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# Table 1: Review Information

<table>
<thead>
<tr>
<th>Policy Name</th>
<th>GAUTENG INDUSTRIAL POLICY FRAMEWORK</th>
</tr>
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<tr>
<td>Originator department</td>
<td>ECONOMIC DEVELOPMENT</td>
</tr>
<tr>
<td>Approval Date</td>
<td>JULY 2010</td>
</tr>
<tr>
<td>Implementation Date</td>
<td></td>
</tr>
<tr>
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1 Introduction

The research presented in this Industrial Policy Framework supports Gauteng Provincial Government’s vision for industrial development in the Province. The process of developing this Industrial Policy framework used economic analysis and sectoral industry structural analytical techniques. The aim was to develop an Industrial Policy Framework designed to contribute effectively to wide-ranging industrial development and the creation of decent work opportunities in Gauteng Province.

The recommendations that come out of this document puts forward a framework for industrial policy and, as such, do not represent a blueprint for industrial development. GPG will have to develop a provincial industrial policy action plan that details a programme for implementing its industrial policy. In preparing this report we at the Corporate Strategy and Industrial Development Research Programme (CSID) familiarised ourselves with previous documents developed for Provincial economic and industrial policies. We draw much from these previous document but we also advocate an alternative approach that we believe rectifies errors and gaps that we have identified in those documents.

The trajectory of industrial development must be carved out in such a way as to address the legacies of the past, to move away from a dependence on natural resources and capital intensive industrial sectors towards a diversified industrial base that facilitates the expansion of decent work opportunities for those that were previously excluded by prevailing industrial structures. Efforts to move towards environmentally sustainable economic activities are an important goal of a new employment and growth strategy and industrial policy. Further, addressing poverty and inequality through policies, such as affirmative action and broad-based black economic empowerment are important goals of the new strategy and policy.

Five overlapping strategic thrusts should inform specific strategic programmes and action plans. These are:

a. Expansion of decent work opportunities;
b. Development and expansion of medium tech-labour intensive manufactures;
c. Strengthening intersectoral linkages through supply chain development;
d. Enhancement of value addition and upgrading along supply chains; and
e. Creation of an integrated and diversified industrial base in Gauteng.

This industrial policy framework is firmly located within National Government’s efforts to promote a new economic growth path and the National Industrial Policy Framework (NIPF) and Industrial Policy Action Plans (IPAPs) that will help drive our economy onto this new growth path. The Gauteng economy is important within the national economy, particularly as a location for the concentration of manufacturing and services industries. Therefore, the alignment of GPG’s industrial policy with the national policy and actions and additional complementary policies and actions in support of industrial policy will be significant for the South African economy.
The methodology of the research had three stages. First, we analysed Gauteng’s industrial structure and sector composition in detail, including the spatial dimensions of Gauteng industry, in order to provide an accurate basis for selecting the sectors which ought to be deemed strategic by Gauteng’s industrial policy and industrial strategy. Second, we undertook detailed input-output analysis of the Gauteng economy in order to identify forward and backward linkages and employment multiplier effects of targeting particular sectors in the province. Third, we considered the way in which potentially key sectors fit within specific supply chains in order to understand the potential constraints and bottle necks in the maximisation of backward linkages from key sectors. This approach allowed us to point out specific industry support strategies for Gauteng Province.

Further, strategic programmes identified in the NIPF and IPAPs provide important policy enablers for the achievement of industrial development in the province as envisioned by GPG and the Gauteng Industrial Policy Framework (GIPF). These include:

- SP1: Sector Strategies
- SP2: Industrial Financing
- SP3: Trade Policy
- SP4: Skills and Education for Industrialisation
- SP5: Competition Policy and Regulation
- SP6: Leveraging Public Expenditure
- SP7: Industrial Upgrading
- SP8: Innovation and Technology
- SP9: Spatial and Industrial Infrastructure
- SP10: Finance and Services to Small Enterprises
- SP11: Leveraging Empowerment for Growth and Employment
- SP12: Regional and African Industrial and Trade Framework
- SP13: Coordination, Capacity and Organisation

This Policy identifies a number of additional Gauteng-specific policy levers (strategic programmes) that can be applied at the provincial level across a number of strategic programmes in line with those in the NIPF and IPAPs. On the basis of our research, the NIPF and IPAPs, as well as existing policy programmes in the province, the Gauteng Department of Economic Development (DED) has provisionally identified the following strategic programmes that would enable and leverage implementation of the GIPF:

- SP1  Sector Strategies
- SP2  Strategic Infrastructure Investment
- SP3  Strategic procurement
- SP4  SMME Support
- SP5  Trade and Investment Facilitation
- SP6  Reducing the Cost of Doing Business
- SP7  Gauteng B-BBEE Strategy
- SP8  Gauteng Green Economy Strategy
- SP9  Gauteng Tooling Initiative (GTI)
The next section provides a more detailed framework for the development of industrial policy in each of these areas. The section that follows discusses how it was narrowed in on industrial sectors to be supported. A brief discussion is provided of input-output (I-O) analysis and its limitations are outlined. The methodological weakness with I-O analysis and how this can be addressed through considering institutions and infrastructure around industry is also explained. The approach taken is to look at value chains and industrial clustering. The last section provides a summary of the research and analysis on the targeted sectors taking into account I-O analysis and consideration of value chains and clusters affecting these sectors.

2 Targeting sectors for the industrial policy framework

A research methodology was formulated for targeting industry sectors when developing the industrial policy framework for Gauteng. The approach was to start with all industry sectors and then to use economic analytical techniques to filter sectors so that we would end up with a list of sectors where industrial policy interventions would help the province achieve its socio-economic goals, particularly increasing decent work opportunities and promoting environmentally sustainable development. The context for this analysis was that Industrial Policy would be part of a package of policies and interventions used by the Province in conjunction with national policies, such as the NIPF (and IPAP), to drive the Gauteng economy onto a new economic growth path.

Input-output analysis was conducted to look at the economy over the past few years and to estimate the linkages between sectors and the employment multipliers for sectors. The idea was to use this analysis to filter all the economic sectors and be left with the sectors with the highest linkages and employment multipliers. In short, we would get a list of sectors where industrial policy and state support would promote sectors with the strongest linkages to other sectors and where most jobs would be created.

As mentioned earlier, there are limitations with input-output analysis and the study of value-chains and industry clustering provided us with additional filters to understand the current industrial context and how we could support industry further through industrial policy. The Industrial Policy Framework Background Report for Gauteng provides more detail.

2.1 Input output analysis

Input output analysis is widely used to analyse the structure of an economy by assessing how sectors are materially interconnected as a means to identify the economy’s key sectors of growth and employment. Key sectors of growth are identified on the basis of the magnitude and strength of their linkages to the rest of the economy relative to other economic sectors. From a policy perspective, a sector with strong linkages relative to others indicates that it may possibly have high positive multiplier effects on output and employment. Therefore, if the key sector is stimulated, it can help stimulate growth and employment both within its bounds and more importantly in other sectors as well.
An important limitation of I-O analysis is that it does not consider institutional settings that inform the economic structure. Therefore, while a sector may have the highest linkages relative to other sectors, the intended effects of a stimulus (i.e. raising economy wide output and employment) may be constricted by institutional factors such as: poor infrastructure facilitating the trade in goods and services, high input prices born from anti-competitive behaviour etc.

The input output analysis must also be accompanied by an analysis of the identified key sectors’ political economy i.e. industry’s history, form of accumulation, structure of the industry, key player’s performance and behaviour, challenges and opportunities faced by firms, international product markets etc. An analysis of the key sector’s political economy will help verify whether a stimulus is likely to have the intended effects of stimulating economy wide output and employment.

### Table 2.1: Total backward linkages from industrial sectors in Gauteng 2007

<table>
<thead>
<tr>
<th></th>
<th>Agriculture</th>
<th>Mining</th>
<th>Manufacturing</th>
<th>EGW</th>
<th>Construction</th>
<th>Tertiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>1.062</td>
<td>0.005</td>
<td>0.148</td>
<td>0.004</td>
<td>0.009</td>
<td>0.008</td>
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<tr>
<td>Mining</td>
<td>0.113</td>
<td>1.079</td>
<td>0.300</td>
<td>0.235</td>
<td>0.224</td>
<td>0.042</td>
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<tr>
<td>Manufacturing</td>
<td>0.902</td>
<td>0.690</td>
<td>2.150</td>
<td>0.499</td>
<td>1.136</td>
<td>0.666</td>
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<tr>
<td>EGW</td>
<td>0.029</td>
<td>0.044</td>
<td>0.070</td>
<td>1.198</td>
<td>0.030</td>
<td>0.022</td>
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<tr>
<td>Construction</td>
<td>0.010</td>
<td>0.011</td>
<td>0.035</td>
<td>0.051</td>
<td>1.232</td>
<td>0.025</td>
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<tr>
<td>Tertiary</td>
<td>0.437</td>
<td>0.468</td>
<td>1.305</td>
<td>0.322</td>
<td>0.501</td>
<td>2.329</td>
</tr>
<tr>
<td>sum</td>
<td>2.553</td>
<td>2.296</td>
<td>4.007</td>
<td>2.310</td>
<td>3.131</td>
<td>3.093</td>
</tr>
</tbody>
</table>

*EGW – electricity, gas and water

Our analysis uses Gauteng’s input output tables. The manufacturing sector’s role as the engine of growth based on its output linkages vis-à-vis other sectors is borne out by this analysis (refer to Table 3.1). Manufacturing is more backwardly integrated to all the other sectors. Manufacturing demand has more stimulatory potential on economy wide intermediate output than services. A one unit increase in manufacturing final demand can potentially stimulate economy-wide intermediate output by 4.0 units; which is more than services impact on economy-wide intermediate output (3.1 units) given an equivalent rise in final demand.

Also illustrated is that the service sector is more backwardly dependent on manufacturing as a source of demand than vice versa. A one unit increase in manufacturing’s final demand results in a direct and indirect stimulus in services of 1.31 units. The stimulus to service output from manufacturing demand is more than the stimulus in manufacturing’s output on account of an equivalent increase in service final demand (0.67 units). Essentially manufacturing is more backwardly integrated to the rest of the economy than services.

**Figure 2.1: Backward linkages and employment multipliers of sectors**
An analysis of linkages and employment multipliers (as illustrated in Figure 1) from our input analysis allows us to identify potential sectors for policy targeting.

Table 2.2 Potential sectors for policy targeting based on backward linkages and employment multipliers

| -Transport equipment          | -Metals, metal products, machinery & equipment* |
| -Wood & paper, publishing & printing | -Transport services* |
| -Textiles, clothing & leather | -Catering and accommodation* |
| -Food, beverages & tobacco   | -Electrical machinery and apparatus* |
| -Other non-metal mineral     | -Radio, TV, instruments, watches and clocks* |
| -Construction               | -Furniture and other manufactures* |

Input-output analysis allows us to study the material interconnections between industrial sectors and highlight strategic sectors on the basis of strong backward linkages and employment multipliers. As a purely quantitative exercise, input-output analysis is both limited to the availability of quantitative data and tells us nothing about the extent to which linkages are local, nor can it tell us to what extent domestic linkages can be realised. The next section looks at global value chains and industry clusters to provide economic analysis that takes us further than I-O analysis.

2.2 Global value chains and Industry clusters

More than the material interconnections between firms and industries, industrial structures have important institutional and spatial dimensions that cannot be captured by input-output analysis. A Global Value Chain (GVC) is understood as the network of labour and production processes whose end result is a finished good that is ready for end consumption. The GVC approach constitutes a valuable analytical tool for understanding the processes by which value-added or
surplus is created at different nodes in the supply chain and the way in which it is distributed along supply chains. In this way, value chain analysis can identify challenges and constraints against deriving greater value added or the capture of higher value added sections of the supply chain through upgrading. GVC analysis focuses on the organisation of production (reflecting economic power relations) as determining the pattern of surplus distribution. According to the GVC approach, in the distribution of the surplus among different participants in a value chain are caused by changes in their political and economic power as the market structure evolves (Talbot 1997).

A value chain has three main dimensions:

i) **An input-output structure** describing the physical production processes;
ii) **A territoriality** describing its spatial organisation; and
iii) **A governance structure** that describes the way in which activities are coordinated along the supply chain.

The input-output structure of a value chain allows the application of an accounting framework to be used to decompose price into value added in each of the sectors or countries which directly or indirectly contributed to the supply of a particular product, allowing changes in the distribution of surplus along these chains to be observed (Gereffi 1994). A value chain can also be characterised by a particular structure of production, be it distributed geographically or among different sizes of firms, and finally, it has a particular governance structure. The structure of a particular value chain “determines”, as well as results from, the excess profits, or rents that appear at different stages of the value chain. Changes in the structure of the chain occur through the struggle for rents as actors along the chain attempt to increase the income and profit they derive from their participation (Kaplinsky 2000).

The concept of industrial clusters is closely related to the value chain. There have been many definitions of clusters, the most common defines a cluster as “groups of firms, businesses, and institutions that co-locate geographically in a specific region and that enjoy economic advantages through this co-location” (vom Hofe & Chen 2006, p21). Firms in a cluster are generally inter-dependent. Therefore, clusters do not only refer to horizontal inter-dependencies such as those found with competitors. They also refer to vertical inter-dependencies involving buyer-seller relationships along the supply chain.

Swann et al (1998) outlined a set of advantages and disadvantages that are associated with being in a cluster. They split these into demand side and supply side perspectives.

The development of supply chains is also a crucial aspect of global competitiveness today. Increasingly open markets and the entrance of many new global suppliers have lead to new challenges in terms of gaining and maintaining global competitiveness. The new global economy has been characterised as a networked environment. In reaction to greater pressures in terms of consumer demands, firms have organised into a web of supply chains both within and across national borders. **Firms no longer compete against each other. Instead, supply chains become the competitive forces that drive markets. Here, the performance of the individual firm is**
related directly to the strengths and weaknesses of the firm’s collaborative partners in the supply chain. (Jespersen & Skjott-Larsen 2005)

3 Analysis by targeted sector

Preliminary studies on specific targeted sectors were carried out for the Industrial Policy Framework for Gauteng. The objective with respect to the selected sectors going forward is to conduct detailed sector studies, culminating into sector action plans (SAPs) to be executed by the respective sector desks. The sectors for which preliminary work was conducted as part of the GIPF are:

- Food and beverages
- Furniture
- Textiles and Clothing
- Construction
- Machinery and Equipment
- Automotives and Components

Apart from the Automotives sector, we have also concentrated in sectors that have not been identified in previous provincial strategies. A number of these medium-tech and labour intensive industries have been identified within both IPAPs, namely food and beverages and textiles and clothing. Construction has been selected owing to the importance of current and future infrastructure spends in the province.

It is worth noting that global markets in these sectors are dominated by dominant global value chains and well known global brands. The fact that global competition between the dominant brands and value chains has become fiercer does not necessarily mean that developing countries and their regions, such as Gauteng, cannot compete in these markets. A really important fact for industrial policy is that the advances in these industries because of the competition can easily be absorbed by Gauteng’s enterprises. Many of these advances can be integrated into Gauteng’s enterprises without huge outlays on new capital equipment or intellectual property rights.

Advances in industrial organisation and production techniques can be learnt and assimilated for a fraction of the costs of developing these new systems. The advances in packaging branding, marketing, and distribution can be drawn on easily and without great costs. Many of the advances in ICT have become commercialised and available through off-the-shelf software and from consulting logistics and engineering services businesses. Further, many of South Africa’s corporations and services providers have experience in achieving ISO certification and improved business management strategies, including ‘6-Sigma’, developed by Motorola in the 1980s.

Therefore, entry and growth into many of these ‘medium tech’ sectors is achievable by Gauteng’s existing firms and potential new entrants. The barriers to entry in most of these sectors is relatively low and new entrants and existing industries can build their domestic value chains, improve management and technologies and draw on advances in branding and distribution over
time. In short, these sectors not only have the advantage of having relatively high linkages with other sectors and high employment multipliers, they also are sectors where productive enterprises can engage in a process of searching and learning to catch up with the corporations at the leading edge of production globally.

With the support of national and provincial industrial policy the enterprises in these sectors have the potential to become more productive quicker. Further, they can absorb unskilled and semiskilled labour and through a process of skills development and on-the-job training engage in incremental productivity improvements that will move them beyond domestic and regional markets into global markets over time.

3.1 Food and Beverages
The Food and Beverages sector was highlighted as a potential strategic sector through our input-output analysis on the basis of maximising both backward linkages and employment multipliers.

The Strategy for a Developmental Green Economy in Gauteng highlights local food production as an important strategy. It recommends that Gauteng should address food security by increasing the production of food within Gauteng Province whilst simultaneously generating significant employment and building a stronger regional food economy through diversification and value-adding initiatives. To this extent, the recommendations of the Green Strategy are very much in line with recommendations here that have been based upon maximising backward linkages and employment multipliers.

In addition, Agro-processing, linked to food security and food pricing imperatives has been identified as a new area of focus for national industrial policy. Provincial programmes can both complement and utilise a number of Key Action Plans outlined in IPAP2. These include: i) establishment of a National Food Control Agency; ii) development of the organic food sector; iii) development of high-value agriculture niche markets – organic cotton; iv) competitive enhancement in the fruit and vegetable canning industry; v) promote exports of beneficiated Rooibos and Honeybush products.

3.2 Furniture
The once promising industry that had faster export growth than import growth at the start of democracy has fallen prey to stiff import competition. Much of the growth in furniture exports was attributable to the depreciation in the Rand/$ exchange rate which made South African exports competitive. The appreciation in the rand as commodity prices have risen has reversed this trend.

The main constraints to greater backward integration of the furniture supply chain come from the high costs of raw materials namely timber and steel. These high costs have led to the substitution of locally produced inputs for imports. While in principle, importing components for domestic
value addition can make economic sense, we argue that the un-competitiveness of local components such as springs and foil are the direct result of anti-competitive pricing of raw materials. The uncompetitive pricing of key raw materials, including steel, is serious constraint faced by many manufacturing industries and must be addressed at the national level. Provincial government might be able to complement national strategies to reduce the cost of key inputs through interventions that give incentives for the use of domestic inputs, for example through lower borrowing rates for the purchase of local inputs.

Local suppliers of intermediate inputs find it difficult to supply smaller furniture manufacturers owing to the need for bulk orders in order to produce. Here provincial government might extend support to SMMEs in terms of collective sourcing of intermediate inputs. Such an intervention would strengthen backward supply chain intervention.

Another constraint faced by furniture suppliers in terms of upgrading to higher value-added production comes from the lack of investment in technology and innovation. Gauteng has the largest concentration of furniture manufacturers in the country. There is therefore scope for the provincial government to engage with and strengthen furniture industry associations in order to provide a conduit for knowledge and skills enhancing programmes, possibly by engaging with foreign partners in order to transfer key knowledge of export markets.

The power of retailers compared with furniture manufactures has had the effect of eroding margins for furniture manufacturers who find it increasingly difficult to compete with imports on the basis of price. Here, the development of the Gauteng Brand and incentives for retailers to stock locally produced furniture can have a positive effect on the development of the provincial furniture industry.

Further, the role of Government as a consumer of furniture should be considered. Schools, clinics, hospitals and government departments and agencies require furniture. As a major customer, government can break the stranglehold of retailers on the value-chains though purchasing directly from producers. Government can support domestic producers through developing long-term relationships and contracts with producers.

There could be massive demand for furniture as a result of increased access to housing due to national and provincial government initiatives to increase housing stock. It would seem that consideration should be given to South African mass production of affordable, decent quality furniture for low income households. There could be scope for mass production by larger manufacturers or there could be support for small and medium manufacturers that meet local needs. At a minimum government should coordinate the supply chain between the housing delivery agencies, contractors, furniture manufacturers, trade unions and community representatives. Government support could further extend to developing quality standards and ensuring that prices are kept within an affordable range for furniture for low income households, particularly those supported by housing delivery.

There is evidence that many furniture retailers exploit poor consumers through the types of financing arrangements they offer these consumers. Government should examine the possibility
of regulation of financing arrangements. Gauteng Province could also consider direct state involvement in provision of short-term lending for purchase of furniture, white goods and appliances. Larger manufacturers of furniture for low income households should be encouraged and incentivized to get involved in retailing and finance as well.

Government could support small producers by reducing barriers to entry to the industry and ensuring great value chain coordination and clustering. Government could support facilitating specific types of infrastructure, capital equipment and services that are too expensive for individual SME manufacturers to do in-house. Government could also negotiate with inputs suppliers to ensure that SMEs are supplied and to limit the disadvantages of size with regard securing timely supply of inputs. Government support for retailing and distribution would also help SMEs.

The need for technological upgrading and innovation within the industry has also been highlighted as an important mechanism to enhance competitiveness. In the absence of technology transfer via access to export markets, there is scope for interventions in the cooperative upgrading of the industry into higher value added product lines.

3.3 Textiles and Clothing
The current IPAP (2010) states among others - the following opportunities for development in the sector:

- improving competitiveness through a range of interventions including a focus on innovation and new technology, export capabilities, training and incentive support measures;
- the achievement of firm and value chain competitiveness through the further implementation of the Clothing and Textiles Competitive Programme (CTCP);
- the recapture of the domestic market through value chain competitiveness upgrading; implementation of production incentives; development of SME clusters in CMT production.

Opportunities for strengthening backward linkages from apparel manufacturing to textiles are scarce and previous efforts have been unsuccessful. In terms of supply chain development, opportunities lie within clothing manufacturing through upgrading into higher value-added production.

The sector faces a number of serious constraints in terms of diversifying away from low value-added manufactures. The strength and volatility of the Rand and the surge in illegal imports from China have both had negative effects on the sector. While the exchange rate cannot be dealt with at the provincial level, there is much that can be done to curb illegal imports through better policing of large wholesale and retail outlets.
The lack of skills, particularly at the management level, has been identified as a constraint faced by the industry. The IPAP outlines national level interventions for skills development. Such interventions can be made more effective at the local level by taking into account the particular structure of clothing manufacturing taking place in the province. For example, programme design and implementation of micro CMTs located in Johannesburg CBD require different interventions from a clothing manufacturer employing 50 people. The organisation of CMT microenterprises into cooperative structures, and the formalising of informal manufacturers, will facilitate support and intervention in skills development and innovation. Sector specific technology and skills upgrading programmes can also be rolled out through support for SMMEs.

### 3.4 Construction

More specifically on the provincial side, the following institutional problems were highlighted:

a. The local/provincial governments are not planning properly. This is attributed to the constant change in procurement personal with every election cycle. Therefore a person who has been employed on a five year contract has a short term planning horizon.

b. Lack of technical expertise within government as these have either retired or have been released as a result of employment equity. Therefore, provinces are without personal that can identify bottlenecks in the infrastructure and thus design plans to correct them.

c. Provinces are not spending their budget allocations fully.

While construction companies tend to be geographically dispersed across the province, there is significant cooperation between construction firms. Construction firms with large contracts will often subcontract others. There is also cooperation in the joint submission of tenders.

The cooperative nature of construction firms and the well integrated upstream supply chain act as a strong basis on which the provincial government can enhance efficiency further by enhancing the procurement process on the demand side. Efficient procurement systems and an up to date central supplier database will enhance the ability for the province to use procurement as a policy lever for industrial development. This is discussed in greater detail in chapter 5. Further, the government could also help making it easier for civil construction firms to take advantage of the infrastructural demands within the rest of the continent as is done by other states such as France.

### 3.5 Machinery and Equipment

Machinery manufacturers suffered in the wake of trade liberalisation. Many found themselves unable to compete with imports and have therefore either stopped producing or have become assemblers based on imported inputs and distribution channels for foreign firms. Machinery relating to mining and municipal infrastructure has the largest local demand. Power boilers, valves and pumps remain important machinery manufacturers within Gauteng. The main
On the demand side, much can be done in terms of improving government procurement processes for the ongoing maintenance of municipal infrastructure. There can also be better incentives for procurement of locally manufactured machines and equipment.

On the supply side, there has also been increasing competition from imports in intermediate inputs, particularly in terms of cast metal components. Once again, the major constraint faced by local manufacturers of intermediate inputs is the high price of raw materials: steel and scrap metal. While IPAP outlines national level interventions through the stronger implementation of competition policy, provincial government can intervene to complement these efforts. First, there can be better incentives such as better borrowing rates for firms who procure locally produced intermediate inputs. Recapitalisation and upgrading of the foundry industry through government programmes could also help to in part offset the high costs of raw material inputs.

DED, through the Gauteng Tooling Initiative (GTI) and also the National Foundry Technology Network (NFTN) that is located at the CSIR, will work toward the recapitalisation of the industry and the development of much needed industry skills. The GTI is therefore listed as a strategic programme in this GIPF to emphasise the interconnectedness of different initiatives.

### 3.6 Automotives and components

OEMs have less autonomy over their procurement policy because these decisions are centralized at the parent company level with the help of global mega suppliers.

The once diverse component manufacturing sector has been rationalized.

Two spheres of government must come on board to assist the autos sector. The president of the National Association of Automotive Component Manufactures, Ken Manners, says that government’s continued support is required to “equalise our global base of competitiveness because of:

- Distance to [major] markets
- Subsidised competitors (especially investment subsidies)
- Raw material monopoly
- Costly ports and domestic logistics” (Naacam directory, 2009)

A Gauteng based OEM stressed the importance of improving the transport infrastructure because high costing logistics are contributing to South Africa’s lack of competitiveness in vehicle assembly. A representative of the auto components manufactures requested that the Gauteng government must liaise with the sector more often in a structured format so that they can discuss manners in which the province can be of more assistance. Logistical constraints were also highlighted by the auto component representative as a barrier to trade.
4 Sector Portfolios and Institutional Arrangements

The DED will establish sector desks each focusing on a portfolio of three sectors per desk staffed by qualified teams of sector specialists. Each desk will perform sector development over a period of three years aiming to achieve specific outcomes. The first outcome of the sector teams will be to develop sector strategies based on detailed sector studies of the sectors in their portfolios. These sector strategies must comprise of key action plans that endeavour to achieve the following outcomes amongst others:

- Improved profitability based on margins that are not exploitative to buyers
- Long term sector viability and sustainability
- Increased output or volumes
- Increased capital investment (including foreign and domestic investment)
- Improving sector skills availability
- Increased sector export performance and lower import penetration (import substitution)
- Increased employment generation (direct and indirect)

Key performance indicators (KPIs) will be developed for the abovementioned outcome areas and the sector desks performance will be measured annually on the basis of these KPIs.

The sector teams will interact closely with all stakeholders particularly industry players to ensure that they buy into the outcomes as defined per the sector strategies developed. Sector development work will be taken very seriously henceforth by the DED and its agencies and these governmental stakeholders will all be required to contribute towards the outcome areas. The vagaries of international market developments will be taken into consideration however when performance is evaluated.

The national Department of Trade and Industry (the dti) in the National Industrial Policy Framework (NIPF), has outlined strategic programmes to promote industrial development. It must be noted that industrial financing is such a strategic programme that is available to manufacturers. Furthermore, the dti administers incentives for investors to expand their operations and it will be expected of the sector teams to facilitate access by firms and SMMEs to these facilities to ensure they are able to expand operations.

With regards to the configuration of the portfolios, the sector desks will each service the following industrial sectors:

In terms of sector portfolios and the findings of the GIPF, the following sector desks will be established focusing on three sectors groupings each:

<p>| Table 4.1 Sector portfolios or grouping |</p>
<table>
<thead>
<tr>
<th>CAPITAL/TRANSPORT EQUIPMENT</th>
<th>SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transport equipment, automotives and components</td>
<td>1. Tourism</td>
</tr>
<tr>
<td>2. Machinery and equipment, electrical</td>
<td>2. Business process outsourcing</td>
</tr>
<tr>
<td>3. Tool, die and mould making (TDM)</td>
<td>3. ICT and ICT-enabled industries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESIGN AND CREATION</th>
<th>GREEN ECONOMY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clothing, textiles, footwear and leather (CTFL)</td>
<td>1. Alternative sustainable energy sources: wind, biomass, solar, biofuels etc.</td>
</tr>
<tr>
<td>2. Film, crafts and creative industries</td>
<td>2. Waste management and recycling technologies</td>
</tr>
<tr>
<td>3. Jewellery design and manufacture</td>
<td>3. Industrial energy efficiency</td>
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<th>FURNITURE, PULP AND PAPER, OTHER MANUFACTURES</th>
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<tr>
<td>1. Furniture and other manufactures</td>
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<td>2. Wood, pulp and paper</td>
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<td>3. Publishing and printing</td>
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The Sector Desk teams will have to rely on up to date market intelligence and are expected to command a good grasp of the sectors under their care. They will also have to cultivate good relations with the business management organisations (BMOs) operating in their sectors. Furthermore, the sector desk teams must have a strong client orientation as they will be doing client management to a great degree. Strong legal and business establishment services experience will also be extensively employed in their interactions with foreign investors.

The Sector Action Plan (SAP) will be a blueprint to guide sector development work and it must outline clear milestones and timeframes, phasing the milestones into annual cumulative targets over three years. The sector portfolios are also not static but will be reviewed and updated with relevant other sectors after the three year period (2010 – 2012).

The SAPs will be signed off by the relevant authority and monitoring and evaluation (M&E) must take place on a quarterly basis. It is imperative that this structured monitoring system be put in place in order to ensure that targets and indicators in terms of the outcomes are achieved. The following section outlines the levers that need to be employed by the sector desks to achieve the stated outcomes.
In terms of phasing implementation over the medium term expenditure framework (MTEF), it is proposed that the following portfolios be prioritised:

- Green economy
- Capital and transport equipment
- Services

The green economy agenda is so critical because of the potential constraints that it will place on economic growth if it is not immediately implemented. Further delay will also put the provincial and national economies at a disadvantage to comparative regions globally because most governments have realised the importance of ‘greener development’. Gauteng Province has also recently completed its **Green Economy Strategy 2010** and prioritising green economic activities will ensure the implementation of the strategy. A further advantage with the focus on green is that the so-called green agenda does not refer to a sector per se, but applies across a number of sectors and should be approached more like a portfolio of projects.

The prioritisation of the Capital/Transport Equipment portfolio is because the rapid de-industrialisation that is observed is affecting industries such TDM severely. The danger with this is that once these capabilities are lost it would be hard to replace and therefore the tide must be stemmed before it is too late. South Africa and Gauteng particularly are in the midst of a drive to modernise transport networks across road, rail and air. This planned reinvestment and upgrading presents an ideal opportunity for reviving manufacturing activities such a rail coach manufacturing and/or repair amongst others. Critical capital equipment can therefore be supplied locally, potentially decreasing costs and improving social welfare.

Gauteng has also committed extensively to infrastructure investment especially in automotive assembly and components manufacturing. These are standing commitments and may need to expanded and thus a continued focus on such areas is complementary to existing projects.

The prioritisation of services sectors between 2011/12 and 2013/14 is to provide a balance in the first instance between manufacturing and services oriented sectors. Secondly, the recent hosting of the FIFA 2010 Soccer showpiece could still see the country and province experiencing increased visitor numbers. It is therefore important to build on those successes, tourism promotion is also quite labour-intensive and is a source for jobs growth. The province’s commitment through investment in tourism infrastructure (e.g. Cradle of Humankind and Dinokeng Game Reserve) are also further compelling reasons for keeping a focus on tourism.

The BPO&O Marketing Strategy being implemented by the Gauteng Economic Development Agency (GEDA) is also expected to increase the number of BPO&O ventures going forward.
Gauteng Province is on the verge of launching an ICT sector strategy. This will be timeous as it will coincide with the GIPF implementation phase. The ICT sector strategy must then ensure ICTs play the critical role of enabling economic growth and must thus be properly supported.

The priority sectors contained in the portfolios outlined above can be replaced with a different portfolio after 2013/14 if necessary. This will ensure that industrial policy remains dynamic and addresses the challenges at hand.
5 Policy Levers and Strategic Programmes

A brief summary of each of the strategic policy levers and programmes identified in the Gauteng Industrial Policy Framework are discussed below. Much more detail is provided in the complete Industrial Policy Research document.

SP1 Sector Strategies

The quality of the design and implementation of our sector strategies will be critical in the realisation of the outcomes expected of the GIPF. Gauteng, as the leading provincial economy in SA and on the continent, has a relatively diversified and complex industrial base that will require advanced planning and execution to achieve the outcomes desired of industrial production.

Each sector team will be responsible for designing well-informed sector strategies as per the priority sectors in their portfolios. The sector strategies must be accompanied by detailed action plans outlining the roles and responsibilities, actions to undertaken and timeframes for the relevant agencies involved in those sectors. Furthermore, the action plans must also outline resource requirement over the medium term expenditure framework (MTEF) in terms of the actions plans.

The performance with regards to the action plans will be monitored on a quarterly basis in terms of the KPIs that will be developed to measure achievement of the outcomes for each sector.

SP2 Strategic Infrastructure Investment

Strategic infrastructure investment should be broadened to include new projects and continued maintenance of existing projects for the provision of social as well as economic infrastructure. Gauteng Province in 1993 established the Strategic Infrastructure Investment Programme (SIIP) which evolved into present day Blue IQ (Pty) Ltd. which successfully implemented eleven catalytic projects. This can be defined as the first generation (1G) projects and included amongst others the Gautrain Rapid Rail Link.

It is therefore imperative that enhanced strategic infrastructure investment initiatives or second generation (2G) projects must be conceptualised taking into account the lessons learnt from the 1G projects. Furthermore, it must be designed and closely aligned with the programme for strategic procurement to maximise the local impact of infrastructure spends through local procurement. The policy proposal of the establishment of a Provincial Strategic Procurement Team needs to be investigated urgently as this is consistent with the role of objective of increased localisation of supply for strategic infrastructure investment programmes.

The critical stakeholders in this regard include GPG sector departments, GPG municipalities, state-owned enterprises (SOEs), provincial government agencies and other entities. Advanced
planning and budgeting, local manufacturing supplier development are critical elements of this proposed 2G strategic infrastructure investment programmes.

**SP3   Strategic procurement**

The Provinces Strategic Procurement programme should be at the core of the overall industrial development strategy. The role of this programme is to maximise the developmental impact of Government expenditure on new infrastructure as well as ongoing expenditure on the maintenance of infrastructures and consumables used in schools, hospitals etc. The strategic procurement programme should also be closely linked with SMME support programmes, Trade and Investment Facilitation programmes and the Gauteng Green Economy Strategy in terms of supply chain development with the aim of maximising local content along the supply chain.

The establishment of a detailed and up to date supplier database across the broad range of goods and services procured both directly and indirectly through government expenditure. Successful implementation of the provincial strategic procurement programme will require considerable technical capabilities and logistical expertise and there is scope to establish a Gauteng Strategic Procurement Team. This team would play a crucial role in assessing provincial procurement needs in terms of new spends and ongoing infrastructure maintenance, identifying local suppliers and gaps in local supply.

**SP4   SMME Support**

The recommendations for SMME support coming out from our research concern the development of local supply chains in order to maximise the developmental impacts of government expenditure and private investment. SMME support should include supplier development programmes along the lines of NIPP. It should also involve a process of building institutions (either new or building on existing ones) that ensure that cooperation and competition is managed in order to ensure more optimal outcomes in terms of supply chain development. For example, support can be provided in the establishment of cooperatives so that SMMEs can jointly tender for large contracts.

**SP5   Trade and Investment Facilitation**

A number of policy levers can be utilized at a provincial level in addition to the investment and financing programmes within the IPAP. These policy levers are directed at providing incentives to business to use local inputs as well as favourable lending rates to local suppliers. As learnt from BNDES in Brazil, the interest rates at which loans are dispersed should depend upon whether it is for the financing of activities that promote the national industrial development objectives.

**SP6   Reducing the cost of doing business in Gauteng 2009 (Implementation Framework)**
The implementation framework for ‘reducing the cost of doing business in Gauteng 2009’ should be cognisant of the strategic goals of supply chain integration and development and supplier support programmes particularly in terms of the cost of doing business for SMMEs. The DED undertook a study to assess the business environment in 2009.

The findings of the study showed that challenges related to the ease and cost of doing business spans a range of areas. These are related to infrastructure, business conditions, government efficiency and practices, crime and corruption amongst others. Priority recommendations for provincial and local government were identified to implement in order to support economic growth. The recommendations for areas to be improved by provincial and local government include amongst others:

- Investment in infrastructural maintenance and improvement
- Addressing crime and increasing community safety
- Supporting skills development
- Improving the government-business interface
- Government staff efficiency and process improvement

Enhancements in the areas mentioned will prove as critical means towards industrial development and assisting the sectors identified towards achieving efficiencies. If coupled with the strategic programmes to be implemented at national government level, these will go a long way towards improving private sector productivity and output.

**SP7  Gauteng B-BBEE Strategy**

The Gauteng B-BBEE Strategy must be aligned with both the national strategy and provincial industrial policy. An effort should be made to encourage B-BBEE in targeted industries that form part of the strategy to addressing industrial structural weaknesses in South Africa. B-BBEE should be encouraged and supported in productive industrial and services sectors that get state support to increase decent work opportunities and environmental sustainability. B-BBEE should be encouraged in renewable energy projects and in the environmental services industry. There should also be an effort to ensure that B-BBEE is directed towards manufacturing and construction of inputs for goods that are procured by government. Adequate levels of concessional finance should be secured to support both small and medium and large black owned firms involved in targeted industrial sectors.

**SP8  Gauteng Green Economy Strategy**
In addition to the suggestions in the Gauteng Green Economy Strategy the Gauteng Industrial Policy should use existing support programmes and develop new greener industry programmes that incentivise and support moves towards more green production. On the one hand support for industries that produce products that address environmental problems directly, such as water saving equipment and solar water heaters, should be supported. On the other, greener production within existing and new industrial plants must be encouraged, incentivised and supported.

**SP9 Gauteng Tooling Initiative**

The tool, die and moulding (TDM) industry has an important role in the manufacturing sector in the province and country. The industry manufactures much needed equipment employed as inputs into the manufacturing of other finished goods. It is estimated that the industry directly employs 3,000 employees nationally and supports 75,000 downstream jobs. Gauteng Province accounts for about 35% of firms operating in this industry. This particular industry has however seen an erosion of much needed investment and skills with the result that employment creation has suffered. As a result, ongoing investment and re-investment in infrastructure and human resource development is required. The value chain of the TDM industry can be represented as follows:

**Figure 5.1 The tool, die and moulding industry value chain**

The Gauteng Tooling Initiative (GTI) is a provincial response of the National Tooling Initiative (NTI) to the challenges experienced by the TDM industry. The interventions to be formulated
under the auspices of the GTI, which is a public private partnership (PPP) entity between the GPG and industry, will thus serve as a critical pillar in reviving the TDM industry.

6 Conclusion: a framework for industrial policy action

The aim of industrial policy should be to move the economy towards higher value-added and more advanced technological development where knowledge plays a greater role. However, we have to consider the conditions in the economy and we have to recognize that this move will take time and effort. It cannot be achieved with the current industrial structure and therefore requires the shift towards building a larger and more diversified industrial base. Central to this strategy would be an alignment with education and training policies. Given the decent work agenda, the enhancement of skills in the workplace would require a move away from informalisation and casualisation of employment towards employment where there is adequate wages, benefits, job security, training and a career path.

The first phase of implementing industrial policy will require a focus on relatively more labour intensive sectors, particularly those sectors that can grow by drawing in unskilled and semiskilled workers. Further, the sectors supported should be sectors with strong links to other sectors. This industrial policy identifies those sectors. Further, this industrial policy focuses on industrial structure and transforming the industrial structure. The low levels of clustering in the province are a concern. Therefore, support should be given to building value chains and clusters.

The following actions are considered to be critical and must immediately follow the approval of the policy framework by the relevant authorities:

An important part of the industrial policy would be to build infrastructure and capacity that supports a range of sectors and value chains. Some of these initiatives such as support for foundries and tool making will enhance and build clusters where proximity and sharing infrastructure will lead to positive economic outcomes across a number of enterprises. Further, the technological development and innovation supported in the targeted sectors could have positive spinoffs for existing advanced manufacturing sectors, which will be supported through their inclusion in value chains and clusters. As mentioned above, there have been many advances in sectors referred to as low and medium tech. These include use of ICT, advanced materials, biotechnology and other advances. It also includes advances in packaging and logistical and production engineering services. These advances may also support productivity growth in enterprises through promoting energy efficiency, cleaner energy sources, less use of material inputs, less waste and overall better environmental outcomes. Support for growth and development of the targeted sectors, given their relatively high level of linkages with other sectors, should support a virtuous cycle of investment in productive, downstream, relatively labour intensive manufacturing sectors and services sectors that support them.
Cross-cutting issues identified as important are decent work, broad based black economic empowerment, small, micro and medium enterprises, infrastructure, technology and innovation and spatial dimensions of development and the green economy. The shift to new industries and investment in productive sectors will require different kinds of interventions. BBBEE will have to be supported in manufacturing and productive services and less in mining, finance and higher rent sectors. Most South African SMMEs are in services, therefore, there will have to be a shift in the types of support given to small businesses. Further, new kinds of infrastructure and a break with current path dependency in technological development will be required. All of these developments have huge implications for spatial aspects of development.

Shifting to this new growth path will require more social dialogue and coordination. It will require an active government with more staff dedicated towards the implementation of industrial policies and more staff to build institutions of planning and coordination. It will require a strong commitment from the political leadership of the Province and an effort by them to convince existing strong businesses and coalitions of the need to shift onto a new economic growth path and to support a different kind of industrial development.