such as fertilizers, concentrate feed and pesticides increases in line with the oil price, so those farmers that are able to draw on traditional and sustainable farming methods will not only be able to produce a product that carries a market premium (such as an organic or free range certification), but they will also have a market advantage in terms of cost. Recent studies have indicated that organic farmers in Kenya now have a cost advantage of as much as 50 per cent over conventional farmers, because of the very sharp increases in petroleum-based inputs such as fertilizers and pesticides.

The more that new economic development initiatives are based on an existing pool of skills and resources, and focused on *enhancing* rather than *replacing* these, the greater the likelihood of success.

[10] Hydroponics is a method of growing plants using mineral nutrient solutions instead of soil. Terrestrial plants may be grown with their roots in the mineral nutrient solution only or in an inert medium, such as perlite, gravel or mineral wool. A variety of techniques exist.

One good example is the preparation of land for vegetable farming. These areas of land tend to be quite small. The temptation always is for the project to invest in expensive machinery which is costly and difficult to maintain. This puts an unnecessary burden on the project participants. It is far better to look at traditional cultivation methods, such as oxen or donkeys. At first glance this seems to be a "backwards" approach, but in the long term it will be far more beneficial for the project members. We need to ensure that project planners focus on *what is most likely to work for the participants under their particular circumstances,* rather than making hasty decisions that appear more impressive. The market opportunities that we have identified *are based on better using and supporting the existing pool of traditional farming skills and resources in the area,* supplemented with new techniques around organic and mixed-use farming, as well as possibly, investment in hydroponics.

6.3.3.2 A combined entrepreneurial/cooperative ownership model

One the one hand, it is absolutely true that the best way for emerging farmers to access the high capital cost inputs required for farming (such as land, capital equipment, etc) is through a collective, that allows them to pool their limited resources. On the other hand, development planners are increasingly realising that cooperative benefit sharing models are not ideal, since there is no additional reward for those who work the hardest and no sanction for those who work the least. In this way, pure cooperative models can result in both lower output, and a barrier to the creation of potentially successful commercial farmers.

What is required is a hybrid model that will allow farmers to benefit from pooled resources, but to reap the benefits of their own inputs and labour. This type of model also encourages people to stay in projects, through a more transparent effort vs benefit model. The best hybrid models are those that allow individual farmers to share the cost of essential inputs, such as the most necessary capital equipment, breeding livestock, veterinary supplies, etc and the cost of improved market access, such as joint certification, shared transportation etc, BUT allow individual farmers the opportunity to produce clearly identified products, and to be paid a differentiated price, based on pre-determined criteria. For example, cattle farmers would share land and a breeding bull, and club together to get discounts on items such as feed and vaccines, but each animal will receive an individual price at slaughter.

6.3.3.3 A local market access model and shorter value chains

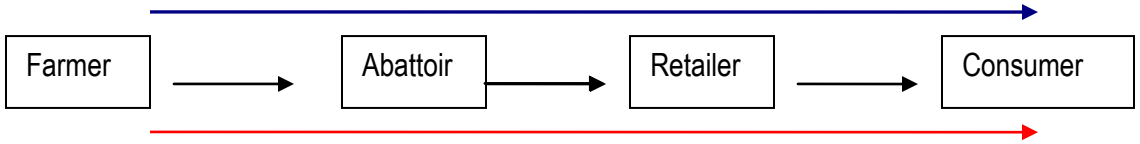
One of the most important barriers to entry for small farmers is market access: Given the market domination of a few very large retail companies, the main existing market access routes are based on accessing the supply chains of these companies (such as Checkers, Pick and Pay, Nando's, Woolworths et al). However, these supply chains are based almost exclusively on high volume production, standardised production and onerous quality standards, all of which are almost impossible for small emerging producers to comply with. As a result, these commercial structures tend to act as a very effective barrier to entry for small emerging producers.

Another feature of agricultural (particularly food value chains) is the very high level of market power that retailers have, and the very low level of market power that producers have. This means that the producers tend to receive the smallest share of the final value of the product. In an environment of rising food prices, this combines to produce a significant negative income on rural incomes: Producers are being paid very low prices for their goods, while then having to pay inflated prices for food at retail outlets. Just one example is milk: producers tend to get less thanR3/litre, while consumers will pay around R7/litre. The low producer price keeps rural incomes under severe pressure (as the farmer keeps for

example, costs of labour and other inputs as low as possible) while the high consumer price erodes the purchasing power of rural incomes. Therefore in terms of the agri process strategies for the two municipalities we recommend as follows:

- **Focus on production for the local market:** This reduces transportation costs, and other logistics issues around accessing remote value chains; and
- **Allow farmers to increase their incomes by moving further up the value chain to process their own products,** and then to retail their own products directly to consumers. A simplified example of a beef chain is shown below:

Figure Seven: Beef Chain to Market



Source: Blueprint (2008)

Each black arrow represents an increase in the value of the product. In the small farmer environment, many farmers don't even get to the abattoir, due to transportation costs, but sell to speculators. The blue and red arrows represent the increased income that can accrue to farmers by narrowing the distance between themselves and their customers. Obviously there is a trade-off between increased share of the value chain, and increased capacity requirements, in terms of resources and skills. It is this value-capacity relationship that government interventions should seek to address.

Most development strategies tend to focus on producing for remote markets (distant cities or even foreign markets), and tend to assume that there is no value in concentrating on the local market that is right around them. However, we cannot assume that poor communities cannot be good customers. There are around 500,000 people living in Thembisile and Dr JS Moroka. If each person re-allocated just R10 per month to the purchase of food items produced in those local authorities, that would represent R5 million per month and R60 million per year in additional farmer incomes. The challenge, therefore, is not for farmers to find a new market, but to be able to provide a quality, well-priced product into an existing market.

It is important to remember that a strategy of focusing on producing for local markets and reducing the length of the value chain between producers and consumers can be beneficial to both producers and consumers, and so have a double impact on real poverty levels. In our milk example above, a retail price of R5/litre from a farmer-owned outlet would increase both producer incomes and buying power of consumers.

6.3.3.4 Linking producers into development nodes along the MRCDI

The key to an alternative market access model such as the one detailed above is to make it easier for producers and consumers to transact with one another. This is the key facilitative role of the MRCDI and associated infrastructure development along the route, and at designated nodes. Nodal development

should be around transport hubs and priority should be given to retail tenants who either represent local producers, or who will make a commitment to purchasing a certain minimum percentage of their products from local producers, (subject to quality and supply standards). A preferential rental rate could also be instituted, whereby rental rates decline relative to the share of local emerging producers in total purchases. It is important to remember that these goals must be balanced against the need to provide a wide variety of quality and well-priced goods. If this is not done, then the nodal retail developments will not attract sufficient customers. For these strategies to work it is vital that the nodal developments :

- Are located in the most central and "natural" convergence points for cost- and time-effective travel as outlined in the spatial strategy above;
- Are connected to or alongside leisure, work and/or sporting attractions, to encourage additional visitors;
- Are geared towards smaller producers, through the provision of warehousing, processing, cold storage, etc facilities at the same or an adjacent site;
- Have reliable bulk infrastructure
- Have good security

6.3.3.5 Agribusiness Market Opportunities

The three strategies of sustainable production, equitable ownership and local market access as outlined above have been applied to the best market opportunities in the agricultural sector in the two local municipalities. The most viable market opportunities at present are:

- Beef production
- Diversified vegetable production
- The establishment of farmer/cooperative owned processing and retail outlets to capitalise on nodal development along the MRCDI.

Beef production:

Almost all of the beef produced in South Africa comes from commercial feedlots. These are dependent to a large extent on the petroleum price, since they feed concentrates (maize) and transport calves over long distances. These factors are likely to put upward pressure on prices. There are a number of communal cattle farmers in Thembisile and Dr JS Moroka, and an initial brief survey indicates that many (although not all) of these cattle are in good condition and are suitable beef breeds. The beef production project will contain the following components:

- Establishment of strong and representative farmer associations.
- Education and training re animal husbandry, markets and breeding. All this will focus on assisting farmers to breed and raise animals that will receive the highest market value.
- In conjunction with the Department of Agriculture, institution of a universal dipping and vaccination programme.
- Better management of existing grazing lands: Some form of rotational grazing pasture management will be required to maximise the value of that land. Improved pasture management will contribute towards improved margins for small farmers, since it will reduce their dependence on higher-cost feed concentrates.

- Compulsory branding/freeze marking of animals.
- The establishment of a concentrated feeding operation, to "finish" animals for market.
- Management of market supply, to ensure that farmers can maximise their income.

It is important that the project is structured in such a way that individual farmers are rewarded for producing high quality animals. Blueprint recommends that the rail network makes provision for the transportation of animals in suitable livestock cars to an approved abattoir if there is one, or if there is not that an approved abattoir be set up in one of the four industrial nodes which will be served with a rail link.

In addition, stock holding pens should be constructed in close proximity to the various livestock loading points. Communal farmers will bring their livestock intended for sale to these pens where their condition, vaccinations, etc could be ascertained, and the animals could remain there for a period of say four to eight weeks to receive extra feed. The stock holding pens could operate on a cost-recovery basis (i.e. each individual farmer pays his/her own costs) and could be managed by the local authority together with local livestock owners' associations. Other livestock such as sheep and goats could also be included in such a project.

Support/ancillary services around livestock production:
These services will consist of, inter alia, the low-cost production of supplemental food stuff for "finishing" livestock. There are plans for a cassava production project in Thembisile. Cassava leaves are an excellent source of animal feed, containing almost as much protein as lucerne. The other ancillary services will be slaughter and processing of livestock. There are many opportunities for small farmers and SMEs in this regard, and there is a growing market demand.

Diversified food production:
This will include products such as vegetables and fruits and possibly hydroponics in areas of severe soil degradation. Many people in the areas are already engaged in these activities. Therefore, interventions should focus on:

- Increasing the knowledge of organic and sustainable production methods to improve productivity.
- Introduction of new/additional high-value crops to supplement existing products.
- Increasing the ability to store/preserve/add value to production. Currently products have a very short shelf-life, and this increases the vulnerability of these producers to market fluctuations. Interventions here would include packing/processing facilities, small-scale milling facilities for grains, etc. These offer many opportunities for SMEs.

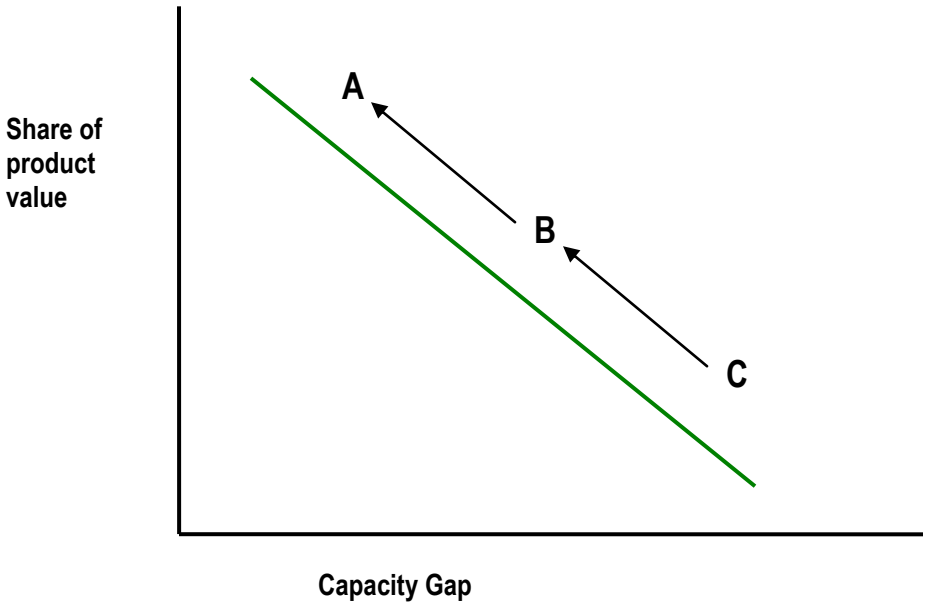
Farmer/cooperative owned processing facilities
Facilities such as cold stores, packing plants, abattoirs will be required. This is not only a key issue in farmers being able to increase their share of the value chain, but will also provide a very valuable source of new job opportunities in agricultural support services. These are often very capital intensive projects, but are not necessarily so. While farmers may own these facilities, its not essential that they manage them.

Farmer/cooperative owned retail outlets.
This is an important step for farmers to make in increasing their income. It is also an important part of a strategy to ensure that consumers have access to affordable source of food. These retail outlets would best be situated along the route of the MRCDI, to make it easy for consumers to access products beginning with the retail nodes as identified in the spatial strategy. The mobilisation of farmers (see below – Stakeholders) is a key preparatory activity.

6.3.3.6 Trade off- Greater share of the value chain and Capacity

There is a trade-off between having a greater share of the value chain and the capacity that is required to do so. This can be roughly illustrated in the diagram below (where "capacity" can be defined as a combination of physical infrastructure, skills, financial resources, management capacity and participant commitment, and the "capacity gap" is the difference between the capacity that is required, and that which is actually in place).

Figure Eight: Capacity Gap



Source: Blueprint (2008)

The wider the capacity gap, the lower the share of the product value the producers will be able to attain. The most important role of any local authority will be to create the skills, capacity and institutional arrangements that will allow producers to move from Point C to Point A. Doing so will require the following interventions:

- Production support so that farmers can produce the highest quality product, at the lowest cost.
- Mobilisation of farmers into groups that can leverage buying power and share resources and responsibilities.

- Developing a long-term skills development, training and mentoring scheme for farmers and support services. This should cover not just issues around production, but also quality control and food safety standards, market pricing mechanisms, market access, financial management, etc.
- Building new or enhancing existing processing facilities to be owned by farmer groups. These need not be very high-cost high tech solutions, and in fact it is best if they are not.
- Facilitating access to farmer-owned retail outlets.

The key components of implementation plans around agricultural production will be:

- Identification of existing farmers, even very small-scale producers.
- Mobilisation of farmers into associations to share certain costs and responsibilities.
- Additional related product identification.
- Training and skills development around sustainable and more productive farming methods.
- The scoping of small-scale shared processing facilities, including location, management, financing, etc.
- The scoping of small-scale shared retail facilities, including location, management, financing, etc.

6.3.4 Tourism

The area has good potential for tourism, and the MRCDI will make the area much more accessible. Thembisile and DR JS Moroka are located within relatively easy driving distance of Johannesburg, Pretoria and OR Tambo international airport. The two main tourism opportunities are around game/nature reserves, and cultural tourism.

6.3.4.1 Game/nature reserves

The current nature reserve/game park tourism infrastructure is very limited, with fewer than 70 bed nights available. The most suitable target market for these areas should be seen as the domestic South African market rather than the international tourism market. The high quality, but affordable local nature tourism market is under-serviced, and improved access to the area through the MRCDI will increase accessibility for many. It will be very, very difficult for the game/nature reserves in this target area to compete effectively against the established international destinations around the Kruger Park. The fact that they are closer to OR Tambo airport is unlikely to be a major incentive to divert.

Very major interventions will be needed to increase the economic development impact of the existing facilities. As was implemented on selected sites by the South African National Parks Board, the Mpumalanga authorities should consider implementing a policy of outsourcing the facilities to private operators for a nominal fee on condition that a range of pre-determined targets in the areas of employment, training, bed nights and occupation rates are achieved. This offers the authorities a fairly low-risk low-cost method of increasing the economic value of these assets.

6.3.4.2 Cultural tourism

There are opportunities for the development of a cultural tourism route, and this type of tourism is becoming increasingly popular with wealthier foreign tourists. Not only should wealthier tourists be seen as desirable, but there should be a specific policy of attracting higher-income foreign tourists as well as local tourists. This requires:

- Focusing on the wealthier market;
- Keeping them in the area for a longer period; and
- Giving them more products and experiences to spend their money on.

Cultural tourism can provide all of these benefits, but only if the following issues are carefully considered and integrated into a cultural tourism strategy:

- Although the area is not very far from key arrival destinations of tourists, they will not travel the distance for only a few hours' of activities/entertainment and some limited shopping. Therefore, a cultural tourism "destination" should be somewhere where there is sufficient entertainment for the average visitor to spend at least two days. The more intensive the destination, the greater the opportunities for a much larger number of SMEs to benefit.
- The type of tourist attracted by this sort of destination wants an experiential and "alternative" experience. They are not travelling the distance merely to watch a routine dancing/singing display, or to shop for some craft items (no matter how good). They want to feel that they have been immersed in a different culture, and have had the opportunity to experience an alternative way of life and alternative points of view.
- Although these tourists are looking for an insight into an alternative, they are also very often wealthier and older people, and do not want to be presented with below average accommodation, food or service.
- The security of tourists in the area is a critical issue

We would recommend a pilot project around the building of a cultural village located in a suitable bushveld environment that will offer:

- High quality and limited accommodation.
- A health spa focused on traditional healing and medication techniques
- Workshops/seminars/sessions focused on traditional healing and spirituality
- Oral history/legends
- Traditional art/craft workshops

The best model would be a partnership with a suitable private company, which will provide management expertise, within an employee/community profit-sharing scheme. A high-quality differentiated tourist offering on these lines offers significant opportunity for down- and up-stream SMME linkages, in areas such as manufacture of cosmeceuticals, purchase of local food, etc.

6.3.5 Construction

The Moloto Rail Corridor is a very large infrastructure project for the area, and offers many opportunities for local and small businesses. The analysis of SMMEs in the area has indicated that there are a significant number involved in construction, who could participate in the project.

Since it is likely that the bulk of the work on the MRCDI will be allocated to large companies (for reasons of economies of scale and risk management) the way in which smaller businesses will benefit is via linkages with these large companies. We would suggest the following approach with respect to

maximising the impact on local and small business in the construction sector, during the construction of the MRCDI:

- Establish a detailed database of all local and small construction companies in the area.
- Establish a database of all individuals in the area that have skills relevant to the project (i.e. who are not in a business).
- Make these lists available to all companies who wish to tender for work on the MRCDI, and weight the preferential points system in favour of local and small business. The preferential points system could also reflect the requirement of skills transfer and mentoring for the managers of these small businesses.

This approach can also be applied to any other non-construction services/goods that will be part of the MRCDI procurement process and could include business services and other activities.

6.3.6 Wholesale and Retail Trade

One of the most significant benefits for the local community of the MRCDI will be the development of nodes at key points along the proposed route. The key commercial benefits of these nodes are:

- They encourage investment into retail trade infrastructure (since the increased amount of "traffic" through these centres increase the prospects for sales). Therefore, there are better located and serviced centres for retailers to situate their businesses, and the prospect of making a profit is increased; and
- The increased retail trade in an area increase the opportunities for wholesale suppliers of goods.

These are general issues that will improve that attractiveness of the wholesale and retail trade sector in the area, for all businesses. The key issue for LED in the area is to ensure that local and small businesses benefit to the greatest possible extent. Since this is not an automatic outcome, it is important that the local authorities are pro-active in this regard, and adopt an approach that will facilitate the following outcomes:

For retailers:

- Identification of local small retailers that will benefit from location in the nodes, and have suitable goods/service offerings.
- Raising of awareness among small retailers of the opportunities.

- Requiring that developers/landlords set aside a certain minimum percentage of retail space for these small retailers
- A rental "subsidy" that exchanges reduced rental rates in return for achieving certain business targets can be a key issue in incubating small businesses, and should be considered.
- By laws in respect of informal traders should be enforced in the areas adjacent to any formal retail centre, in order to protect these markets from informal competition.

For wholesalers:

- Facilitate the construction of wholesale trade centres in close proximity to the retail nodes. The smaller the distance between these wholesale trade centres and the retail centres, the greater the benefit to local businesses of the transportation cost "gap" (i.e. the cost of transportation that wholesalers from outside the area will have to add to their sales price, versus the transportation cost that local wholesalers add.) These wholesale trade centres should be designed with the specific requirements of small wholesalers, such as the requirement for small spaces, affordable rentals and security.
- Identification of local small wholesalers that will benefit from location in the nodes, and have suitable goods/service offerings. This will be a fairly complicated exercise, since the aim will be to identify wholesalers that have both products that are required in the retail node AND who will be able to offer these at a competitive price.
- Raising of awareness among small wholesalers of the opportunities.
- A rental "subsidy" that exchanges reduced rental rates in return for achieving certain business targets can be a key issue in incubating small businesses, and should be considered.
- A programme to encourage linkages between the targeted wholesalers and the retailers in the nearby centre.

6.4 Institutional Framework

This report is intended to supplement the existing LED and related planning structure that is already in place in the two local authorities, and not to replace it. Therefore, it is subject to the same institutional framework as other economic development planning functions within the local authorities. The ultimate responsibility for the finalisation, approval and implementation of this LED strategy will thus lie with the relevant senior official of each local authority, who in turn operates under the local authority Executive and the Mayor.

There is one area where the institutional framework around this document will, however, be different from that which is currently in place to develop and oversee LED strategies: That is the fact that this LED framework has been developed in response to the MRCDI project, which affects both local authorities – Thembisile and Dr JS Moroka. The MRCDI initiative is focussed on improving the movement of goods and people around the area – to reduce the economic isolation of the area, and to improve integration. It is in this same spirit that the two local authorities will need to appoint a joint oversight and implementation committee for this particular LED initiative.

This joint committee will have to ensure that equitable and efficient allocation of resources among projects takes place, and that decisions are made that will have the best long-term implications for the entire area, rather than serving any one particular interest group. This committee will also be responsible for the mobilisation of the relevant departments within each local authority, and for ensuring that they also work to co-ordinate their efforts. Particularly important departments in this instance will be economic development and planning, spatial planning and land use, agriculture, tourism and those responsible for the delivery of bulk infrastructure. The most useful structure will probably be a technical working group, falling under the joint committee, containing representatives from each of these key departments. The main responsibility of the technical working group will be to meet regularly to ensure that all service

delivery departments are working together in a cohesive manner to deliver the goals of this LED framework.

Blueprint recommends that such a committee be established as soon as possible, and that its first order of business be to set the detailed criteria under which resource allocation decisions will be made. This will go a long way towards ensuring that the committee can operate in a cohesive and effective manner, to best serve the citizens of Thembisile and Dr JS Moroka. In addition to local authority representatives, we would recommend that a number of other stakeholders -as detailed below- be invited to join the committee and/or the technical working groups, depending on the final scope and number of projects that are decided on.

- Commercial associations
- Farmers' associations
- Public sector financiers
- Private sector financiers

6.5 Key Stakeholders

In order to leverage the LED strategy around the economic development opportunities created by a more integrated and efficient local economy, there are a number of important stakeholders that must be engaged. These are:

- **The relevant local authority officials**, represented in a joint committee as described above. It will be the responsibility of these committee members to ensure that they have the necessary support and commitment from the most senior executives and the council in each of the local authorities.
- SMMEs and small producers, such as informal farmers, need to be encouraged to organise themselves into **common interest associations**. It is almost impossible for government to interact and negotiate separately with individuals around economic development strategy. In addition, the formation of strong and cohesive associations is a pre-cursor to many of the development programmes outlined above. It is particularly important that those (such as informal cattle herders) who have never had any representative organisation in the past are now able to do so.
- **Key sources of public-sector funding**, such as the Land Bank, the DBSA, various programmes of the DTI, etc must be included as soon as possible. We would recommend that representatives of the three most important identified funders are invited to participate on the joint steering committee. Having these organisations involved directly
- The ability to leverage private-sector funding will be critical, although in the past commercial lenders have proven reluctant to participate in what they see as high-risk/low-return projects. We would recommend that the joint committee approach a number of **commercial lenders** with the proposal that one of them will be invited to be the preferred funder for this LED initiative.
- Most of the agribusiness projects will require **long-term skills development and mentoring support**, in a number of areas, including food safety and processing. We would recommend that an agricultural institute or similar organisation be approached with the view to establishing a long-term working relationship with the project.
- There are many **NGO and donor organisations** that could be involved in a beneficial way in this initiative. We would recommend that the committee identify 3 – 5 of these organisations, with a view

to inviting 2/3 to participate in the institutional structures, based on their ability to add value and leverage resources.

Finally, the most useful way to involve the local community and special interest groups (such as the youth, women, disabled, etc) is through transparency in project activities, and regular feedback and discussion sessions.

6.6 Resource Mobilisation & Funding Principles

The mobilisation of resources deals with all resources, including human capital, infrastructure, etc. As far as funding is concerned, it may be appropriate to consider the setting up of an LED Fund, possibly with donor assistance. Alternatively, a funding unit within the LED unit will need to be set up to facilitate access for potential beneficiaries to existing funds.

The way in which this funding is structured, and the terms and conditions under which beneficiaries access those funds, is a critical issue in successful projects. If the criteria to qualify for funding are too strict, the pool of beneficiaries will be greatly restricted. If, on the other hand, it is too easy to get funding on a no-responsibility basis, resources will be wasted.

[11]All potential projects should be required to submit detailed business plans, indicating exactly how they intend to develop commercially viable enterprises. This underscores the need to ensure that potential funders are involved from the very beginning, so that they can contribute to actual project design and implementation plan. Not only increase likelihood of getting access to funding, but probably also contribute to higher project success rates because commercial principles and requirements will be included from the beginning. In turn, the strict adoption of these principles by either a dedicated LED Fund or the LED funding unit and the joint steering committee with respect for the funding of projects is likely to increase the availability of resources, since it demonstrates a commitment to sustainability. Once again, it is important that potential funders are involved from inception of the projects, and that long-term relationships are built.

6.7 Approach to Implementation Planning

Blueprint recommends the following overall phased implementation framework:

- STEP 1: Obtain finalisation of the MRCDI implementation plan as soon as possible.
- STEP 2: Establish the necessary institutional framework as recommended
- STEP 3: Mobilise communities and stakeholders
- STEP 4: Plan for the implementation of pilot projects in the identified sectors and in the identified spaces

It is probable that the pilot project approach will be the most useful for the implementation of LED projects and programmes. Once high impact pilots are operating successfully, it will be a much simpler matter to replicate in other areas, rather than attempting to establish many simultaneously. A pilot approach also allows for adjustment in many factors, increasing the likelihood of successful subsequent projects. Finally, a successful pilot makes it easier to obtain funding for subsequent initiatives.

[11] Please refer elsewhere in this report for complete list of funding entities for SMMEs

The approach that is adopted towards the implementation of this LED strategy is a *key success factor.* The following guidelines in the drafting of detailed implementation plans for all projects will contribute towards both successful outcomes, and greatly improve performance management and oversight. This is the approach that has been adopted in the drafting of the two detailed implementation plans.

- **All targets should be clearly described and have a clear timing component** (i.e. a target date) associated with it. It is important to avoid targets such as "facilitation", "support", "mobilisation" etc, and instead to focus on setting tangible deliverables and quantities. It is extremely difficult accurately either to measure performance or to allocate resources to vague and fuzzy goals.
- **Planning should be done for rolling five-year periods, in line with government planning requirements.** Clear targets should be set for each project under each year, as well as for the combined 5-year period. This is a useful tool in performing a "reality check" on plan contents.
- **Detailed activity plans**, against which progress and performance can be accurately measured should be drawn up for each one-year period. This will help to focus attention on short-term goals.
- **All plans should be associated with detailed budgets**, rather than one lump sum. This detailed budgeting is not an easy process, but it is the best assurance that the project can be correctly managed, in terms of the most efficient allocation of resources.
- **All plans should make responsibilities for outcomes very clear.** This is the cornerstone of effective performance management.

6.8 Monitoring and Evaluation

The driving principle behind Monitoring and Evaluation is that what gets measured gets done. Those activities not included in a rigorous M&E framework are those that are likely to get neglected. The more vague or fuzzy the goals the more difficult to measure actual progress.

The aim of an effective M&E framework is to provide useful management information to an organisation in order to assist it in improving performance. Adopting this kind of positive approach towards M&E will go a long way towards improving the process. An effective M&E Framework is a mirror image of the planning process. Detailed Implementation Plans form the basis for evaluating the following:

- Whether each activity is actually being undertaken;
- Whether the result of that task/activity is as anticipated by the plan; and
- Whether the task/activity has been completed on the agreed date.

M&E reporting should reflect the same content and layout as the implementation plans, so that it is quick and easy to understand progress and problems. Effective M&E requires standardised reporting**.** It is not very useful to monitor progress made on implementing strategic plans unless there is an associated reporting structure. For example, if the a Department wishes to monitor whether or not a particular activity has been completed, but no one is obliged to report to a third party that it was actually done then there is little point in monitoring that activity.

M&E reporting should be as concise as possible, focusing only on progress made towards targets. Where targets have been reached, no further detail is required. Explanations around why targets have not been reached should be as concise as possible AND focus on what will be done to correct the problem.

Subsequent reports should have reference to the previous reports. For example, if there is a problem area, and certain remedial action is proposed, the next quarterly report must include how that remedial action is progressing. In summary, reporting should focus on clarity, rather than generating mountains of paper that no one has the time to read.

All M&E and associated reporting should be associated with clear time standards. For example, if a Department has decided that it requires a monthly report on the progress made towards achieving each output, those reports must be made available to senior officials as soon as possible after the end of each month. If the reports are only available some months later, they are largely useless for M&E purposes. Timing standards should be set in advance, when the M&E framework is set up.

Blueprint recommends that the LED steering committee establishes a quarterly M & E reporting structure, based on the template contained in the Annexures to this report. This template includes reporting on actual versus budgeted expenditure. The use of this template will help to focus the reporting on the most important issues, and contribute towards more efficient oversight and management.

SECTION FOUR
SMME AND ENTERPRISE SUPPORT STRATEGY

7. SMME & Enterprise Support Strategy

There are very few formal employment opportunities in the corridor. This, combined with high rates of school drop-outs (i.e., out-of-school-youth) lead many young women and men to leave the area for larger urban areas, such as Johannesburg and even Nelspruit, in search of employment opportunities. Many Small, Medium and Micro Enterprises (SMMEs) in the corridor suffer from poor market linkages with large-scale businesses in the area, such as those generated in the mining, tourism and agri-processing sectors. Thus, there is a need to focus on improving procurement and contracting arrangements for SMMEs.

The **Mpumalanga Youth Council** and the provincial government have initiated a number of events that focus on employment and business opportunities for young people. In June 2007 a Provincial Youth Summit was attended by 150 young people from all three regions of the province to discuss and adopt a programme of action to encourage youth participation in the agricultural industry. Similar events were held focusing on young people's engagement with the construction sector, which culminated in the official launch of the **EPWP National Youth Service Programme**.

7.1 Current programmes, projects and support agencies

While the province benefits from a range of programmes and support services provided by national, provincial and local agencies, the communities in the area of the Moloto Corridor are often disadvantaged by their limited access to these activities.

7.1.1 Small Enterprise Development Agency

The major national agency providing non-financial support to SMMEs is the **Small Enterprise Development Agency** (SEDA). SEDA has a network of branches where people can go for help to start a business or, if they already have a business, to make it stronger and more profitable. Eighty percent of SEDA efforts are directed at the emerging market, where new businesses are formed, and where they strive for sustainability and growth. Twenty percent of our energy goes towards assisting existing small and medium sized enterprises, which want to be more competitive and which have potential to grow and create more jobs. As well as helping individuals in business, SEDA has a special focus on co-operative enterprises, where groups of entrepreneurs form a co-operative to ensure that everyone involved in it will benefit from its success. SEDA branches offer:

- Information, advice and referrals
- Tender information and advice
- Import and export training
- Trade information
- Business assessments
- Technical support
- Business mentoring
- Market access
- Business linkages

Linked to the branches are **Enterprise Information Centres** (EICs) offering useful information and services. In each province, the SEDA branches are supported by a SEDA provincial office, as well as by products and services from the SEDA national office in Pretoria. This ensures all branches offer the same quality of service to entrepreneurs country-wide.

SEDA only has one branch in the province in Nelspruit. However, some parts of the province, including the Moloto Corridor are serviced by the Witbank SEDA branch. There are two EICs located in the corridor area: one in Thembisile and one in Dr JS Moroka.[12] However, one of the biggest problems with EICs is the quality of the service they provide to SMMEs. There is a need for close monitoring of the work of the EICs and to develop initiatives that improve the quality of the advice they provide.

7.1.2 Khula Enterprise Finance Ltd

National government support for financial services to SMMEs is largely provided by **Khula Enterprise Finance Limited**, which was established in 1996 to focus on the promotion and development of small and medium enterprises in South Africa. Its role is to maximise access to finance for small and medium enterprises in a way that leads to the development of sustainable small and medium businesses, job creation, economic growth and equity. Khula offers the following products to the entrepreneur:

- **Khula Credit Indemnity Scheme:** to share the financing risk with banks thus enabling SMEs to access funding from a participating bank or other financial institution. The scheme enables entrepreneurs to access funding for purposes of establishing, expanding or buying out an existing business, business assets and working capital. Finance has to be approved by the financial institution and the latter will only apply to Khula for a guarantee where there is inadequate collateral.
- **Khula Land Reform Empowerment Facility**: funded by the Department of Land Affairs (DLA) and supported by the European Union (EU). The aim is to facilitate land transfer and economic participation by black people in economically viable land based agricultural enterprises (both primary and secondary) and eco-tourism sectors.
- **Khula Mentorship Programme**: to act as a risk mitigator and facilitator of access to finance for SMEs. It offers two services, namely; pre-loan and post loan mentorship services. During the pre-loan stage entrepreneurs are assisted by experienced mentors with advice, counseling and the development of viable business plans in order to access funding. In the post-loan stage clients are assisted with various aspects of managing a successful business as identified by the client, mentor, bank and Khula.
- **Non-bank Retail Financial Intermediaries:** Retail Financial Intermediaries, commonly referred to as RFIs, are independent organisations or companies accredited by Khula to lend money directly to SMEs. Once accredited, RFIs receive loan funds from Khula to disburse to small and medium enterprises according to their own lending policies. RFIs have to ensure that loans disbursed are paid back by the SMEs in order to pay back the loan originally received from Khula.

[12] There are 12 EICs in the province

In addition to the above services, Khula has developed a number of joint ventures. These include:

- **The Business Partners-Khula Start-up Fund** is a fund created to enable entrepreneurs to establish new enterprises as well as early phase business expansion. Both Khula and Business Partners have co-invested in the venture, and the fund is managed by the latter.
- **The Anglo-Khula Mining Fund** is a joint venture between Anglo American and Khula Enterprise Finance which facilitates entry of junior but commercially viable mining ventures into the mainstream mining sector. The fund provides seed capital to assist junior mining projects at pre-feasibility and pre commissioning stages.
- **Regent Factors** - Reverse factoring is the most recent addition to Khula's suite of products. This product is a joint venture between Khula Enterprise Finance Ltd and Regent Factors Ltd. Reverse factoring is a facility which is aimed at addressing the cash flow gap that is currently experienced by SMEs that have been awarded contracts by public and private sector entities. In a reverse factoring arrangement funds are advanced to SME suppliers based on the credit worthiness of the buyer, who makes direct payment to the factoring house. This arrangement allows entrepreneurs to access working capital, thus reducing the time gap between the delivery of goods or services and recipient payment.
- **The Enablis-Khula Loan Fund:** a partnership between Enablis Entrepreneurial Network, Khula Enterprise Finance Limited and FNB Enterprise Solutions. The fund provides 90 per cent guarantees for loans extended to ICT focused and enabled businesses. Enablis is a non-profit private-public partnership sponsored by Hewlett-Packard, Accenture, Telesystem and the Government of Canada. FNB Enterprise Solutions, a subsidiary of First National Bank Limited, is FNB's specialist Small and Medium Enterprises financing division.

While Khula operates as a wholesaler of financial services (i.e., it provides financial services to SMMEs through intermediaries rather than directly), it does not appear to have a permanent presence in the province and support to SMMEs in the Moloto Corridor is extremely poor.

7.1.3 ABSA Enterprise Support Centres

An **ABSA Enterprise Support Centre** has been recently established in Mbombela, Ehlanzeni District and it is envisaged that this will lead to the establishment of similar centres in the other two districts of the province. The centre assists SMMEs with access to information, training and mentoring in order to improve their access finance from the bank.

7.1.4 Umsobomvu Youth Fund

The **Umsobomvu Youth Fund** (UYF) is another important national agency providing financial and non-financial support to SMMEs. UYF has a fully-fledged **Youth Advisory Centre** (YAC) in Nelspruit. This is the only UYF facility in the province. YACs are walk in centres that provide and disseminate relevant and up to date information that can assist young people in making informed decisions about their livelihoods. They provide outreach activities in order to cover a broad spectrum of young people even in remote areas.

- Information: provision of general information and referral information using the electronic databases on the portal and the portal as a whole

- Career Counselling: to help young people make informed decisions about their careers and develop plans for their own development
- JOBS: Database for young people and employers to register and search for job, internship and learnership opportunities
- BOSS: Database for youth-owned businesses and procurers to register and search for business and procurement opportunities
- Business Consulting Services Voucher: designed to help youth-owned business set up, expand or develop their businesses
- Volunteer Mentorship: Volunteer to become a business mentor or sign up to be mentored by a business person
- Micro Loans: between R1 000 to R100 000
- SME Funding: loans between R100 001 to R10 million.
- National Youth Service: a structured learning programme conducted under the auspices of the National Youth Service programme - it includes elements of community service and volunteering
- School To Work Training: bridging programmes for young people who are making the transition from school/ training to the world of work - examples are learnerships and internships
- Entrepreneurship Education Training: aimed at helping young people understand the concepts and principles of entrepreneurship and business
- Life Skills Training: based on 22 modules that relate to personal development of a young person
- Cooperative Training: for young people on the fundamentals of establishing and managing a youth cooperative business

The UYF micro-finance programme (providing loans up to R100,000) is administered by the Nelspruit YAC, but the Witbank YAC also offers these services to young people in Thembisile and JS Moroka due to its proximity. Consultations with the two outreach officers have indicated that regular visits are made to Thembisile and JS Moroka. To-date, this outreach has been mainly in the form of awareness raising and, where interest is expressed by young women and men in the area, applications can be distributed and received for various UYF programmes. The outreach officers schedule interview dates so that local young people can apply for support. UYF also has **Mobile Youth Advisory Centres** that create access to information on UYF products and services for youth in hard-to-reach areas. However, this has not yet been made available to young people in Thembisile and JS Moroka.

7.1.5 Expanded Public Works Programme

The national **Expanded Public Works Programme (EPWP)** is active within the province and appears to offer opportunities for SMME development in the area contained within the Moloto Corridor. The EPWP focuses on the development of work opportunities through the entrepreneurial market. This sector develops and supports 3,000 SMMEs over the period 2004/05 – 2008/09, through its flagship programme known as New Venture Creation Learnership. This programme has been endorsed through the EPWP Conceptual Framework, approved by Cabinet.

SMMEs are provided with a National Qualification Training in Business and a track record of completing work through the identification and awarding of suitable projects by all spheres of Government. The programme is of such a nature that all national departments, provinces and municipalities can participate in the programme. Furthermore, all Sector Education and Training Authorities (SETAs) can participate in the programme.

It is anticipated that 3,000 SMMEs will employ three workers each. Therefore the EPWP will develop a total of 12,000 jobs (3,000 SMMEs and 9,000 workers) of the one million work opportunities created through the EPWP. However, the EPWP economic sector also cuts across the entire EPWP through entrepreneurial support, for example to the Infrastructure Programme, known as the Vuk'uphile Programme. Continued business support will be provided to the labour-intensive contractors that have been developed under the Vuk'uphile programme.

7.1.6 The Department of Trade and Industry

The **Department of Trade and Industry** (the dti) has been tasked with the responsibility of coordinating the EPWP. As EPWP coordinator, the dti is responsible for:

- producing the EPWP plan,
- producing the EPWP implementation plan; and
- coordinating and driving implementation in the economic sector.

The NDPW assists the dti with its coordination role through:

- identifying existing local programmes, which have the potential to be expanded nationally,
- ensuring that EPWP principles are incorporated into the sector and implementation plan and
- assisting with resource planning for the sector.

The venture learnership empowers learners with the necessary managerial and entrepreneurial skills required to set-up and manage new ventures and provides learner entrepreneurs with work opportunities and a track record to ensure that these learners graduate from operating in the second economy to functioning effectively in the first economy. The venture creation learnership targets persons that display entrepreneurial ability, with specific emphasis on historically disadvantaged individuals, women and youth. It addresses economic/administrative and behavioural barriers (examples of these barriers include lack of access to finance/credit; need for training; need for mentoring; lack of user-friendly procurement procedures and tender/contract documentation; unaffordability of guarantees or sureties; and lack of access to affordable' all-risk insurance) that contribute to failures in starting and sustaining an enterprise.

7.1.7 Mpumalanga Department of Economic Development and Planning

At the provincial level, the **Department of Economic Development and Planning (DEDP)** oversees the province's support to SMMEs. The provincial SMME strategy has recently been reviewed. However, work continues to design an implementation framework for all departments and stakeholders. The province has also adopted a Provincial Co-operative Strategy and is currently designing an implementation plan. Plans are currently in place within the department to establish a provincial Black Economic Empowerment (BEE) advisory committee and forum to assist with the implementation and monitoring of BEE in the province. A public sector BEE procurement forum is also planned to strengthen BEE procurement from the public sector in the near future.
The provincial government has begun the process of rolling out Business Process Outsourcing incentive scheme. The DEDP is working closely with the White River Furniture Technology Centre to assist the unemployed to access manufacturing skills in the furniture industry.

7.1.8 Mpumalanga Economic Growth Agency

A key provincial agency engaged in SMME support is the **Mpumalanga Economic Growth Agency** (MEGA). MEGA's enterprise development division promotes the development and growth of SMMEs and cooperatives in the province with the following products and services:

- Loan funding by providing term loans between R10 000 to R1 000 000
- Bridging finance linked to an existing contract
- Facilitation of mentorship to funded enterprises
- Development of cooperatives
- Development of strategic partnerships e.g., IDC, SEDA, UYF

Priority sectors and business types that are supported by MEGA are:

- Agro-processing: Food and Non-food
- Miscellaneous: Construction, ICT, Creative Industry, Franchising
- Manufacturing: Wood Processing, Stainless Steel, Petro-chemical and other
- Tourism and Hospitality
- Transport and Logistics
- Energy: Bio-fuels, Fossil fuels
- Mining: Services

In 2007/2008 MEGA approved loans to the value of R11,7 million to 37 small businesses, leading to the creation of 623 employment opportunities. The agency also facilitated six new investments projects to the value of R140 million and 222 new direct jobs were created. Sixty-nine new exporters were registered and 128 exporters were exposed to new markets through participation in trade exhibitions in China, Angola, Mozambique, Durban, Johannesburg and Nelspruit. The total value of exports for that year is R51 million.

MEGA plans to implement the Mpumalanga Local Enterprise Fund to the value of 12 million in partnership with Khula, SEDA and the provincial government. The agency will also provide 50 loans to the value of R20 million and 700 jobs are expected to be created. The provincial government has recently committed R200 million and mandated MEGA to establish the Mpumalanga Growth Fund, which will support viable investment projects in the province.

7.1.9 Mpumalanga Department of Health and Social Services

The provincial **Department of Health and Social Services** has recently announced a programme to fund the establishment of youth information centres in every local municipality. This will provide a valuable facility for co-location of youth development and SMME development services.

7.2 Strategy for future development of SMMEs

There appear to be a wide range of opportunities for SMME development that will stem from the construction of the Moloto Corridor and also from the point when the corridor has become fully operational.

In the first instance, it will be important to focus attention on ensuring the systems for SMME support are in place so that local people can start-up and operate any kind of enterprise. It is clear from the analysis that there are opportunities for SMME development in providing inputs and support services to the construction of the corridor. In addition, there appear to be emerging opportunities in the transport sector (e.g., mini-bus taxi, trucking, warehousing) and for service-oriented SMMEs located in the corridor nodes. A review of the towns and settlements along the proposed corridor suggests the following possible opportunities for SMME development.

7.2.1 Thembisile:

- **Moloto**: Identified as a possible site for a Thusong Service Centre; the Big Tree shopping complex is just outside Moloto. Opportunities for retail, service and transport-oriented SMMEs.
- **KwaMhlanga**: A fairly large, highly populated, developing node; a possible site for a Thusong Service Centre; the Nkangala Spatial Development Framework (SDF) identifies the KwaMhlanga industrial area as having the most potential due to the surrounding economic activity; facilities in the area include a sports stadium, police station and a taxi rank. According to the Nkangala Spatial Development Framework the stimulation of business centres in the dormitory residential areas in the north west of the District is necessary to enable the development of local economies; according to the SDF the industrial area at KwaMhlanga holds the most potential in terms of the surrounding activities and it is proposed that a concerted effort be made to promote development in this area and to also facilitate small industries and other commercial activities to establish in this industrial area. There is a proposed tourism and cultural node south between KwaMhlanga and Ekangala, with the Kgodwana Ndebele Village and Loopspruit Winery on P255-1.
- **Thembalethu:** One of the ten identified stations is to be located here, thus, opportunities for retail and service SMMEs.
- **Tweefontein:** A potential Thusong Service Centre site; promoted as an industrial area by the Nkangala District Municipality; already has many SMMEs.
- **Vlaklaagte**: Identified for a Thusong Service Centre and for industrial development; contains an informal taxi rank
- **Kwaggafontein**: Highly populated; one of two main business nodes with vibrant retail; a proposed area for a Thusong Service Centre; taxi ranks (one formal and one informal); a large shopping centre with Woolworths and other upmarket shops.
- **Mathys Zyn Loop**: Formal and informal taxi ranks; recommended for a "future station" by the Feasibility Study.

7.2.2 Dr JS Moroka:

- **Matshiding/Makola**: High volume of transport linkage and transfers will take place from all local communities located to the west of the main corridor and south of the Mkombo Dam (i.e., Madlayedwa, Kameelpoort, Pieterskraal, Mapotla).

- **Siyabuswa:** the largest town in JS Moroka (population 26,274); informal and formal enterprises found. The Nkangala Spatial Development Framework suggests that the industry in Siyabuswa be promoted.
- **Marapyane**: current SMME activity in retail and transportation (i.e., transport terminus. The Ikageleng school in Marapyane is one of the tourism sites identified in the provincial Heritage, Greening Mpumalanga and Tourism strategy.
- **Phake**: Feasibility Study proposes it as a major station on the western line. Thus, SMME retail opportunities.
- **Masobye**: Opportunities arising from the transportation terminus; identified by the Feasibility Study as a location for a major station on the western line.

7.3 Recommended Interventions to Support SMME development in the Moloto Corridor

Rather than attempting to predict or forecast future opportunities for SMMEs in the corridor, provincial, district and local governments are encouraged to consider the ways in which all forms of SMMEs can be established within the corridor. To this end, the following recommendations are presented.

7.3.1 Improve outreach services to the corridor

Provincial government should work with their national, district and local partners to improve the provision of SMME support services in the area contained by the corridor. In particular, the following action should be taken:

- LED officers located in all district and local municipalities in the corridor should meet SMME services providers (i.e., SEDA, Khula, UYF, MEGA) on a quarterly basis to consider the extent to which these agencies are supporting SMME development in the area contained by the corridor and to identify critical SMME development needs and responses.
- UYF should be encouraged to ensure its Mobile Youth Advisory Centres are deployed to the area on a regular basis, every quarter.
- SEDA should be encouraged to strengthen its support to the EICs in the area.
- Khula should be approached in an effort to ensure it is well represented by its financial intermediaries in Thembisile and Moroko.

7.3.2 Improve SMME support services in the corridor

The key actors in developing a supportive infrastructure for SMME development in the area are the district and local municipalities. Provincial government should work with these actors to assist in the development of permanent SMME development services. This includes the following:

- The Department of Health and Social Services' support for Youth Information Centres that will be established in each municipality should be enhanced through the co-location of a UYF YAC in these premises.
- Local municipalities should consider funding a SEDA business adviser to be permanently located within the municipal premises.

- District and local municipalities in the corridor, with the support of SMME service providers, should promote the use of cooperatives in two ways. Firstly, as a viable form of enterprise for local people. Secondly, as a mechanism for learning more about enterprise development and developing entrepreneurship skills. The district and local municipalities, should hold an annual cooperatives day at which local cooperatives are showcased and awareness raising activities conducted.
- Provincial government should improve the production and distribution of economic data describing the provincial economy and the emerging trends, experiences and opportunities for SMMEs in the province. This data should be provided to all district and local municipalities, as well as SMME service providers, on a quarterly basis.
- Provincial government should ensure MEGA is better represented in the Thembsile and Moroko, possibly through co-location with local municipalities.
- Provincial government, together with all district and local municipalities in the corridor, and SMME service providers, should hold an annual procurement conference at which government and large corporations report to the SMME sector on their procurement activities and the extent to which local SMMEs have participated in procurement contracts. Obstacles and constraints to local procurement would be identified at this annual conference, with plans established to address these concerns.
- Provincial government, together with all district and local municipalities in the corridor, and SMME service providers such as SEDA, should liaise with the EPWP and develop training programmes that better prepare SMMEs to provide services to EPWP project occurring in the corridor.
- Provincial government should work with all district and local municipalities in the corridor and SMME service providers to establish a database of mentors that can be drawn upon by agencies wishing to link local SMMEs with mentor support.

SECTION FIVE
COST BENEFIT ANALYSIS

8. Cost Benefit Analysis

8.1. Background

Cost Benefit Analysis (CBA) is typically used by the public sector to evaluate the value for money of a proposed market intervention or project. The aim is to gauge the efficiency of the proposed intervention, versus the current position (status quo). Building a CBA requires calculating the monetary value of all initial and recurring expenses, and comparing that against expected returns. Monetary values can be assigned to both tangible and non-tangible impacts. A CBA will convert expected future expenses and benefits to a present value, using the selected discount rate. The result is a Present Value of Benefits (PVB) and a Present Value of Costs (PVC) which can then be compared. Developing a useful CBA is based on the following steps:

- Setting the base assumptions around what costs and benefits will be included, and the interest (discount rates to be applied); and
- Collecting the data required to populate the CBA

A CBA can be an important management tool, in that it can provide very useful input into the strategic planning process, by assisting in the process of setting strategic objectives. In this CBA Blueprint considers the costs of establishing the MRCDI and the direct costs to the local authority of setting up development projects related to the MRCDI, and then compared these costs to the expected potential benefits of the projects.

8.2. Assumptions

The assumptions required to populate the model were discussed with the steering committee prior to implementation. Set out below are the approved assumptions to inform the calculation of a CBA for the Moloto Rail Corridor Development Initiative.

8.2.1 Discount Rate to be applied -The projected costs of the MRCDI and related activities will be in actual terms, and therefore a nominal discount rate is applied to these amounts to calculate a present value. However, the benefits will be valued at constant (2008) prices, and so a real discount rate will be applied to these amounts to calculate a present value. Blueprint recommends the use of national wholesale interest rates, with/without an expected Consumer Price Inflation deflator as the most neutral discount rates. In this regard, a nominal rate of 10 per cent per annum and a real rate of 4 per cent per annum will be used, based on the assumption of average wholesale interest rates of 10 per cent over the selected time period, and an average annual inflation rate of 6 per cent.

8.2.2 Time frame - The time frame over which the value of costs and benefits will be calculated is important, since costs tend to be accrued in the short term, and benefits tend to accrue in the long term. In general terms, the shorter the selected timeframe, the more likely that the result of the CBA will be negative. The longer the selected timeframe, the more likely that the result of the CBA will be positive. A time frame for the implementation of the MRCDI is still to be confirmed, and Blueprint recommends that this time period (x) plus 15 per cent (as a project overrun allowance) plus an additional seven years (to

realise the economic potential of the project) be added. Therefore, the time frame to be used for the CBA is proposed as:

(Projected time frame for implementation of the MRCDI + 15%) + seven years.

However, a detailed implementation plan for the MRCDI has not yet been completed. For the purposes of completing this CBA therefore we have assumed that the implementation period will be 5 years, given the capital intensive nature of the project. Therefore, the time frame that has been used for the CBA is:

12.75 years = (5 years + 0.75 year) + 7 years

In addition, Blueprint has assumed that the 2008/2009 municipal financial year will be used largely for planning, and that disbursements on the building of the MRCDDI and related projects will only begin from the start of the 2009/2010 financial year. This has no impact on the basis of the CBA model, since the timing of disbursements is expected to coincide. However, it implies that the analysis is running from 01 July 2009, to 31 March 2022

8.2.3 Impacts to be included as costs and benefits -The next set of assumptions to be made are around exactly which costs and benefits should be included in the model. The desire to be as accurate as possible must be counter-balanced against practical considerations: Certain costs and benefits (particularly benefits) of such large-scale projects are intangible, and therefore hard to measure. It is possible to cost fairly accurately the monetary value of constructing 100 metres of railway line, but how should the improvement in the quality of life arising from shorter travelling times be valued? Certain intangibles have to be excluded from the model, on the basis that they are simply too difficult to value.

Set out below are Blueprints recommendations regarding which costs and benefits should be included in the model. When this list has been confirmed, Blueprint will assign detailed values to the various costs and benefits, following a dedicated half-day workshop. On the cost side of the equation, the following will be included:

- Actual costs of implementing the MRCDI road and rail network (based on the initial projection figures that we have to hand, which may not be the actual final figures).
- The current projected cost of the MRCDI is R8.6 billion. Since we do not yet have an implementation plan for the MRCDI, we have made the following rough assumptions around expenditure (based on our 5-year implementation assumption):

Year 1	R0.4billion
Year 2	R1.0billion
Year 3	R2.0billion
Year 4	R3.0billion
Year 5	R2.2billion
TOTAL	**R8.6 billion**

- Projected costs of economic development strategies and projects specifically developed as a response to the MRCDI. For the purposes of this analysis, we have predicted the following expenditure on agribusiness projects, on tourism projects, and on nodal development:

Year 1	R15 million
Year 2	R60 million
Year 3	R85 million
Year 4	R85 million
Year 5	R45 million
TOTAL	**R290 million**

Once a detailed implementation plan for the MRCDI and detailed business plans for the proposed interventions have been completed, the CBA can be updated with more accurate figures. However, we believe that our costs assumptions are reasonably accurate at this point. On the benefit side of the equation, the following will be included:

8.2.4 Employment and Income -Employment benefits will accrue through:

- New direct permanent job opportunities created.
- New direct temporary job opportunities created.
- New indirect permanent job opportunities created

Job opportunities created in either existing/new organisations will be included. The creation of "indirect" job opportunities must be included because the demand for raw materials, the spending of incomes earned by employees and the spending by Government of its tax revenues obtained from the individuals and SMEs that have benefits from the project will all contribute to economic growth and job creation. For the purposes of this calculation, the "job multiplier" (i.e. the ratio between indirect and direct job creation) will be set at a fairly conservative 4:1, implying that 4 indirect jobs are created for each direct job.

It is important to weight jobs by the income that they attract, since a higher income will have a greater multiplier impact on the economy. Therefore, we recommend that a "job opportunity" will count 100 per cent (i.e. as one unit) when it is associated with a monthly gross income of R2,200 (the new upper limit set for the receipt of social grants). Jobs associated with higher or lower incomes will count pro rata. For example, a job that attracts an income of R4,400 will count as 2 jobs, and one that has an income of R1,100 will count as ½ a job (this will also reflect the fact that higher-income jobs create more indirect job opportunities.)

The calculation of the actual income associated with a particular job will be calculated through a combination of direct observation and industry and job category standards. The MRCDI LED framework contains the following strategic objectives, and these targets have been used as the basis of our calculation of the estimated benefits of the project:

To create, by 2014, 1,500 direct and indirect permanent employment opportunities (including self-employment) in Thembisile and Dr JS Moroka.

Based on the job multiplier assumption set out above, this objective implies that 300 new direct job opportunities will be created for the period 2009 – 2014, and that these, in turn, will support the creation of 1,200 indirect new employment opportunities. Further, we anticipate that the creation of new jobs will be slower at the beginning of the project, and accelerate towards the end of our target period, as indicated in the table below:

Table 7.1: Spread of new job creation

Year	New jobs created	Income[13]
To 30 June 2009	0	0
To 30 June 2010	100	2,640,000
To 30 June 2011	200	7,920,000
To 30 June 2012	300	15,840,000
To 30 June 2013	400	26,400,000
To 30 June 2014	500	39,600,000
TOTAL	**1,500**	**92,400,000**

Source: Blueprint (2008)

Since the CBA analysis is running until 2022, the CBA model will keep the number of jobs constant at 1,500 from 2014 forward, but will continue to accrue the annual income associated with these jobs (i.e. R26,400) For the period to 30 March 2022 (i.e. and additional 7.75 years) the value of the jobs created is R306,900,000.

Value = (1,500 x R26,400 x 7.75)

In addition to the visible project benefits of increased employment and higher income, there are several intangible benefits that must be included. Blueprint recommends that the following intangible benefits be included:

- Reduced travelling time, in terms of its impact on productivity. Passengers who travel short distances to work are more productive during the work day. This results in benefits both for the organisations that they work in, and personal benefits since these individuals are in a better position to do well, and to receive promotion and other advancement.
- Reduced travelling time, in terms of the impact on social fabric and family life.
- Safer journeys and reduced road deaths.
- Access to more conveniently located retail and leisure facilities along the route.
- Access to more affordable sources of food

For the purposes of this model, Blueprint has assumed that 85,000 persons will be affected by the reduced travelling time. Using cut-off annual income above (R26,400), the assumption is made that the

[13] This is cumulative. In year 1 – 100 people are earning R26,400 each, in year 2 300 people are earning R26,400 each, and so on.

value of the reduced travelling time, improved social fabric, and improved market access, can be equated to 3.5 per cent of this amount – R924 per traveller per annum. It is assumed that these benefits will only start once the MRCDI has been completed – and therefore they will only apply for a period of 7.75 years. We can calculate the value of this factor as R608,685,000, as follows:

Value = R924 x 85,000 x 7.75

In terms of reduced road deaths, this is an open-ended question, but it has been assumed that road deaths could be reduced by 20 persons per annum over the period after the completion of the MRCDI (i.e for a period of 7.75 years). Assuming an average productive income-earning period of 20 years, that will give us a real value of R528,000 per averted road death (which obviously excludes multiplier effects), and a combined total of R81,840,000.

Total = (number of deaths averted per annum x R528,000 x 7.75)

For the purposes of calculating a value of fewer non-fatal road accidents, 30 per cent of this figure has been assumed - R24,552,000.

8.2.5 Accuracy allowance

Large infrastructure projects such as road and rail projects often tend to have final costs that are significantly higher than projected costs. Therefore, a useful CBA must include various scenarios testing whether the Cost-Benefit relationship is still the same with budget overruns of 10 per cent, 20 per cent, 30 per cent and 40 per cent on the projected costs of the MRCDI rail and road network (studies indicate that rail projects tend to overrun by more than 40 per cent and road projects by about 20 per cent).

Therefore, the CBA will have **five sets of results, b**ased on 5 alternatives for project costs. The projected cost for the MRCDI is R8.6 billion. The CBA will be calculated on the following cost assumptions, for that portion of the costs that are associated with the delivery of the MRCDI transport infrastructure:

Scenario	Cost (R millions)
One – Project on budget	R8,600
Two – 10 per cent budget overrun	R9,460
Three – 20 per cent budget overrun	R10,320
Four – 30 per cent budget overrun	R11,180
Five – 40 per cent budget overrun	R12,040

Source: Blueprint (2008)

8.3 Rough Cost Benefit Calculation- Scenario One

TOTAL COSTS- PROJECT ON BUDGET	
MRCDI	8,600,000,000.00
Related Projects	290,000,000.00
TOTAL COSTS	**8,890,000.00.00**
TOTAL BENEFITS- PROJECT ON BUDGET	
Employment created	306,900,000.00
Reduced Travelling Time	608,685,000.00
Reduced Road Fatalities	81,840,000.00
Fewer accidents	24,552,000.00
TOTAL BENEFITS-	**1,021,977,000.00**

Source: Blueprint (2008)

SECTION SIX
LED IMPLEMENTATION PLAN

9. LED Implementation Plan: 2008 – 2012 (For the periods 01 July to 30 June)

2008/2009		
OUTPUT	**ACTIVITIES**	**TARGET**
MRCDI Implementation Timetable is finalised	Interaction between local authorities and relevant responsible persons in the MRCDI	Detailed implementation plan is made available to the Joint Steering Committee by 30 September 2008[14]
Joint Project Steering Committee established	Agree mandate and composition of the Steering Committee	31 August 2008
	Identify and invite representatives from outside local government	30 September 2008
	First meeting held	Before 15 October 2008
	Agreement on criteria for allocation of resources	At the first meeting
Technical working groups established	Agree mandate and composition of the technical working groups	At first meeting of Joint Steering Committee
	Identify and invite representatives from outside local government	By 15 November 2008
	First meetings held	By 01 December 2008
LED M&E and Reporting Structures finalised	The Joint Steering Committee will make recommendations	At the first meeting
	Approved by the relevant local authority executives	30 November 2008
Meeting schedule for Joint Steering Committee established	The Joint Steering Committee will make recommendations	At the first meeting
	Approved by the relevant local authority executives	30 November 2008
Meeting schedule for Technical Working Groups established	The Technical Working Groups will make recommendations	At the first meeting
	Approved by the relevant local authority executives	30 November 2008
Plans for nodal development finalised	Based on the final MRCDI Implementation plan, final nodal development plans are drawn up	31 December 2008
	Plans are approved	15 February 2009
Sites for pilot agribusiness and tourism projects identified	Detailed baseline study of agricultural assets completed	31 October 2008
	Pilot sites chosen on the basis of (i) equity between the two areas (ii) most suitable target beneficiaries and (iii) best linkages with nodal development	31 January 2009
Communities and relevant stakeholders	Establishment of initial farmers'/smallholders' associations in	31 January 2009

[14] Delays in finalising the MRCDI implementation plan will delay all the associated LED planning, since the two must be aligned. Other targets are based on this target being achieved

2008/2009		
OUTPUT	**ACTIVITIES**	**TARGET**
organised and mobilised	the pilot study areas	
Detailed business plans for pilot projects drawn up	Delegate responsibility/appoint persons	30 November 2008
	Plans completed	31 March 2009
Funding for pilot projects identified	Detailed budgets drawn up	31 March 2009
	Funders identified and funding sourced	31 May 2009
Necessary Private Sector Partners Identified and Contracted	Detailed description of required partners, based on detailed business plans	30 April 2009
	Potential partners identified	31 May 2009
	Formal contractual agreements concluded	30 June 2009
Target beneficiaries identified	In each target area, based on the requirements of the business plans	30 April 2009
	Formal agreement reached	31 May 2009
Implementation of pilot projects commences	Formal commencement of each project	30 June 2009

Source: Blueprint © 2008

10. Annexure One- References[15]

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- Vuna Awards Report, Mpumalanga (2006)

[15] Interim reference list

11. Annexure Two: Summary Information for selected Towns and Settlements

Below is a summary of each of the relevant towns. It includes information such as the composition of the town, its level of infrastructure and social facilities available within that town. Some of these towns have been identified for nodal development as per the recommendations above.

11.1 Thembisile

11.1.1 Moloto

- There are 547 residential sites available for development with additional sites in Extension K.
- 750 RDP homes are scheduled to be built but due to land claims on the land, the project has been stalled.
- Moloto has been identified as a possible site for a Thusong Service Centre, which could serve as the impetus for nodal development.
- There is no public lighting
- A new post office is being constructed
- The Big Tree shopping complex is just outside Moloto, across a bridge and isolated from the main development. At present the taxi rank behind the complex is not utilised. *This is a preferred location for a railway station as it would support and strengthen the existing developments and would not create a competing additional node.*

11.1.2 KwaMhlanga

- KwaMhlanga is a fairly large, highly populated, developing node
- There is infill development taking place between KwaMhlanga and Enkeldoornoog
- KwaMhlanga C is an undeveloped site with approximately residential 1000 stands. It is anticipated that this development will cater to mixed income levels.
- This is a possible site for a Thusong Service Centre
- The Nkangala Spatial Development Framework (SDF) identifies the KwaMhlanga industrial area as having the most potential due to the surrounding economic activity.
- Service Upgrading Priority Areas (SUPA) has been identified in the SDF for capital investment in service backlogs (for water, sanitation and electricity). The large conglomeration of settlements in the KwaMhlanga area has been identified in Thembisile Local Municipality due to the high population numbers and the huge backlogs in service provision.
- Only KwaMhlanga and Tweefontein K have waterborne sewage systems.
- Facilities in the area include a sports stadium, police station and a taxi rank.
- According to the Nkangala Spatial Development Framework the stimulation of business centres in the dormitory residential areas in the north west of the District is necessary to enable the development of local economies. It furthermore suggests the development of a node at KwaMhlanga through the concentration of economic activities and social facilities. It also states that this would require strategic intervention in the form of service upgrading and investment programmes (which would include the Moloto rail system).
- According to the SDF the industrial area at KwaMhlanga holds the most potential in terms of the surrounding activities and it is proposed that a concerted effort be made to promote development in

this area and to also facilitate small industries and other commercial activities to establish in this industrial area.

- There is some level of mining activity
- Almost the entire Thembisile municipal area is subject to land claims. There are 133 claims on 60 properties. Most are in and around KwaMhlanga with 82 claimants on 29 properties.
- Residential expansion is promoted round the Moloto Road between Moloto and KwaMhlanga
- There is a proposed tourism / cultural node south between KwaMhlanga and Ekangala, with the Kgodwana Ndebele Village and Loopspruit Winery on P255-1
- The area has mast lighting
- A shopping centre, "Cross Roads Medical Centre" is located here
- The roads do not have storm water drainage

11.1.3 Thembalethu

- One of the 10 identified stations is to be located here
- Area to be served is Thembalethu/Buthlebuzile/Vezubuhle

11.1.4 Tweefontein

- Residential expansion is promoted Between the T573 and northern extensions of Tweefontein (A, B, C, D, K, N and M
- Housing development has occurred in Tweefontein K.
- This is a potential Thusong Service Centre site
- Tweefontein is promoted as an industrial area by the Nkangala DM. It already has small / medium enterprises
- In Thembisile Local Municipality only two tenure upgrading projects have been finalized with the conveyancing complete. One of these is at Tweefontein IA. There are additional tenure upgrading projects in the Tweefontein complex which have not been completed.
- Only KwaMhlanga and Tweefontein K have waterborne sewage systems
- Water meters are required in parts of Tweefontein F
- There is no public lighting available in Tweefontein North and South
- There is a police station, a post office, taxi rank
- The Strategic Plan lists specific projects for which budgets are allocated. One of those for Thembisile is the upgrading of 18.5 km of the D25 road in the Tweefontein vicinity.
- A fire station is in the process of being built

11.1.5 Buhlebesizwe

- Buhlebesizwe (Vlaklaagte 2) is where linkage and transfer from Verena takes place.

11.1.6 Vlaklaagte

- Residential development is promoted in the vacant area between Vlaklaagte 2 and Gemsbokspruit A
- The town has been identified for a Thusong Service Centre
- The town is identified for industrial development

- In Thembisile Local Municipality only two tenure upgrading projects have been finalized with the conveyancing complete. One of these is at Vlaklaagte 2.
- *Priority, in terms of electricity backlog, has to be given to areas where house connections do not exist. This includes small parts of Vlaklaagte*
- One of the main stormwater routes is along the R544 from Vlaklaagte to Witbank
- There is a regional cemetery
- An informal taxi rank
- Residential expansion areas are the vacant area between Vlaklaagte 2 and Gemsbokspruit A; the area adjacent to route R573 to the south between Vlaklaagte 1 and Kwaggafontein B; and the area surrounding the Vlakfontein settlement
- There is a commonage area centrally located

11.1.7 Kwaggafontein

- It is highly populated
- Residential expansion area is adjacent to the R573 between Vlaklaagte 1 and Kwaggafontein B
- There is Illegal mining taking place
- It is one of 2 main business node with a vibrant retail and business node
- It is a proposed area for a Thusong Service Centre
- The Nkangala District Municipality is promoting Kwaggafontein B as a future industrial area
- Water meters are required
- There is a police station, a fire station, taxi ranks (one formal and one informal)
- There is a large shopping centre with Woolworths and other upmarket shops
- Government buildings are situated here
- According to the McTrans HCS2000 analyses, the R573 & Kwaggafontein intersection operates at an unacceptable Level-Of-Service and requires upgrading to function satisfactorily under the status quo conditions.
- *It is suggested that the R573 & Kwaggafontein intersection be upgraded to a high geometric standard roundabout intersection based on Gautrans's standards.*

11.1.8 Mathys Zyn Loop

- Formal and informal taxi ranks
- Recommended for a "future station" by the Feasibility Study

11.2 Dr J S Moroka

11.2.1 Matshiding/Makola

- It is suitable for a station because the Makola Station is where high volume linkage and transfers will take place from all local communities located to the west of the main corridor and south of the Mkombo Dam (Madlayedwa, Kameelpoort, Pieterskraal, Mapotla)
- Bus shelters and a low level bridge at Mogonnong, Makola are on the Dr JS Moroka capital project list
- The area from Makola to the west linking with all communities south of the Mkombo Dam and west of the main identified Moloto Corridor was originally identified as a possible secondary corridor. This has, however, been found in the Feasibility Study not to be viable.

11.2.2 Siyabuswa

- Siyabuswa is the largest town in JS Moroka with a population of 26,274.
- Siyabuswa is significant due to it having the highest concentration of activities in Dr JS Moroka.
- There is informal and formal economic activity.
- The development principles in Dr JS Moroka include the recognition of the existing Siyabuswa node. This is supported by the Nkangala Spatial Development Framework.
- The Nkangala SDF also suggests that the industry in Siyabuswa be promoted.
- *The conglomerations of settlements in the Siyabuswa area provides the support for the development of a node in this area*
- *A detailed precinct plan for Siyabuswa is required.*
- Properties are illegally changed from 'residential' to 'business' zoning (Siyabuswa A, B, C, D and A1)
- Villages around Siyabuswa do not have proper sewerage systems. Sanitation infrastructure needs upgrading as sewer lines are blocked.
- There is a fire station

11.2.3 Mthambothini

No information available

11.2.4 Senotlelo

No information available

11.2.5 Marapyane

- There is an existing node at Marapyane with mixed land uses, including retail and a transportation terminus. The node needs consolidation with higher density residential development around it.
- There is a backlog in infrastructure services
- Allow development south of the node and discourage northward growth.
- Formulate a precinct plan for the area
- The Ikageleng school in Marapyane is one of the tourism sites identified in the provincial Heritage, Greening Mpumalanga and Tourism strategy.

11.2.6 Seabe

No information available

11.2.7 Nokaneng

No information available

11.2.8 Mmametlhake

No information available

11.2.9 Phake

- The Feasibility Study proposes it as a major station on the western line

11.2.10 Masobye

- Masobye node has a natural, organic growth trajectory. There is a filling station, offices and a transportation terminus. *Although the transportation terminus is not integrated with the node, it provides an opportunity for future growth.*
- *A precinct plan is required for the node.*
- Identified by the Feasibility Study as a location for a major station on the western line

12. Annexure Three: Present & Future Commuter Numbers per Station per Day

	PASSENGERS TO RAIL				
STATION	LOCAL	FEEDER	2007 TOTAL	2017 TOTAL	2027 TOTAL
MOLOTO	3,263	45	3,308	5,387.57	14,294.82
KWA-MHLANGA	4,184	887	5,072	8,260.94	21,918.73
THEMBALETHU	4,831	20	4,851	7,901.77	20,965.74
BULEBESISWE (VLAKLAAGTE 2)	3,124	1,800	4,925	8,021.49	21,283.41
KWAGGAFONTEIN	4,588	42	4,631	7,542.60	20,012.75
MOTETI	617	1,735	2,352	3,831.16	10,165.21
MAKOLA	2,161	2,616	4,778	7,782.04	20,648.08
SIYABUSWA	2,604	262	2,867	4,669.23	12,388.85
MTHAMBOTHINI	2,632	455	3,087	5,028.40	13,341.84
SENOTLELO	117	104	221	359.17	952.99
MARAPJANE	798	598	1,397	2,274.75	6,035.59
SEABE	298	216	515	838.07	2,223.64
NOKANENG	60	14	74	119.72	317.66
MMAMETHAKE	-	-	-		0.00
PHAKE	-	-	-		0.00
MASOBYE	-	-	-		0.00
TOTAL	29,279	8,794	38,073	46,867	84,940

Source: MRCDI Feasibility Study (2006/7)

13. **Annexure Four: Sample Monitoring and Evaluation Report**

This column is ONLY completed and MUST be completed if the Progress column indicates ANY problems. This column explains what is being done about the progress problems.

SUMMARY M&E REPORT FOR THE QUARTER TO *[INSERT DATE]*

Project One _____

ACTIVITY	TARGET	PROGRESS	ACTIONS TAKEN	BUDGET OVER/UNDER

The Activities will be taken verbatim from the implementation plan.

As indicated in the implementation plan.

This column is a short summary of the progress made in achieving the Target

Compared to the original and approved budget.

14. Annexure Five: Report on Community Consultations

The process of consultation was based on the stakeholder list that was compiled by the consulting team. The stakeholders identified below, are mainly government, traditional leaders and SMMEs which included the taxi industry. Individual interviews and focus group discussion were held. At government level, presentations and comments were obtained from the municipal councils of Thembisile and J.S. Moroka. A presentation and subsequent discussion was held at the cabinet cluster technical committee and also with the full cabinet. Finally, a detailed questionnaire was distributed to SMMEs. The purpose of consultation was to obtain views and comments so that these could be incorporated into the report on economic scoping of the corridor.

14.1 Meeting with the Councillors: J. S Moroka Municipality

The meeting took place on the 08 July 2008 in the Council Chamber of J.S. Moroka Municipality. The meeting was attended by ninety percent of the councillors. The facilitator presented the interim report and this was followed by questions and comments which were then clarified by the facilitator. The comments and questions were recorded by the facilitator. These are summarised below as follows:

- While acknowledging the fact that the feasibility study came to a conclusion that the railway line between Siyabuswa and Masobye is not feasible, it was argued that the line may be feasible if it is linked to Hammanskral. Councillors coming from this part of the corridor clearly indicated their dissatisfaction about the fact that the line between Siyabuswa and Masobye will not be built.
- One councillor wanted to know why the interim report did not mention anything about the availability of mining within this municipality.

14.2 Meeting with the Councillors: Thembisile Municipality

The meeting took place on the 15th of July 2008 in the council chamber of the municipality. The meeting was organized by the Speaker. This was a special meeting mainly organised for the purpose of presenting the interim report to the councillors. The facilitator in his opening remarks encouraged councillors to comment and question the report critically. He emphasised that their comments and contributions were critical for the success of the study. This was then followed by a presentation on the interim report. At the end of the presentation, the following issues were raised:

- The councillors were keen to know about the type of minerals deposits that are available. The facilitator in his response stated that the only information he had is the report in the IDP which stated that there is illegal mining of sand in Zithabiseni and Kwaggafontein. The IDP also states that there are minerals that are not exploited to the fullest potential viz.- TIN, Copper, Lead, Silver, Zinc, Thrium, Rare Earths, Fluospar and Refoctory Clay(flint). Possibly a study on the availability of these minerals will need to be undertaken.
- One councillor expressed an interest in the investigation of the possibility of trading in flowers as there was a study that indicated that this is feasible but the councillor concerned could not remember the source of this information. This is a possibility as there is flower farming in Bronkhorspruit, a town of about 50 kilometres South of Thembisile. This will require further investigation.

- Provide strategies that will attract private sector. It as felt that this municipality will find it hard to attract investors to come to this part of the world. The councillors felt very strongly that a package of incentives will have to be developed in order to attract investors.

14.3 Presentation to Mpumalanga Provincial Cabinet Technical Committee

The presentation was done on the 11 July 2008. This was a second presentation to this cabinet sub-committee. The major concerns raised at this meeting were:

- The alignment of the Moloto corridor with the Sekhukhune Corridor with respect to economic scoping. The sub-committee felt that the economic scoping linkage with the Sekhukhune Corridor will make the outcome of the study more effective. It was reported that unfortunately the Sekhukhune corridor does not form part of the terms of reference given to the consultants, therefore a study of this Sekhukhune Corridor will not be conducted at this stage.
- The technical Committee expressed concern about the quality of life of the communities and also acknowledged the railway line on its own will not bring any improvement. They strongly expressed a need for a thorough investigation of opportunities outside the corridor and how the corridor can serve as catalyst for the development of this area. Assessment of economic activities not just along the corridor but any areas that will assist in improving the quality of life of the people of the area was therefore emphasized.

14.4 Presentations to Mpumalanga Provincial Cabinet:

The presentation was done on the 16 July 2008. In general, the politicians expressed satisfaction with progress achieved to date. During this presentation, it was explained that the consultants were only appointed in May and therefore were not in a position to complete the study at the end of July as was expected but the study will be completed in mid August. The following points were made:

- The report should include specific opportunities. The cabinet felt very strongly that the report in its final stage should clearly identify specific opportunities and through the Cost Benefit Analysis exercise clearly explain the economic spin-offs that will come through such investment.
- The cabinet was impressed by the maps that were shown during the presentation depicting the backlog in sanitation and electricity. They emphasized that the study should clearly identify what government should do to make this project a success and improve the depressing socio- economic conditions of the communities of the two municipalities. It was also indicated that the study should also clearly report on what can not be done.
- Mining activities that have been identified would need further exploration in terms of the type of mines that can be explored.
- It was felt that agriculture and tourism seem to be the main areas that the report was showing as having potential for the development of this area. The consulting team was requested to investigate these two sectors further and come with recommendations
- Cabinet realizes that finding a turnaround strategy for these two municipalities will not be easy. They requested the consulting team to also investigate how the economy of the corridor can be linked with the development of neighboring municipalities of Steve Tshwete and Emalahleni but this is however, not part of the scope of this project.

- Cabinet expressed concern about private sector companies that would like to take advantage of the corridor outside the boundaries of the two municipalities. It was reported that cabinet members are inundated with inquiries from private sector on the route of the railway line. Cabinet would like to take the lead and direct planning along the corridor and not be led by the private sector. The consulting team was therefore requested to assess planning outside the boundaries of the two municipalities towards Tshwane direction. This is however, outside the scope of this project

14.5 Consultation with Traditional Leaders:

The meeting with traditional leaders was held on the 11 August 2008. The purpose of the meeting was to obtain their views on the economic scoping of the corridor and also report on progress made to date. A concern was raised concerning the current route of the railway line. The traditional leaders, especially King Makhosonke II, argued that it will be best for the route of the railway line to be extended from Siyabuswa via Kameel rivier and Vaalbank to join at Kwamhlanga or at Moloto. This is a new proposal and does not form part of the feasibility study report. The consultant explained to the meeting that this request does not fall within the mandate of Blueprint but this submission will be forwarded to relevant authorities. Other issues that came up at this meeting are:

14.5.1 Availability of Coal

It was reported that there is a company that is currently conducting prospecting for coal deposits within the two municipalities. The king was reluctant to reveal more about this. King Makhosonke II indicated that he has the names of these companies conducting explorations but would not reveal this to us as information was still confidential. According to the leaders, coal is available and this is low grade coal that can be used for oil manufacturing. The traditional leadership is confident about this discovery and strongly believes that coal deposits are abundant within this area. It is interesting to note that in our consultations with councillors and cabinet, no-one appeared to be aware of this undertaking. The cabinet clearly reported that there were no minerals deposits in this area.

14.5.2 Support for Farmers:

During the former Kwa Ndebele Government, farmers were supported by government through training and loans were offered. Unfortunately this process was abandoned since the takeover by the new government as such most farms in the Eastern part of Thembisile Hani are today lying fallow. The traditional leaders feel strongly that this support needs to be revived. Currently, some white farmers are taking advantage of the vacuum and have come to some arrangements with local farmers and have started the revival of these farms.

14.5.3 Co-operation between the Traditional Institutions and the Municipalities

More than 90 percent of Thembisile Hani and Dr. J. S. Moroka Municipalities fall within the jurisdiction of the traditional leaders. Cooperation between the two authorities is therefore critical. The meeting with both municipal councils revealed that there is co-operation between the two institutions but this was contradicted by the traditional leaders in the meeting. There is no structured arrangement for these two institutions to work together. For example, a letter written by traditional leaders to the District Municipality three months ago requesting a meeting to discuss matters of common interest has not elicited any response from the DM.

There is however, reportedly a good working relationship between the traditional leaders and Dr. J.S. Moroka Municipality but, according to the leaders, not between the traditional leaders and Thembisile Municipality.

Another example of poor communication between the two institutions is the misunderstanding related to the mushrooming of squatters resulting from land invasion. According to the traditional leaders, the councillors believe that it is the traditional leaders that allocate land to the squatters. Unscrupulous people are currently identifying open land and demarcating it into stands and then selling these stands. This makes it difficult for any municipality to plan properly for land use. In one matter an issue between the two institutions that could have been resolved through discussion ended up in the Supreme Court.

14.5.4 Existing Railway Line

Traditional Leaders noted the cabinet decision to not approve the construction of the new line between Masobye and Siyabuswa. They agreed with cabinet that there is no need to construct a new line from Siyabuswa to Masobye but argued strongly that the existing railway line from Marble Hall to Tshwane should be revived (this recommendation is supported by Blueprint findings). Whilst previously the line was used to carry mainly agricultural produce, in future it should be made to accommodate both passengers and light goods. They further proposed that since this line passes close to Marapyane, a station could be created at a point close to this urban centre. A connection to this station with other areas such as Siyabuswa and others can be implemented through the use of road transport.

14.6 Meeting with SMMEs

This meeting took place on the 8th of July 2008 and was attended by SMME organizations from both municipalities. The meting was well attended. A total of 153 people completed the attendance register. The majority of SMMEs that attended came from the Siyabuswa area. This is attributed to the fact that the meeting was held in Siyabuswa. Issues raised were:

- Most questions and comments that were raised centred on the availability of job/work opportunities that will come from the construction of the railway line. It was strongly felt that in most cases opportunities arising are currently being taken up by people coming from outside the two municipalities. They would like to be assured that they will benefit from this project. In preparation for the construction work and the operation of the project, it was requested that identification of training needs for this project should commence with immediate effect and the training should start soon to avoid the importation of skills from outside the two municipalities.
- Many commented that local business is competing with councillors for work, in particular for tenders issued by government. The SMMEs indicated a serious lack of trust in the municipal political leadership. They stated that they believe that all meaningful opportunities will be taken by the municipal leadership and they will be left with very little or nothing. They therefore requested that some projects be ring fenced for local business.

The SMMEs also expressed concern about their lack of financial and skills resources to take advantage of the opportunities that will arise out of the Moloto projects. They appealed to government to begin with preparations that will include making available a budget that will assist local business to start business along the corridor.

14.7 Taxi Services

Taxi transportation services operate parallel with the bus services. Operators are organized into Local Taxi Associations as part of a system that feeds into Regional Councils, Provincial Councils and the National Council that is tasked with upholding national issues and policies. The business remains unregulated and concerns have often been raised that minibus taxis are unsafe, poorly maintained and prone to accidents. Different individual taxi associations appear to decide collusively on taxi fares to be charged per route, outside consultation with, or interference by, the authorities. It is for these reasons that government has intervened to regulate the industry. It has now laid down conditions of employment for drivers, rank marshals and administration workers within the sector. On the whole, the industry has created hundreds of jobs: drivers, rank marshals, fare collectors, administrators and many others. It remains to be seen what impact the recapitalization process will have on the growth of this industry within Thembisile and J.S Moroka.. The taxi industry within the two municipalities portrays the following characteristics:

- Taxis carry approximately 15 per cent of the total number of public transportation commuters between the two municipalities and Tshwane.
- Taxis are unable to compete with buses on longer trips at a competitive fare
- Apart from the service for long distance trips in a difficult competitive environment, taxis provide an effective peak and off peak service within the two municipalities.
- Lack of regulation resulted in a massive informal component of the industry

14.8 Questionnaire- Summary of Results

SMMEs responded to a questionnaire that was presented to them upon registration. A total of 45 SMMEs were interviewed ranging in age between 20 and 60. Most were between 20 and 29 years old (33 per cent) and 40 to 49 years old (36 per cent). Most of the businesses were survivalist in nature, and the majority were run by women (56 per cent).

The dominant category of economic activity was to be found within personal services, consisting primarily of hair salons, cleaning and catering services. Catering and cleaning services are procured primarily by government. The personal services sector is followed by the construction sector, where many people have some skills and have registered companies, but few projects appear to be available to them. It seems likely that this core group should benefit from the construction of the MRPDI and linked facilities in the nodes. It will be critical that training programmes in construction are implemented prior to the implementation of the MRCDI to ensure they are ready and able to work to the required quality standards.

Most of these businesses are stagnant and have not experienced any growth since inception. Instead of growing they are getting smaller and smaller. Because there is very limited private sector investment in the two municipalities, the SMMEs are highly (over) dependent on government for work which is not always forthcoming. The SMMEs in these two municipalities are mainly at the survivalist stage.

14.9 Recommendations Arising from the Communities

14.9.1 Mining

The need for mining exploration was raised by both municipalities. Cabinet has however, clearly indicated that there are no mining deposits in this area. The fact that the traditional leaders are in consultation with companies that are conducting coal exploration in this area without the knowledge of municipalities is interesting. A meeting between the municipality of Thembisile and traditional leaders should be held to ensure common understanding. Mining is a strategic economic intervention that can create employment opportunities in this area. MEGA should be involved in obtaining more information on this matter and meeting with the exploration companies.

14.9.2 Flower Trading

The matter concerning flower trading forms part of the LED strategy for this area. A feasibility study will have to be conducted to assess the viability of this trade.

14.9.3 Development of an Incentive Package

This suggestion came mainly from the councillors of Thembisile. It was argued that these two municipalities will find it a challenge to compete with Gauteng and the neighbouring urban areas such as Emalahleni and Steve Tshwete in attracting investors. A package of incentives especially in the area of tourism and agricultural tourism will need to be investigated.

14.9.4 Investment in Infrastructure

Good quality infrastructure serves as the catalyst for private sector investment. The poor quality of infrastructure along the corridor has been noted as a matter of concern. These include improvement of the road infrastructure, water reticulation and availability of water in the pipes; sanitation and eradication of slums and pit toilets. The IDPs of the two municipalities have identified investment in infrastructure as critical.

14.9.5 SMME Development

The meeting with SMMEs revealed a need for preparation for both construction and management of the passenger train project. It is recommended that a training needs analysis be conducted with a focus on the construction and management of the train during operation. The needs assessment should identify the role to be played by SMMEs and the kind of training required to fulfil the identified need. The study will also identify skills that will be needed for employment purposes. The outcome of this will be involvement of local communities both within the technical environment and non technical fields of the project.

14.9.6 Revival of Agricultural Farming

The study noted that large tracts of land are lying fallow especially in the eastern part of Thembisile Hani Municipality. Large private sector farmers have started farming projects in collaboration with local farmers. The Mpumalanga Agricultural Development Corporation (MADC) should be involved in the strategic management of these partnerships to ensure that the small farmer benefits from this relationship.

14.9.7 Co-operation between Traditional Authorities, Local Municipalities and Nkangala District Municipality

The traditional authority is an autonomous body that operates independently from a municipality but its operation impacts on the operation of a municipality. It is therefore very critical that the two bodies co-operate. The Traditional Leadership and Governance Act of 2003, provides that municipalities may enter into service agreements with traditional authorities. This provision is crucial given that such agreements will provide a clear framework within which the two entities will function, stipulate the exact minimum requirements for compliance with the agreement, and provide for penalties in the case of non-compliance on either side. This may go a long way in dealing with the current complaint by traditional leaders that they are in the dark as to what is expected of them in the current democratic dispensation. This agreement should be established in the two municipalities and should also provide for regular meetings between these entities.