MPUMALANGA
PROVINCIAL
GOVERNMENT

Mpumalanga Industrial Development Plan (MIDP)

Synopsis

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MPUMALANGA
THE PLACE OF THE RISING SUN

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Synopsis

Preamble

This Synopsis Report is aimed at providing a short overview on the outcomes and proposed interventions emanating from the Mpumalanga Industrial Development Plan. The Plan consists of three reports, namely:

Report 1: Mpumalanga Industrial Development Plan: Situational Analysis
Report 2: Mpumalanga Industrial Development Plan: Industrial Opportunities
Report 2: Mpumalanga Industrial Development Plan: Prospects for Industrialisation

Whilst the Synopsis provides a condensed outline of the pertinent issues and proposed interventions, the three reports comprising the Mpumalanga Industrial Development Plan need to be read in order to fully understand the rationale behind the proposed industrialisation strategy for the Mpumalanga Province and the interventions that have been proposed.

The Synopsis provides a brief contextualisation of the Industrial Development Plan, within the scope of broader Government development frameworks, provides some insight into the importance of innovation as a driver for industrialisation, and briefly outlines the industrialisation model for the Province.

After briefly describing each of the proposed interventions, the Synopsis ends by giving an overview of the portfolio of initiatives, and outlines some of the requirements for implementation of the Industrial Development Plan.

Contents

Synopsis

1. Introduction

The Mpumalanga Industrial Development Plan is an integrative approach to industrialisation in the Province, within the context of a broad policy and planning framework that covers all spheres of Government. This context is depicted in Figure 1 below. Furthermore, it aims to build robust partnerships between Government, industry and related stakeholders to ensure a coherent system of supportive initiatives within identified areas of industrialisation. In this way, the Plan aims to achieve its short and long-term inter-related goals of:

- Developing an integrated and diversified industrial base in the Province;
- Developing and expansion medium to high technology labour intensive manufacturing industries;
- Developing inter-sectoral linkages that will localise the supply chains within the Province, especially with major companies in the mining and energy sectors;
- Enhancing value addition through the upgrade and development of local suppliers to enter the supply chains of major industries in the Province;
- Planned efforts to distribute development investments over a range of industries so as to prioritise job creation;
- Expanding sustainable and value adding employment opportunities; and
- Planned infrastructure investment so as to maximise the potential of major industry sectors, both in the short and long term.

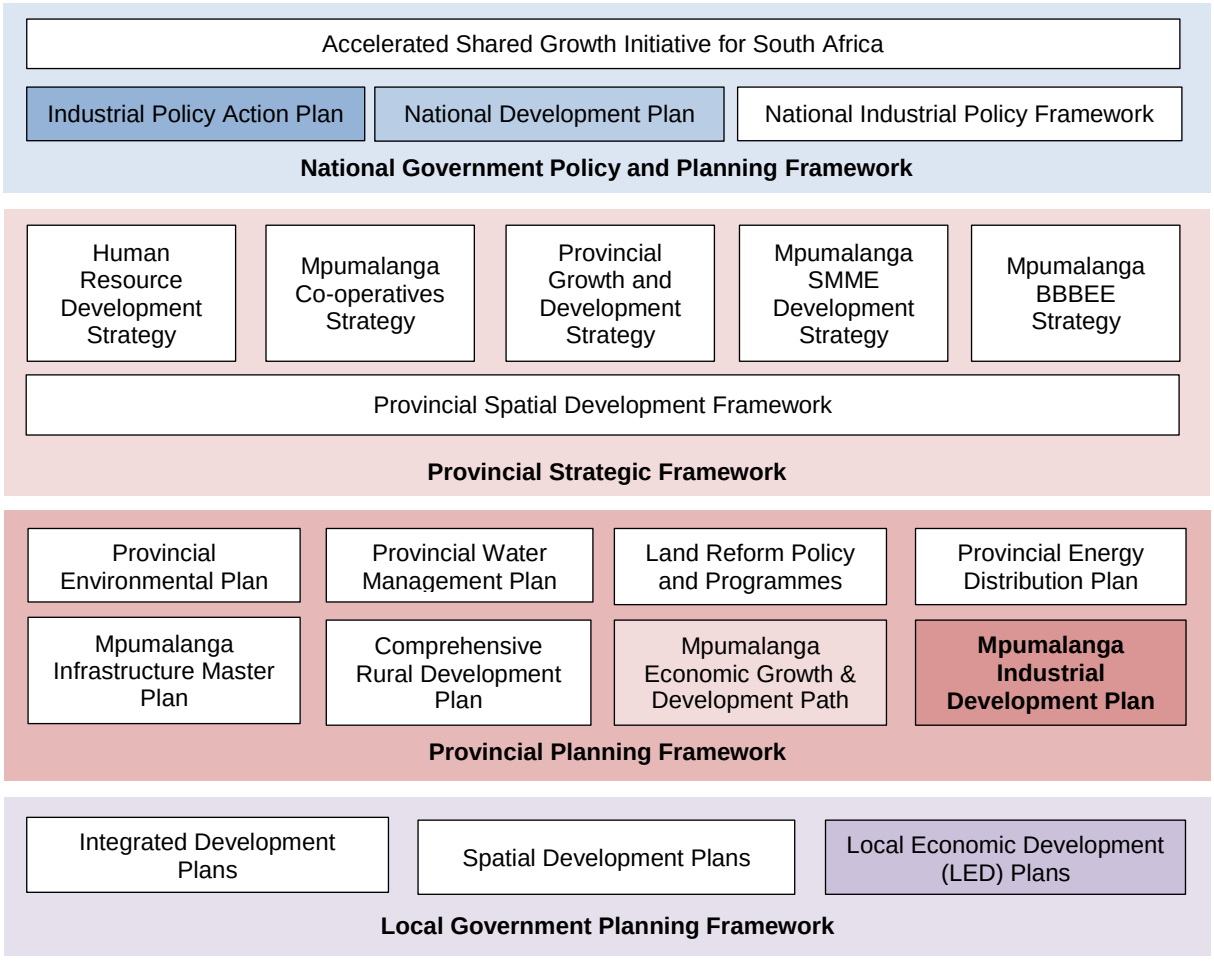

Figure 1: Policy, Support and Planning Framework for Industrialisation.

Synopsis

At the core of the Provincial strategic and planning framework is the Mpumalanga Economic Growth and Development Path, which indicates a clear commitment towards industrialisation by the Provincial Government, through enabling infrastructure development and resource allocation, among others.

Setting the Baseline for the Industrialisation Development Plan

As a precursor to the development of the Mpumalanga Industrial Development Plan, an extensive situational analysis and baseline study, covering the elements shown in Figure 2, revealed the extent of the existing industrialisation enabling framework in the Province and the current industrialisation path within the key economic sectors.

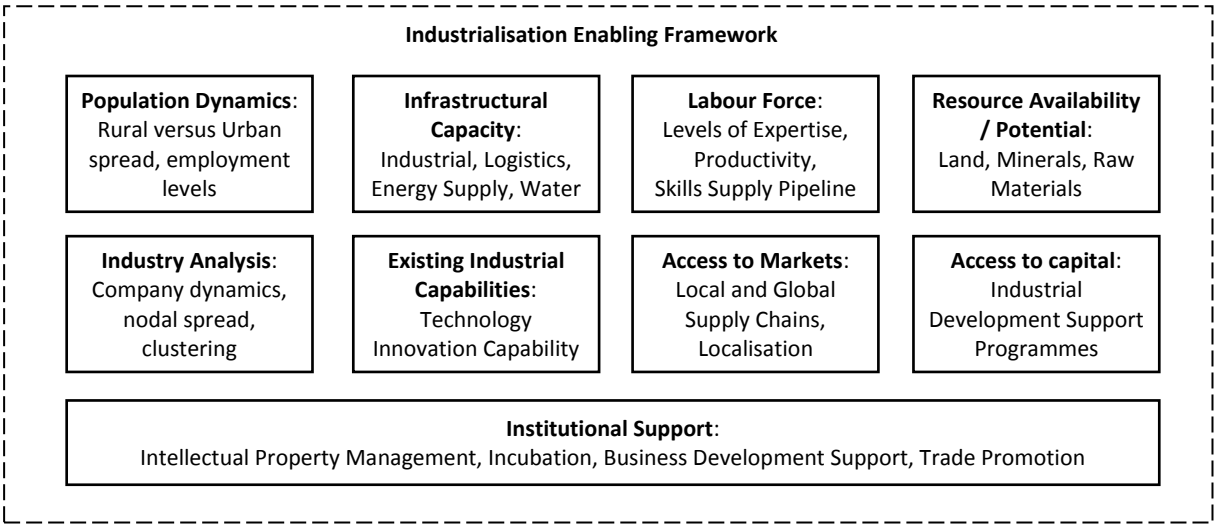

Figure 2: Industrialisation enabling framework analysed within the key industrial sectors.

Furthermore, a number of industrial subsectors emerged that could lay the foundation for further industrial development in the Province, in particular their diversification into downstream value-adding sectors for labour absorption. These resource-intensive and upstream beneficiation sectors dominate the productive economy of the Province, and are characterised by large globally competitive corporations. Analyses of the innovation capabilities within these sectors, though, indicate a lack of institutionalisation, which will make diversification difficult to achieve in the short term. Coupled to this, the labour force production capability in the Province is not aligned to current industrialisation and economic objectives, although planning and intent in this regard has emerged over the past decade.

Another challenge rests in the development of rural economies, which has seen stagnant growth over the past decades. The importance of addressing this area lays in the fact that half the population resides within rural areas, with relatively high levels of unemployment and poverty. Priority rural nodes for development have been identified with the view of developing a model for integration with urban nodes, in order to enable technology flows and open avenues for accessing industrial supply chains.

The Importance of Industrial Innovation Capability

Industrialisation is aimed at developing globally competitive industries, which continuously improve and innovate to respond to market demands. This development and support of industrial clusters and their capabilities for knowledge flows, innovation and diversification are therefore key pillars of this Industrial Development Plan.

Synopsis

Mapping the Province's industrial clusters into innovation clusters also provided insight into both the potential and obstacles for industrialisation. Besides identifying the industrial / innovation clusters, t a close understanding of the following were necessary (a) the resource potential or production capacity of the Province, being a largely resource-driven economy, and the value chains for diversification of the key industrial sectors, and (b) the investment portfolio of Government and the private sector linked to major industrialisation projects.

The net result was the development of a model for industrialisation of the Mpumalanga economy through (a) targeted **Industrial Centres of Competence**, and (b) implementation of key Industrial Capability Development initiatives, as shown in the figure below.

In addition, a portfolio of Rural / Township Industries has been proposed, which involves the proliferation of local economic development projects into capability development and linked to the Industrial Centres of Competence.

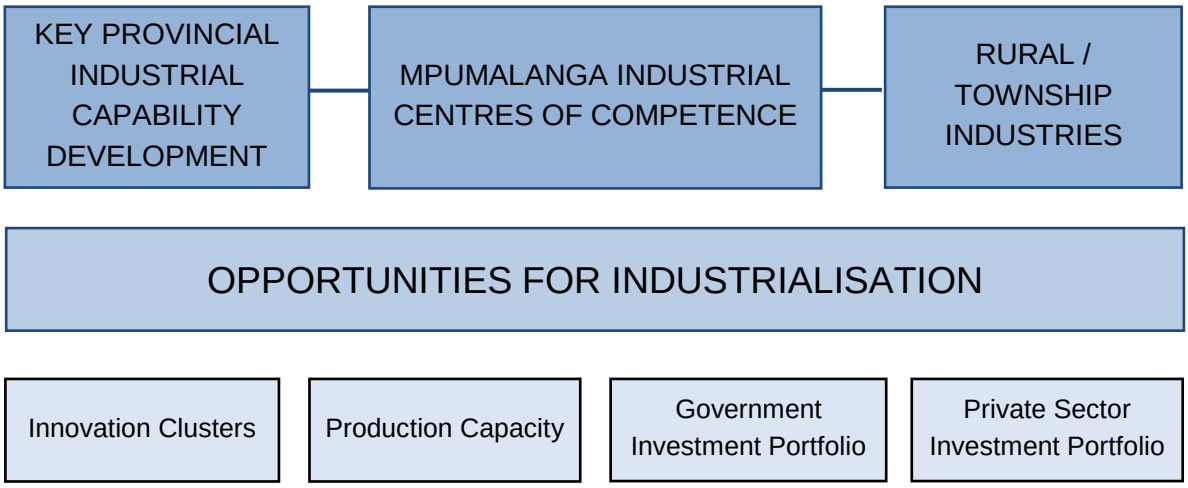

Figure 3: Phases in identifying the prospects for industrialisation.

A Model for Industrialisation in Mpumalanga

An Industrial Centres of Competence model has been proposed due to the relative concentration of particular industrial sectors in specific regions. This situation augurs well for targeted investment towards the diversification of these industrial sectors into downstream value-adding industries, at the same time supporting current upstream value addition activities.

The current Government investment portfolio is largely vested in the development of logistics infrastructure. This is a critical success factor for future diversification of the industrial economy. Further investment commitment exists in the establishment of industrial hubs, in particular the Special Economic Zone in Nkomazi. However, a coherent industrialisation model and plan is necessary to embed the development of these industrial hubs. The Industrial Centres of Competence model provides such a framework.

As mentioned before, alignment with the National industrialisation support framework, in particular the Industrial Policy Action Plan (IPAP), will be crucial. The IPAP is envisaged to provide important enabling mechanisms and incentives for industrialisation in the Province. Most notably, all the existing and new industrial areas of focus presented in the IPAP are related to the existing and envisaged Mpumalanga industrial economy, as has emerged in this Industrial Development Plan.

Synopsis

2. Industrial Centres of Competence

The strong bias towards the resource-based sectors of mining, agriculture and forestry, dominated by large corporations, requires an intensive plan to diversify these sectors into downstream manufacturing-based industries to enable broader economic growth and labour absorption. Platforms for these have already been laid through beneficiation of raw materials into value-added materials. Furthermore, a growing manufacturing sector will also improve the demand for resource-based commodities locally. This transition towards what is commonly known as the knowledge economy requires the development of innovation capabilities that can drive competitive sustainable industries. One of the main barriers confronting the Province's transition towards a knowledge-based economy is the lack of knowledge-based institutions.

Many of the major corporations are globally competitive and therefore exhibit in-house innovation capabilities. These large corporations in Mpumalanga are crucial stakeholders in the diversification of the industrial economy through supporting the establishment of mutually beneficial knowledge-based institutions and through the development of mutually beneficial local supply chains. Hence, the formation of highly cohesive industry-Government forums will be critical in setting the development paths for industrialisation

Based on the aforementioned, this Industrial Development Plan therefore proposes the formalisation of a number of industrial centres of competence, which emanated from the analysis of the current industrial economy in the Province. Although six industrial centres of competence were uncovered in the analysis, as shown in the table below, these have been rationalised into three, with one linked to the Nkomazi Special Economic Zone.

The Industrial Centres (or regions) of Competence will serve two purposes: firstly, to establish the innovation platforms necessary for supporting sustainable industrial developing in the targeted sectors, and secondly, to form a central hub or nerve centre from which the Industrial Centre of Competence can be effectively marketed, promoted and coordinated.

Table 1. The Industrial Centres of Competence

Centre / Region	**Centre of Competence**	**Industrial Centre of Competence**	**Central hub/s**
eMalahleni	Mining and Metals Centre of Competence	**Mining and Metals Industrial Centre of Competence**	Mining and Metals Technology Park
Middelburg	Metals Manufacturing Centre of Competence		
Secunda	Petrochemicals Centre of Competence	**Petrochemicals Industrial Centre of Competence**	Petrochemicals Industrial Supplier Park
Mbombela	Agriculture Technology Centre of Competence	**Agriculture and Forestry Industrial Centre of Competence**	Forestry Technology Park International Fresh Produce Market
Sabie	Forestry Centre of Competence		
Komatipoort	Agro-Processing Centre of Competence	**Nkomazi Special Economic Zone**	Agro-Processing Technology Park

Synopsis

Mining and Metals Industrial Centre of Competence

The Mining and Metals Industrial Centre of Competence covers the region of eMalahleni and Middleburg, the former being biased towards the upstream mining sector and the latter biased towards the downstream manufacturing sector, hence encompassing the full value chain – from mining to fabrication of metal components. The focus here is on production of chromite-based materials through to the production of stainless steel components. Owing to these reasons, the development of an integrated **Mining and Metals Technology Park** is proposed as a comprehensive facility for promoting industrial development within the mining and metals manufacturing sectors. It will house facilities and capabilities across the full spectrum from technology development to industrial infrastructure.

The location of the park would need to satisfy a number of criteria, and must be appealing to both users and investors. Firstly, it should be logistically well-positioned, adjacent to the N4 between eMalahleni and Middleburg. At the same time, it should have fast access links to the two adjacent CBD areas. It is estimated that the park should be at least 200 hectares, but preferably in the region of 600 hectares to allow for future expansion and the incorporation of larger manufacturing operations.

The proposed Mining and Metals Technology Park will comprise three main entities:

- A **Faculty of Mining and Minerals Engineering** aimed at localising critical skills development, and incorporating two dedicated R&D and technical services divisions relating to Mining and Metals Manufacturing respectively;
- A **Mining and Metals Centre for Innovation and Entrepreneurship** aimed at providing new business incubation services, targeting the beneficiation of iron and steel; and
- A **Mining and Metals Supplier Park**.

These three entities within the Mining and Metals Technology Park will create a dynamic hub for skills development and knowledge flows, and will provide an attractive location for new business creation.

The development of a **new South African Iron and Steel company** in the Middleburg region, as a joint venture between China's Hebei Iron & Steel Group and the IDC will providing a major catalyst for job creation and economic development, with an estimated. The plant is set to double the country's steel production output, adding a further 5 million tons of steel production, and attract a total investment of US$4.5 billion. This would translate into approximately 9000 jobs (excluding the construction phase) based on the current employment levels at Arcellor-Mittal's SA production sites. The development of strategic partnerships with Hebei institutions have been proposed to leverage spin-off opportunities linked to this development.

The development of the Mining and Metals Industrial Centre of Competence in the eMalahleni-Middleburg region, through targeted investment, has received overwhelming support from companies in this region. The need to diversify the economic base is seen as crucial for future economic sustainability, but also realistic in terms of the raw materials manufacturing base in the region. This raw materials manufacturing base has potential for major expansion, but needs to be supported through technology development and technology transfer (particularly related to cleaner production) and technology skills development.

Synopsis

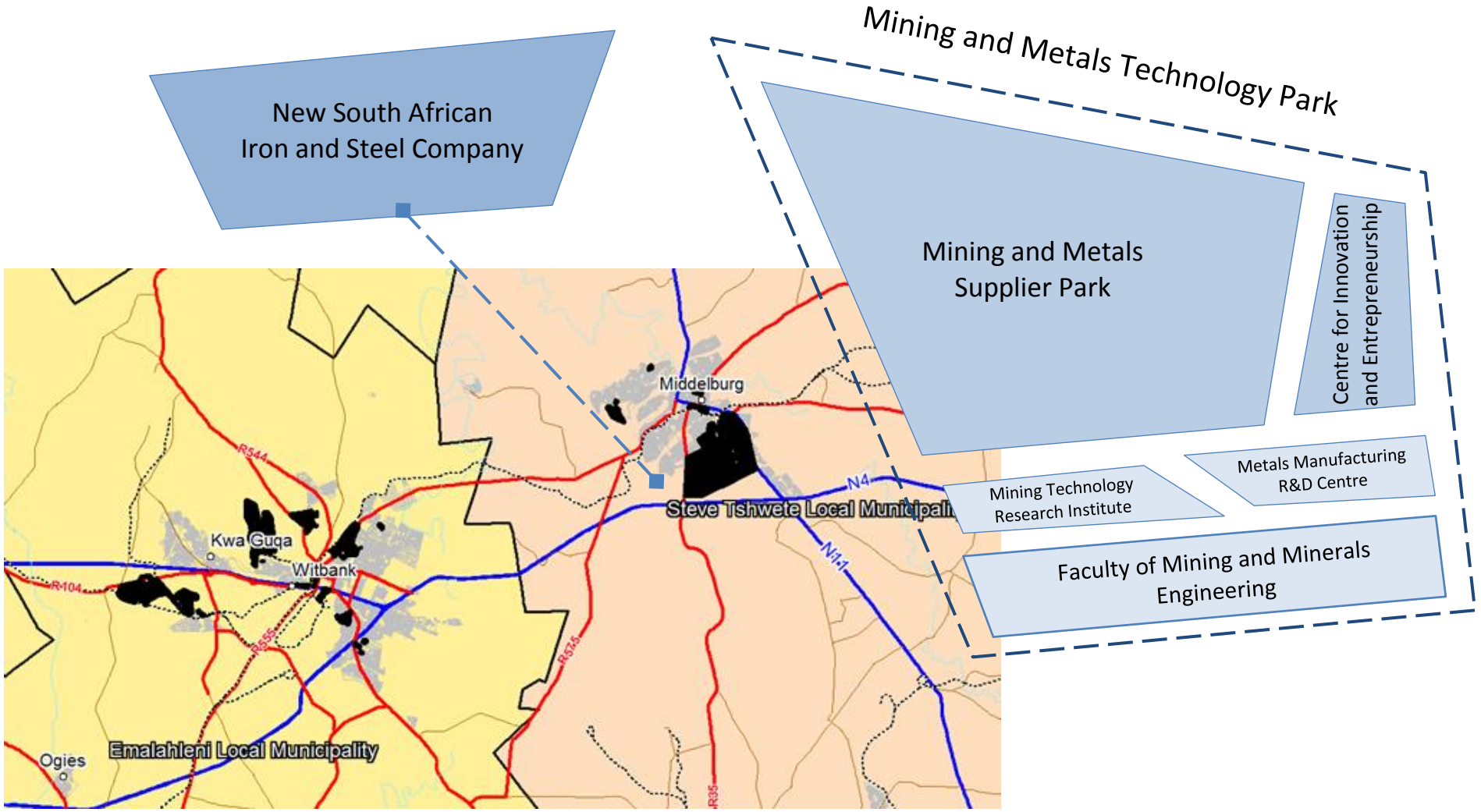

Figure 4. Mapping of Mining and Metals Industrial Centre of Competence.

Synopsis

Agriculture and Forestry Industrial Centre of Competence

The second proposed Industrial Centre of Competence is premised on the existing areas of competence identified in the Mbombela and surrounding areas, as listed below. The proposed Agriculture and Forestry Industrial Centre of Competence already exhibits a substantial innovation capability base between public institutions and private sector.

Table 2. Identified centres of competence in the Mbombela and surrounding areas.

Centre	**Area of Competence**
Mbombela	Agriculture Technology Centre of Competence
Sabie	Forestry Centre of Competence
Komatipoort / Nkomazi SEZ	Agro-Processing Centre of Competence

The competence in agro-processing is premised around the sugar cane processing capabilities in Nkomazi. Whilst this area of competence lacks critical innovation capabilities, it has the potential for development within the designated Nkomazi SEZ, and is therefore proposed as a major industrialisation flagship project within the SEZ.

The innovation capability in agriculture is relatively well-developed, as discovered in the innovation capability assessment. This capability is built around the University of Mpumalanga and other dedicated R&D institutions, mainly sustained by the fresh fruit export industry. However, a **Forestry Technology Park** is proposed to institutionalise the forestry innovation capabilities in the region.

At the core of the proposed Forestry Technology Park is the proposed **South African Forestry Technology Centre** which will be a focal point for the development and diversification of the Province's forestry sector, through the provision of specialist technology and business development services for the forestry and forestry products industries. The Forestry Technology Centre will also act as a technology support mechanism for the proposed **Wood SME Incubator** to be established in the Technology Park. The Wood SME Incubator will focus on the development of post-harvest enterprises in areas such as wood treatment, preservation, lamination and other specialised niche services, and will therefore require a world-class technological innovation support mechanism. As part of the planning for the Forestry Technology Park, provision will need to be made for the development of a future **Forestry Industrial Park**, aimed at providing a platform for inter-firm collaboration between the large forestry companies and spin-offs and other SME entrants.

The mapping of the Agriculture and Forestry Industrial Centre of Competence shows the potential to create a highly coordinated and integrated industrialisation platform in these sectors. This includes the coordination and integration of skills development programmes, technology development and transfer, supply chain development, logistics and investment, among others inputs for industrial development. In particular, the Forestry Technology Park will provide a mechanism for institutionalising the capabilities that will lead to such integration within the forestry sector. Similar roles would be played by the planned **Mpumalanga International Fresh Produce Market** and the proposed **Mbombela Food Technology Centre** within the agriculture component of the Industrial Centre of Competence. Based on similar successful models in the country, the Food Technology Centre will also act as a business incubator facility to enable new companies to be formed, and to provide a vast array of resources and technology services to both new and existing SMMEs.

Synopsis

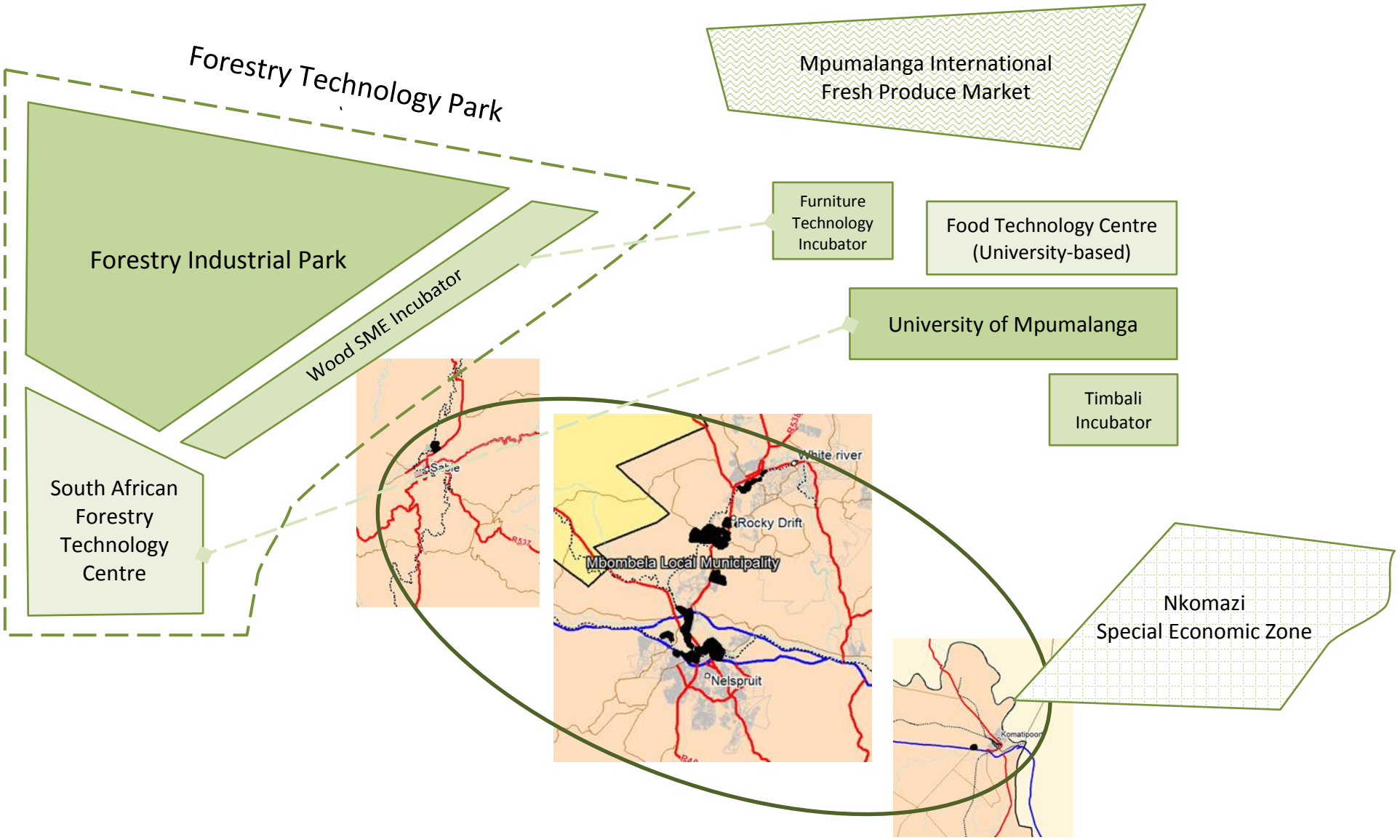

Figure 5. Mapping of Agriculture and Forestry Industrial Centre of Competence.

Synopsis

Petrochemicals Industrial Centre of Competence

The third proposed Industrial Centre of Competence is based on the opportunities for diversification of the petrochemicals industry in the Secunda region, which has been identified as a potential Petrochemicals Industrial Centre of Competence. Targeted investment for the expansion of the petrochemicals industry in this region will lead to the development of specialised facilities and a controlled environment for processing of petrochemical products, which remains an inhibiting factor in the diversification of this industry. This is due to the nature of this industry which consumes large flows of energy, chemicals and water, and generates large volumes of waste. Compliance with regulatory requirements is therefore difficult to achieve for small and even medium-sized companies. Owing to this, the development of a **Petrochemicals Technology Park** has been proposed, which will allow for implementation of eco-industrial interventions to mitigate environmental impact associated with this industry.

The proposed Petrochemicals Technology Park will be one of the major industrialisation initiatives in the Province, aimed at stimulating economic growth and job creation, both through SME incubation and large-scale production in well-identified areas of technology. In addition to the strategic location close to a major petrochemicals production site, the Technology Park will provide shared infrastructure, services and facilities, which includes specialised logistics services and facilities for transport of petrochemicals, waste water recycling, sludge dehydration, sludge recycling, residual heat electricity generation and hydrochloric acid processing.

Linked to the Technology Park is a proposed **Faculty of Engineering**, as a satellite campus of the University of Mpumalanga, with emphasis on petrochemicals, to achieve the level and intensity of the education and training landscape necessary to support a Petrochemical Industrial Centre of Competence. The proposed Faculty will be the custodian of a number of technology support and services units: (a) Chemical Analysis Services Unit, (b) Cleaner Production Services Unit, (c) Waste Recycling Facility, and (d) Chemicals Disposal Services Unit.

Overall, the Petrochemicals Technology Park consists of an Industrial Park, a Business Incubator, and a high-end education facility in the form of a proposed Faculty of Engineering, the latter housing a number of technology support and services units.

The Petrochemicals Technology Park concept is further supported by the Gauteng-based OEM production facilities and the associated opportunities for leveraging localisation obligations.

The development of the proposed Petrochemicals Technology Park will depend on cooperation by a number of enabling stakeholders, central being the commitment of Sasol and the facilitation role of the Provincial Government. Others include some of the large chemical and petrochemical companies in the country (not necessarily based in Mpumalanga), as well as certain multi-national petrochemical companies who have past involvement in similar developments in other countries. In addition, support mechanisms will need to be targeted within the sector development strategies of the Department of Trade and Industry, Department of Science and Technology and the Department of Minerals Resources.

Synopsis

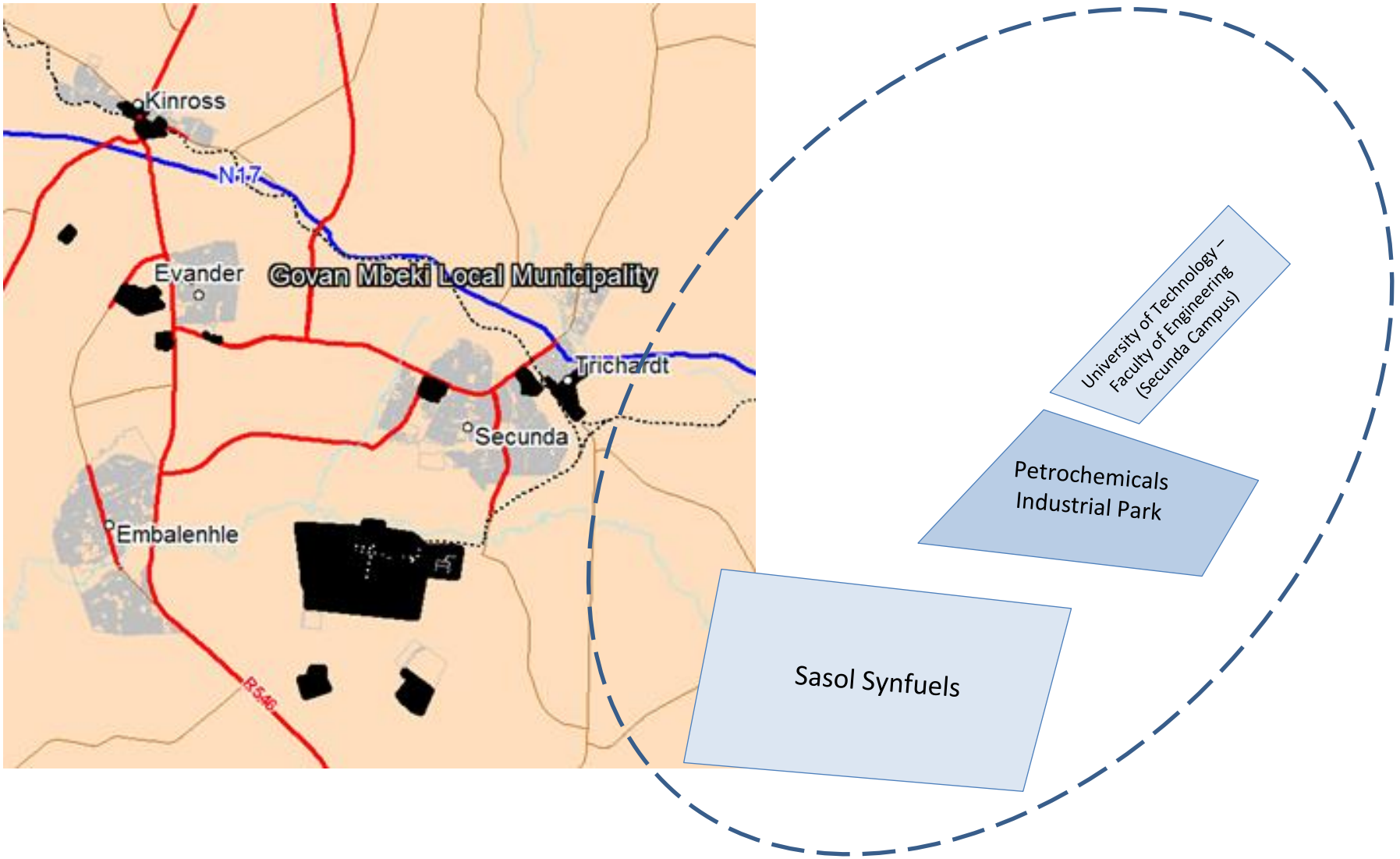

Figure 6. Mapping of Petrochemical Industrial Centre of Competence.

Synopsis