

## Capsule professionnelle 2

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# Durban and its Port: An Investigation into the relationship between the City and port of Durban'

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## Biography

**Ajiv Maharaj** holds a Master's degree in Town and Regional Planning and PhD in Urban Geography. He worked for 3 years as a development consultant before joining the EThekweni Metropolitan Council as an urban planner. He then worked as a Development Manager focusing on implementing developmental projects and also as the Manager of the Durban Beachfront. He was subsequently appointed Project Executive focusing on industrial sector support and later as Deputy Head of Economic Development responsible for the conceptualization and implementation of economic projects. Since 2011 he has assumed the role of Deputy Head of Economic Development and Investment Promotion Unit with the responsibility of managing the Policy, Strategy, Information and Research department. He authored the EThekweni Economic Development and Job Creation Strategy; several academic journal articles and regularly peer reviews academic articles on behalf of journals. He authored a book

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## Introduction

According to the eThekweni Economic Development and Job Creation Strategy (eThekweni Municipality, 2013), when one compares Durban to the six other metros in the country, a distinct picture emerges. Across a number of indicators, the rate of poverty and unemployment only compares to the Nelson Mandela Bay Metro, with the key difference, that the population of eThekweni is significantly larger than Nelson Mandela Bay, and hence the extent of the challenge is far greater. In summary, eThekweni has the highest number of people living in poverty; the highest number of people on social grants, while having too few people employed (only 22% of the total population is employed). The city also has the lowest per capita income; the second lowest consumption expenditure per household; very high youth dependency and slow rate of reducing youth dependency; and one of the highest rates of migration of skilled professionals. There is a high level of dependency and income levels are low resulting in low levels of disposable income to spend on consumption goods. There is also a disproportionately high expenditure on property (rates and rent) and travel, further eroding disposable income. Of particular concern is that eThekweni, while being home to the continent's premier port, only ranks 4th in terms of net exports.

According to census data (StatsSA, 2012), eThekweni has performed much better in terms of the delivery of basic service, which is also evidenced in the fact that while KZN has the greatest number of people living in poverty, it had the lowest number of service delivery protests. The delivery figures in terms of basic services and housing also support this notion (Global Insight, 2013). In general the performance of the city is of great concern and unless urgent and ambitious programmes are put in place, the social burden will increase to ultimately undermine the financial viability of the Municipality (eThekweni Municipality, 2013).

The eThekweni Municipality's Economic Development and Job Creation Strategy (2013) asserts that Durban is at a crossroads and unless it pursues a path that seeks to significantly increase job creation, its long-term future will steer it far from the warmest place to be, or "Africa's most livable city". It further argues that Durban's long term finances may also be questioned on the basis that the level at which property rates are levied must take into consideration the ability of the population to pay. Currently, according to National Treasury, Durban's rates charges in relation to the income levels of the population, is the highest among the Metros. The real challenge in the facts stated above, is to grow rates through investment and increasing the number of employed people that are able to pay for rates and service charges. Furthermore In order to meet the targets in the National Development Plan, the local economy must double its current rate of job creation. To address the challenge of poverty; unemployment and inequality, formal job creation must be catalyzed (eThekweni Municipality, 2013).

Given the current position outlined above, the future dilemma for the Municipality will rest on the trade-off between providing social services to the poor and pressure to increase taxes on a relatively small rates base. The deciding factor will rest on the ability to increase the rate of inclusion of the unemployed into the economy through transformation, but more importantly, through growing the economy and increasing its labour absorption rates.

At the heart of the Durban economy is the port, which until recently was Africa's busiest and largest container port. Getting a good estimate of the significance of the port to the local and provincial economy is a difficult task. While the port and related businesses employs about 50,000 people, there are numerous firms that depend on the port in one way or another (Maharaj, 2013). Manufacturing firms such as Toyota South Africa chose the Durban location due to the presence of the port as their export and import functions are a large part of the business. There are many large as well as smaller manufacturers which support thousands of local jobs. There are also freight and logistics companies which are involved in the business of sea trade and transport as well as land freight. This includes many maritime firms, and the growing significance of the maritime sector is a clear indication of the growing significance of the port. Component assemblers; retailers and the FMCG (fast moving consumer goods) industries all have linkages to the port. To a lesser extent, the tourism sector also has linkages with the port in terms of the growing cruise tourism industry.

Jones (1997) reported that at 1995 levels of port activity, the direct port-ancillary sector accounted for 25,000 jobs and a further 8,000 in establishments supporting these directly. At that stage it was reported that, using Braby's data, an estimated 850 firms were directly supporting the port. These ranged from cargo terminal operators to yacht brokers and sailing schools; clearing and forwarding cartage contractors and transportation companies, freight services and warehousing establishments, ship liners and agencies, and cargo agents. The majority of these firms are located in areas that are in proximity to the port (Jones, 1997). In 2006, it was reported that Transnet employed 3,300 people directly at the port, which is estimated to have increased to 4,000 in 2011. In 2006, it was estimated that 40,000 people were directly employed in port-ancillary activities or supporting these in port-dependent firms (e.g. contract staff). Given the rate of expansion of the transport sector, it is estimated that in 2011 this has risen to approximately 48,000 – 50,000 jobs (Maharaj, 2013). However, what is more difficult to determine is the number of jobs in the manufacturing; agriculture and trade sectors which are located within the eThekweni Municipal Area due to the relative advantages of the port. Making various assumptions, we may conservatively estimate that another 48,000 jobs in such related sectors owe their existence in the city to the presence of the port. This would bring the total to 53,000 jobs directly related to the port and at least another 55,000 induced jobs, implying a total of 103,000, or about 10% of all employment in the EMA (Maharaj, 2013).

Of course, employment and the impact of the port on employment is not limited to Durban, but is significant in the provincial and national economy. The port also serves the SADC region and is hence a major influence on the economy of this region.

## *Historical Background*

In the 1840's Natal became a British Colony and it became apparent that for the colony to succeed, the import and export of goods through the Port Natal harbour in Durban (D'Urban as it was originally named) need to be provided for. The British Government wished to develop the Port Natal harbour however financial constraints prevented this for some time, in 1846 the total income from the colony was only £3100. Gaining access to the protected estuary in which Port Natal harbour was situated was restricted due to the sand bar and sand banks at the estuary mouth. In March 1850 there was only 1,95m of draught at high tide. The problems of the sand bar across the entrance to the port, which severely limited ship draught and risk to shipping movement, were the focus of the port engineers and over several schemes were implemented from the 1850's till early 1900's (for more reading on the harbour entrance improvements, readers are directed to Barnett (1999)).

By the late 1930's the "battle of the bar" had been won and with dredgers now maintaining the entrance approach at a depth of 13m, the width and size of vessels stated to gain momentum (Barnett, 1999). In the latter half of the 19th century the port and city both grew, unlimited by land constraints until the mid 20th century. The vast natural estuary that formed a natural bay protected by a large sand dune/bluff to the south provided sheltering from the winter storms. The port and city had now reached a state where there started to emerge issues which had negative impacts for the other party. This situation was exacerbated by the institutional arrangements in place.

The Port of Durban has always been part of a National department while the Borough and later the City of Durban has been under municipal control since its establishment in the mid 1800's. Both organisations not surprisingly have different goals. The Port wishes to maximize the volumes of freight across the quay while minimising costs, while the city desires maximum economic benefits to citizens and surrounding industry but at the same time managing transport flows and reducing congestion. At one time the relationship between the City and the Port was very adversarial, based primarily on the attitudes of the two key technical leaders in the Port and the City. Both these individuals were Scottish clan descendants whom had waged war against each other in the 16 and 17th centuries. The "war" continued with little co-operative outcomes until these two personalities retired. In the post 1990's era the City and the Port started working closer but still had a difference of opinion on issues based on their individual mandates. The port authorities still

planned within their land while ignoring the impacts outside their land boundary e.g. car terminal at the Point. This was as a result of the institutional hierarchy, the Port management and planning at a National level while the services supplied (water, electricity, roads, etc) by Local Government which reinforced a perceived superiority by National departments, when in fact neither should trump the other but should be seen as complementary and harmonised.

### *Socio-Economic Relationship between port and city*

According to Fedderke and Simkins, (2012), while South Africa's industrialisation started as early as 1915, it was only after 1945 that the economy diversified into a number of manufacturing sub-sectors. Between 1945 and 1970 national growth and employment was driven by manufacturing. It was during this period that the Durban economy grew rapidly and manufacturing became the number one employer within the Durban economy. Furthermore, the Harvard papers produced in 2006 illustrated the importance of the manufacturing sector in being able to absorb a large semi-skilled work force and presented the best opportunity to absorb the unemployed into the work force. However, in the last 10 years, manufacturing has become less competitive due to a number of factors and other manufacturing destinations including - China, Malaysia, Korea, Brazil and Turkey; to name a few - have become more attractive. This has seen a lagging manufacturing sector which has been consistently underachieving in the recent past. One of the key factors affecting competitiveness of export manufacturing is the high costs of logistics.

Logistics costs have often been highlighted as an important factor impacting negatively on the competitiveness of South African business. According to the 8th State of Logistics report, logistics costs accounted for 12.7% of GDP in 2010, down from 13.5% in 2009 (CSIR, 2012). The report also noted the high externality costs experienced nationally. The national costs for road accidents were estimated at R13.8 billion per annum (while CO<sub>2</sub> emissions would have added another R6.5 billion to the transport bill, if these emissions were taxed). The changing nature of global supply chains in favour of flexible operations and time-sensitive movement as well as the challenges associated with risk (from disasters and political uncertainties) has become an important consideration for supply chains. While it is difficult to compare logistics costs across countries due to the different methodologies used, comparisons with country's using similar methodologies points out that the logistics costs to the South African economy is significantly higher than in most other middle income countries. A comparison with Brazil highlights that even the costs associated with rail are significantly higher in South Africa, which is an important factor in the debate on road versus rail freight (CSIR, 2012).

It has become evident that freight volumes at Durban are growing faster than the local or national GDP growth. In fact freight growth has been consistently almost double GDP growth, which is largely a global phenomenon caused by the specialisation of economies. Considering South Africa's high cost structure and vulnerability to transport costs, this trend poses a threat to the sustainability of current transport systems. In particular corridor transport saw the largest growth in terms of tones, increasing by 7.4%. The greatest growth in terms of tonne-km was observed for metropolitan road freight, which increased by 6.1%. Without intervention, the country may face a crisis in freight volume and road capacity which would be similar to the energy sector crises, of demand volume outstripping supply. Such a scenario will result in ripple effects in the economy and job losses (CSIR, 2012).

South Africa's competitiveness in international markets has been strongly dependent upon the costs and efficiency of its maritime supply chains for the export of commodities and raw materials. The supply chain is made up of multiple modal links which are managed to achieve 'just in time' delivery as an essential requirement of their cost efficiency. The movement of cargo in the Durban port is one of the most important links in the South African maritime supply chain, barriers or challenges on the development of the port and the consequent disruption in the functioning of the chains will have an impact on both the local and national economies. In South Africa there is a tendency to associate supply chains with the distribution and acquisition of goods, for successful competition in global markets requires production to be integrated into supply chains that begin with the acquisition of raw or input materials and terminate with the delivery of products to consumers. The manufacturing firms that compete successfully globally are efficiently integrated in supply chains in which production is only one activity in the chain. The most successful integration is achieved when all the link providers in the chain contribute to the single purpose of delivering the product to the place where it is needed at the lowest cost, rather than serving their own ends as profit seeking third parties (CSIR, 2012).

The model integration of South Africa's maritime supply chain has not yet developed to the extent of those of many of the country's competitors in global markets. However the rise in exports by the local automotive industries in recent years is necessitating the efficient management of supply chains stretching through SA's ports from component manufacturers in several countries, to buyers of vehicles in other countries. It is important to emphasise that the routing of containerised cargo in supply chains is usually determined by liner companies in accordance with the economics of their logistics and not by the geographic hinterlands of the ports. Liner companies generally dictate the ports that they will use according to their business interests, and some container terminals built by port authorities worldwide have failed to attract traffic. Competition in the liner trade constantly requires these companies to be conscious of the advantages to

their business of the rapid and timely delivery of cargo. Thus, ports will often be chosen in relation to saving voyage time at the cost of longer overland transport if the cargo can be delivered more quickly. Shorter voyages enable savings in both the operating and capital costs of ships, and quick and reliable deliveries of cargo enable savings in the costs of inventory holdings by cargo owners (CSIR, 2012).

The trend in global trade is to put supply chains against each other and failure by countries to facilitate comparative international supply efficiency for their exporting industries impacts detrimentally on their economic growth. Ports are usually the most strategic link in these international supply chains and in the past few decades numerous stakeholders such as district councils, business and individuals have invested huge amounts in them. These partnerships have been formed to ensure seamless interfaces between shipping links, port terminals and land transport.

The hinterland of the Durban port has both geographic and with its transport link incorporates much of South Africa's adjacent countries to the north and in accordance with global trends should be developed as the major link in efficient international supply chains of containerised cargo serving South Africa. It becomes necessary therefore to have substantial investment not only in the port, but in countrywide rail and road links that enable cargo to move seamlessly and rapidly through the port terminal.

According to Transnet (2012) it is estimated that 65% of current South African imports and exports of general cargo is believed to move through the Port of Durban, most of it in door to door supply chains managed by logistics providers mainly being liner companies. The port has never functioned efficiently as the key link in the supply chain needed to promote growth because of the frequent delays to shipping that have persisted for many years. These delays have several causes including, the unscheduled bunching of ship arrivals. The effect has been to preclude the tight, reliable and punctual scheduling necessary for international supply chain efficiency (CSIR, 2012).

The automotive industry is one sector in which international supply chains are required to deliver components just-in-time. Many of these are structured to link vehicle manufacturers in Gauteng by rail from other ports, although Durban is better located for that purpose. Durban is potentially the port through which all South Africa's major maritime supply chains of containerised products between the interior and suppliers or customers overseas should be linked. Supply chains that have diverted through other ports will revert to Durban if seamless, punctual and reliable cargo flows can be assured. Unlike their European counterparts South African customers are yet to benefit both from the economies of scale achieved by the integration and from the enhanced value of the place and time utility of the goods carried, attributable to the reliability and punctuality of the transport. Those qualities depend in the first instance on the ability of port terminals to ensure that

cargo moves between ship and land and through the port in a smooth manner.

This seamless movement of containers through the port is indispensable to efficient supply chain operation. The problem at Durban Container Terminal is that it takes a long time to remove containers from the quayside and the lower rate of throughput results in congestion. By increasing the number of cranes as well as the rate of container removal by employing cranes and trains departing quickly in succession, the capacity of ten container berths should be adequate to accommodate at least twice the throughput.

The interception of exports from elsewhere in South Africa by local industries for final processing provides additional scope for supply chain structuring that can establish local industries as global competitors. The characteristics of the supply chains needed for that purpose are reliable delivery of the processed goods at the final destination at pre-arranged times. Apart from delays in the berthing of ships and the handling of containers at the container terminal, slow customs procedures, road traffic congestion, inadequacies in the supply of rail services and a lack of reliable electronic data transfers facilities as well as interruptions in power and water supplies are all impediments to the efficient functioning of supply chains. Without such deficiencies Durban and its environment have the potential to rival the major processing regions of the world. These regions depend on upon the proximity of container terminals as links in supply chains that vie for leadership in throughput efficiency, it could be in the interests if the local community to support that happening. Recognising these issues the joint leadership of the Port and City initiated the TEMPI process in 2006.

### *The TEMPI process*

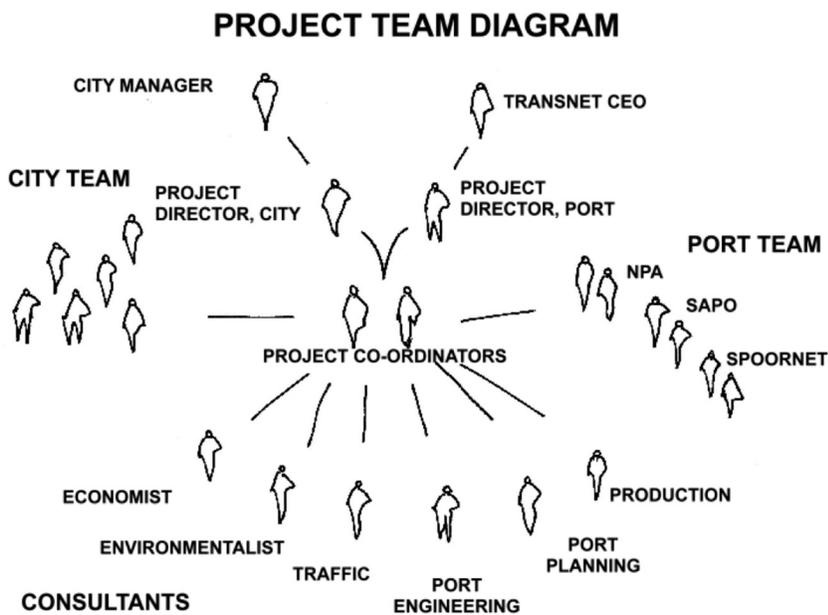
Recognising the problem between the two organisations was the first step in coming together to form a joint process to work together going forward in the interest of the region and the country given Durban's gateway status. Once again the process was driven by two personalities, Ms Maria Ramos (Group CEO Transnet from 2004 to 2009) and Dr Michael Sutcliffe (eThekweni City Manager from 2003 to 2012). Recognising that there were joint challenges facing both organisations in growing the regional and national economies through job creation and increased trade as well as supply chain capacity constraints (port, road, rail and pipeline) a joint planning approach was formulated to assist in maximizing benefits and opportunities while reducing conflict/wasted resources.

The TEMPI process was guided by the following principles:

- a joint eThekweni Municipality / Transnet initiative
- locally (at Port / City level) initiated and driven
- cofounded by both parties
- supported by City and Transnet management

- a fast-tracked project of limited duration
- dual policy direction from the Port and City
- integration by Project Co-ordinators to ensure joint planning of scenarios
- appointment of consultants to undertake specialist studies and evaluations
- incorporation of in-house Port and City staff into the project team
- focused and targeted consultation of key stakeholders and roleplayers
- delivering a framework for decision making
- leading to a unified masterplan for the future of the Port and City of Durban

**Figure 1:** TEMPI project team structure



Project TEMPI aimed to develop a framework to inform independent decision-making, based on a shared vision and understanding of future development requirements of the port and the city. This was required as in the past, port planning and city planning had occurred in isolation of each other, resulting in a lack of synergy and occasional conflicts.

The objectives of the two parties differ and can be summarised as follows:

- Transnet's objectives are to reduce the total logistics cost of doing business in South Africa by optimising the development of the port system and rail network from a national perspective.
- eThekweni municipality's objectives are to maximize the benefit of the port for its citizens in the local economy by optimising the operations and development of the port and its integration into the city.

## *TEMPI Process and Objectives*

The TEMPI process centred on the production of specialist analyses by consultants for various sectors focused on a set of key questions/issues:

- Economic, producing economic analysis of the national, regional and local role of the port, economic imperatives for its future development, and optimal economic activities in the port
- Port engineering, analyzing port capacity, and exploring options for port expansion.
- Environment, assessing the environmental constraints on development of the bay
- Traffic and transport, assessing current and future transport impacts of port development.
- Port and precinct planning, assessing the potentials for the re-use of port land along the Point and Victoria Embankment waterfronts to improve port-city interfaces.

Each workstream consisted of a Municipal and Transnet representative who were required to work closely with sector consultants.

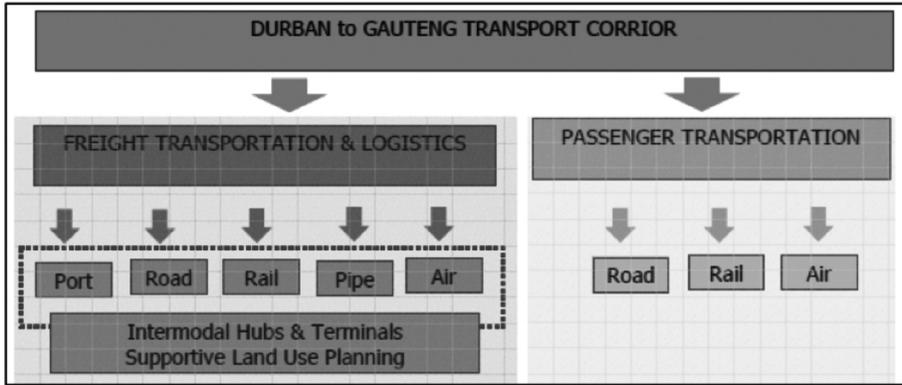
The resulting outputs from these joint specialist studies were a set of potential future trajectories for the development of the Durban port system. The work which had essentially been inward focused, however the development of the Port of Durban cannot occur in isolation and so it became clear that what was required was integration within the regional economy and as has been pointed out because of Durban importance in South Africa, how these plans integrate into the National economy. The TEMPI project changed into a regional driven approach however using the impetus and findings derived from the TEMPI process into the region. The project became the “2050 vision for the Durban to Gauteng Freight corridor”.

## *2050 vision for the Durban to Gauteng Freight corridor*

The 2050 vision provides an integrated solution to the growing expansion requirements of the Durban to Gauteng freight corridor which will form the foundation for the establishment of a Southern African regional freight network. The Durban to Gauteng freight corridor consists of the following key developmental components (Figure 2):

- The Port of Durban
- The Durban-Gauteng road corridor
- The Durban-Gauteng freight rail corridor
- Strategically located logistics hubs and terminals
- Supportive local land use plans

**Figure 2:** Elements of the 2050 corridor.

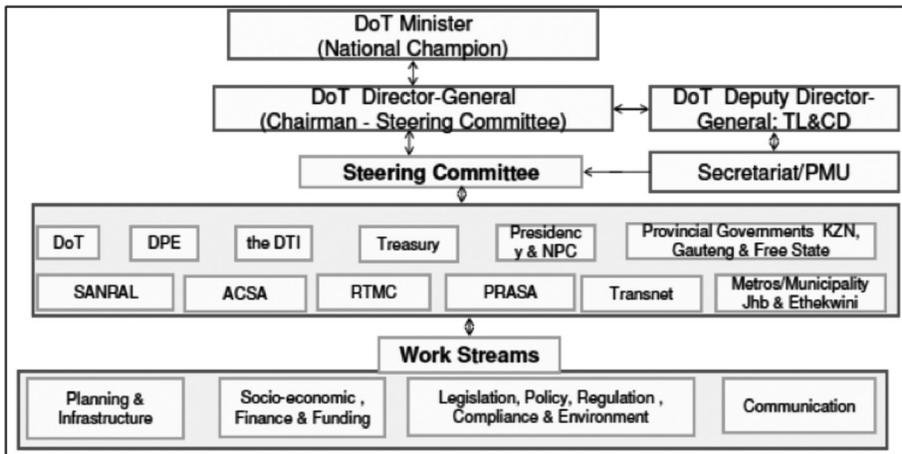


The vision was driven by three major phases of port development:-

- Phase 1: 2010-2020 (current expansion plans for Durban)
- Phase 2: 2020-2040 (Airport site development)
- Phase 3: 2040-2050+ (Bayhead development)

To manage the process a multi stakeholder forum was developed as shown in Figure 3.

**Figure 3:** Institutional framework

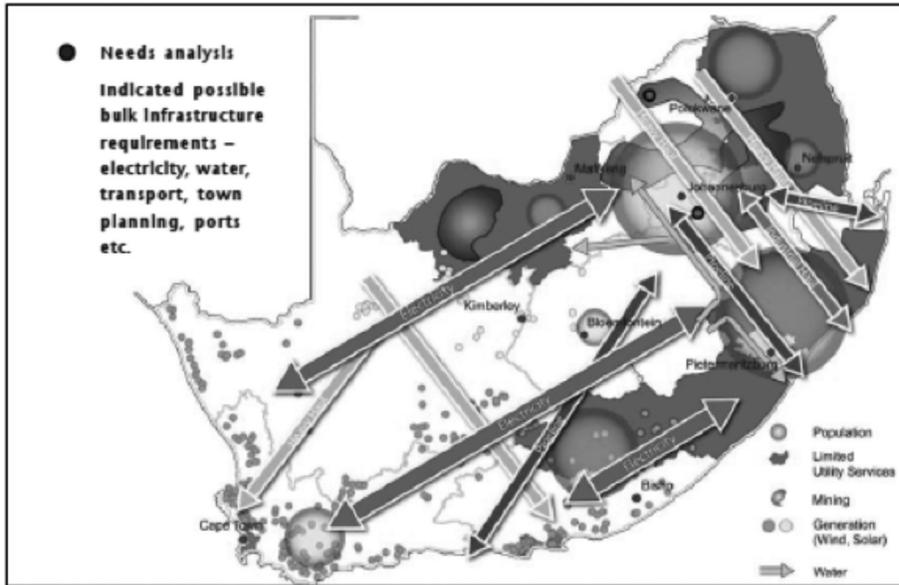


The 2050 vision for the Durban to Gauteng Freight corridor was presented to the newly formed National Planning Commission and endorsed as a key national imperative. Now that the project had gained national significance because of its potential positive impact of jobs and economic growth for the country it became a consideration for a Strategic Investment Project (SIP).

## *The Strategic Integrated Projects (SIP) programme*

The Presidential Infrastructure Coordinating Committee (PICC) was charged with developing a set of key infrastructure driven project to revitalize the South African economy. The National Infrastructure Plan (2013) identified 18 Strategic Integrated Projects across South Africa. These project were identified to promote balanced economic development, unlock economic opportunities, promote mineral extraction and beneficiation, address social-economic needs and job creation and help integrate human settlement and economic development.

**Figure 4:** Needs analysis for South Africa.



From a needs analysis of South Africa (Figure 4) it was clear that the Durban-Gauteng corridor was a major element in the country's economic infrastructure and this led to the Durban-Gauteng corridor project becoming part of the SIP programme **SIP 2: Durban-Free State-Gauteng logistics and industrial corridor.**

Again the project was widened to incorporate another province (Free State) and broaden to include industrial activities as well as the aerotropolis around the new King Shaka airport. From a governance point of view the project now fell under the PICC chaired by the President and very much driven at a National level. The range of organisations represented had now increased to over fourteen government entities comprising all three spheres of government.

## *Lessons learnt*

From these processes some key lessons have emerged:

- Local initiatives are vital in making government at the highest level aware of key problems and opportunities
- Large multi sectoral projects are complex and have significant lead times which need to be tightly managed if these projects are to be delivered on time.
- Strong, visionary leadership is critical in brokering deadlocks during the process.
- Identifying champions, preferably by name, in each institution and making them accountable for performance.
- Dedicated coordination resources to management the administration and consultation programme.
- Scarce resources in some sectors require human development ahead of these processes and beyond into the operational phases of these projects
- In the Engineering sector, some options to retain skills are to increase immigration, reduce early retirements, extend age of retirement and actively bring back those whom had left the industry.
- Develop a skills framework

## **Conclusion**

The project is still ongoing at the time of writing and while significant steps have been taken to elevate this project high up onto the National agenda there is still much to be done to finalise this project. Despite this there is now a far better and deeper understanding of the needs and desirability for this project at all three levels of government. Institutionally the project had morphed from an inward locally driven project to one that is now driven by the country's first citizen and endorsed by over fourteen governmental institutions. The project is planned to roll out over the next 3 decades and with a strong institutional basis from which to work there are high expectations that this will be a success.

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