Promote labour-absorbing industrialisation

Broaden participation

Raise competitiveness

Industrial Policy Action Plan

Economic Sectors and Employment Cluster

IPAP 2013/14 – 2015/16

the dti
Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA

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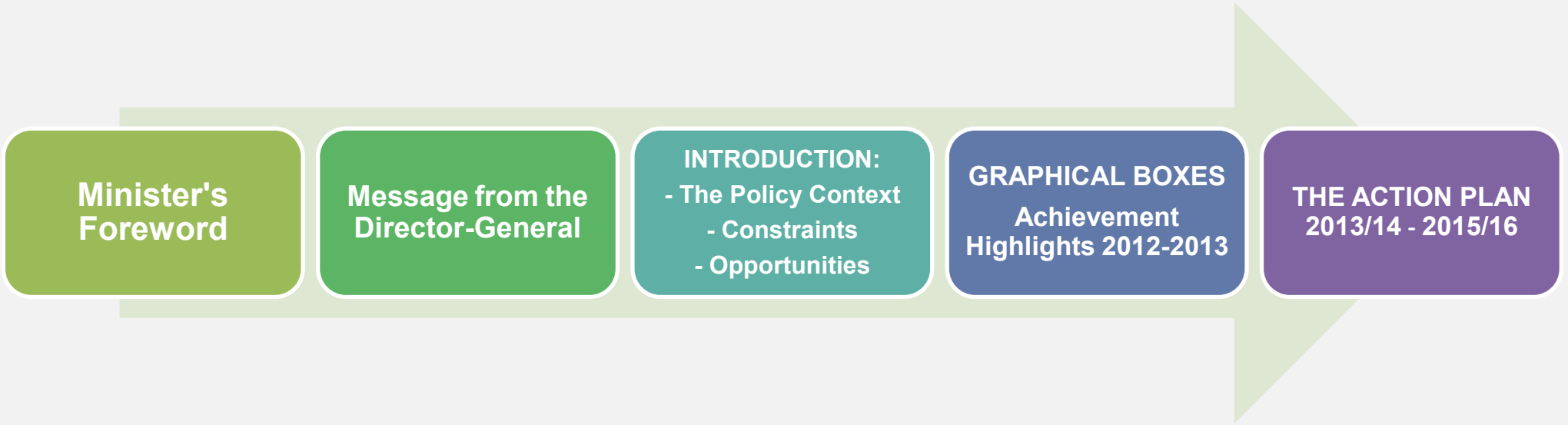
HOW TO READ THIS DOCUMENT

THIS YEAR'S INDUSTRIAL POLICY ACTION PLAN (IPAP) MAKES A DISTINCTIVE BREAK WITH ITS PREDECESSORS IN TERMS OF "LOOK AND FEEL"

The intention has been to make it as user-friendly as possible, not just to direct stakeholders and insiders, but to any interested and informed lay reader. The idea is that it should be a document that encourages the reader to return to it as an accessible reference point throughout the year.

With this in mind – and while continuity with the logical framework of previous IPAP iterations has been carefully maintained – much more effort has been put into showing how all the components fit together: graphical boxes and structural diagrams have been selectively introduced wherever they can contribute to a quicker grasp of the way IPAP interventions connect and support each other in delivering on the plan's core objectives. In this way, it is hoped that the document will be widely circulated, well used and better understood.

HERE, THEN, IS THE FIRST "SNAPSHOT" OF ITS OVERALL STRUCTURE:



CONTENTS

FOREWORD BY THE MINISTER 6

A MESSAGE FROM THE DIRECTOR-GENERAL 9

INTRODUCTION 10

THE POLICY CONTEXT FOR IPAP 11

The role of manufacturing 11

The global economy and the manufacturing sector 12

Structural imbalances and the manufacturing sector 13

CONSTRAINTS AND THREATS 19

OPPORTUNITIES FOR INDUSTRIALISATION 20

THE ROAD AHEAD 22

IPAP 2012-2013: ACHIEVEMENT HIGHLIGHTS 23

PROGRESS IN THE IMPLEMENTATION OF IPAP 24

IPAP TRANSVERSAL HIGHLIGHTS 25

IPAP SECTOR HIGHLIGHTS 28

THE IPAP IN DEPTH 33

MAPPING THE FIELD: IPAP TRANSVERSAL INTERVENTIONS 34

IPAP TRANSVERSAL INTERVENTIONS 35

Public Procurement 35

Harmonising strategic approaches to local procurement 35

Industrial Financing 40

Developmental trade policy 43

Competition Policy 51

Regional integration 54

Skills for the economy 59

Innovation and Technology 65

Special Economic Zones (SEZ) and Industrial Development 68

MAPPING THE FIELD: IPAP SECTORAL INTERVENTIONS 1 72

Sectors supported since 2007: scale up and broaden interventions 72

IPAP SECTORAL INTERVENTIONS 1 73

Clothing, Textiles, Leather and Footwear 73

Automotives 77

AUTOMOTIVES: THE MOVE FROM MIDP TO APDP 80

Metal Fabrication, Capital and Rail Transport Equipment 81

Agro-Processing 86

Biofuels 92

Aquaculture 94

Plastics, pharmaceuticals, chemicals and cosmetics 96
Plastics 96
Pharmaceuticals 97
Cosmetics 101
Forestry, Timber, Paper, Pulp and Furniture 103
Forestry 103
Sawmilling sector 105
Furniture manufacturing 106
Business Process Services 108

THE MONYETLA STORY IN DEPTH 112

Creative industries: Craft, Music and Film 113
Craft 113
Music 114
Film and Television 115

SECTORAL INTERVENTIONS 2 119

QUALITATIVELY NEW AREAS OF INTERVENTION 119
Green industries 119
Renewable Energy 121
Energy Efficiency 123
Downstream Mineral Beneficiation 124
Upstream Oil and Gas 127
Boatbuilding and Associated Services Industry 131

SECTORAL INTERVENTIONS 3 135

DEVELOPING LONG-TERM ADVANCED CAPABILITIES 135
Nuclear Energy 135
Advanced Manufacturing 137
Advanced Materials 137
Aerospace and Defence 139
The Electro-Technical Sector 141
Electricity Prepayment Meter Manufacturing (EPPMM) 141
The South African Software Industry 144

ABBREVIATIONS AND ACRONYMS 147

FOREWORD BY THE MINISTER

The IPAP 2013/14-2015/16 is in its fifth iteration and covers the last full financial year in the term of the present administration. Its publication provides an opportunity to reflect upon the key achievements, critical constraints and ongoing challenges experienced since the publication of the first IPAP in 2007. It also provides an opportunity to set out the new policy and operational platforms that have been put in place during this period. This is important because these lay the foundation upon which an extension, deepening and more timely deployment of industrial policy instruments can be achieved.

The IPAP 2013/14-2015/16 is informed by the vision set out for South Africa's development provided by the National Development Plan (NDP). It is located in the framework provided by the programmatic approach of the New Growth Path (NGP) and is one of the key pillars of that document. The National Industrial Policy Framework (NIPF) adopted by Government in 2007 provides the more general industrial policy framework for IPAP and the blueprint for Government's collaborative engagement with its social partners from business, labour and civil society.

The overriding goal of the IPAP in this policy context is to prevent industrial decline and support the growth and diversification of South Africa's manufacturing sector. The balance of international evidence is that manufacturing is the engine of growth and employment of all economies that have achieved high gross domestic product (GDP) and employment growth. Manufacturing can generate significant job creation directly as well as indirectly in a range of primary and service sector activities.

At the same time, experience over the past year reinforces a point articulated in previous iterations of IPAP: namely, that industrial policy can and does succeed if it is well designed, adequately resourced and informed by robust and constructive stakeholder dialogue.

The IPAP is a product of the Economic Sectors and Employment Cluster of Government and its iterative annual format has served as a useful tool to strengthen intra-governmental integration and co-ordination. Experience during this period also confirms the view that the annual publication of a 'rolling' or iterative IPAP has encouraged wider debate and more constructive engagement by all sections of society. In particular, the manufacturing sector has benefitted from the transparency of the policy perspectives and the time-bound Key Action Plans (KAPs), which are set out for each transversal and sector-specific intervention in the IPAP.

The publication of successive annual iterations of IPAP in this format has also served to strengthen and deepen Government oversight and accountability for the targets and milestones it contains; and to facilitate the oversight and deliberative roles of the National Assembly, National Council of Provinces (NCOP), National Economic Development and Labour Council (NEDLAC) and manufacturing sector stakeholders.

It is also important to make the point that both industrial policy and the wide range of interlocking policy instruments deployed in its name are critically underpinned not only by the partnership and support framework Government has been able to provide for the manufacturing sector, but also by the growing effectiveness of the enabling instruments IPAP has been able to put in place to improve manufacturing competitiveness and address the complex and deep-seated structural imbalances that characterise the South African economy.

The sectoral achievements of the past year create a springboard for deepening and extending industrial policy across other sectors. A major advance was the finalisation of the transition from the Motor Industry Development Programme (MIDP) to the Automotive Production and Development Programme (APDP), which now includes the Medium, Heavy and Commercial vehicle segments of the industry. The efficacy of Government interventions has been demonstrated by very large private sector investments, including the public transport segment of the industry, as well as by increased levels of local assembly and exports.

A significant turnaround in the fortunes of the Clothing, Textile, Leather and Footwear industry has been achieved, bringing relief to a sector that has been in deep distress. Not only has the tide been turned with respect to factory closures and lay-offs; but gains have also been registered in recapturing domestic market share and developing close-working relationships between Government, manufacturers and domestic retailers. A modest increase in exports has been achieved; most notably in the footwear sector.

The deployment of a range of new procurement policy levers has produced a sea-change in the general environment of industrial development. These instruments include:

- Designations for local procurement;
- Deepening of localisation in the large fleet procurement processes of State-Owned Companies (SOCs);
- Localisation in the renewable energy generation programme; and
- Increasing acceptance and implementation of localisation targets across the spectrum of state procurement regimes.

The incremental re-orientation of the Industrial Development Corporation (IDC) towards industrial development objectives has come a long way. In parallel, important new initiatives have been launched, including the inception and successful roll-out of the Manufacturing Competitiveness Enhancement Programme (MCEP) and sector-specific financing support mechanisms for key sectors such as Agro-processing and the Green Industries.

Significant progress has also been registered in implementing a range of trade measures – tariffs, standards, and compulsory specifications – to ensure that momentum is maintained in the shift away from a singular focus on facilitating trade as an end in itself, towards concentrated strategic support for the manufacturing sector. Similarly, Government efforts to stem the tide of illegal imports and customs fraud – which constitute a grave danger to domestic manufacturers and an unfair advantage to competitors – have steadily been gathering momentum. This intra-governmental work is led by the Customs Division of the South African Revenue Services (SARS).

These and other achievements, set out in more detail in this year's IPAP, underscore our contention that much has been achieved over the recent past, even as we reiterate that much more remains to be done. Our approach to the complex and demanding work that lies ahead is embodied in the principles of continuous improvement and learning-by-doing, which underpin the overall effort of the Department of Trade and Industry (**the dti**).

It is for this reason that in addition to a wide range of new action plans for transversal and sector-specific interventions, IPAP 2013/14-1015/16 sets out certain new and embryonic policy directions and plans that need to be further developed and embedded in action plans for future iterations.

Principal among these are initiatives that will flow from Government's intention to leverage South Africa's enormous resource endowment into a beneficiation effort that can turn around the country's existing and unsustainable dependence on the export of unprocessed commodities, while at the same time providing a competitive advantage to domestic manufacturing in the form of developmental commodity prices.

This work assumes even greater importance in circumstances where our historical competitive advantage in cheap electricity has become a thing of the past. It is also important that all the programmes of IPAP are aligned to the roll-out of Government's massive infrastructure development programme, under the auspices of the Presidential Infrastructure Co-ordinating Committee (PICC). This will ensure that IPAP remains fully synchronised with overall efforts to support local manufacturers and avoids the possible 'sucking in' of large volumes of infrastructure-related imports, with consequent negative impacts on the current account balance.

The achievements of industrial policy set out in summary in this document have been hard-won in extremely complex and difficult global and domestic circumstances. Most importantly, on the international front is the longest and deepest global economic crisis since the Great Depression, impacting particularly on demand from South Africa's traditional trading partners. On the domestic front, major constraints to industrialisation have included long periods of currency overvaluation and ongoing volatility; sharply escalating and 'bunched up' administered prices – especially electricity and port charges – and a significant skills deficit and demand-supply mismatch in many areas of the domestic economy. At the same time, complex and still unresolved social and labour relations issues have come to prominence in the public arena, impacting negatively on the project of developing a strong and inclusive domestic economy.

If we are to overcome these constraints, restructure and grow our way out of our difficulties, the economic imperative will be to consolidate our strengths in the spheres in which we are today globally competitive, while at the same time greatly intensifying our efforts to build a fully diversified, globally competitive, manufacturing sector, the most important pillar of labour-absorbing growth and social stability. Top priority must be given over the coming years to developing a high-impact, more comprehensive and environmentally sustainable industrial strategy.

But making such a commitment has important implications that need to be squarely faced. What it means, quite simply, is that whatever trade-offs have to be made in terms of hard monetary, fiscal and policy choices, primacy must be given to the production sectors of the economy – particularly to non-traditional tradable, value-added exports, green industries and renewable energy.

We are confident that, with a genuinely shared collective commitment between Government, labour, business and civil society, the rejuvenation of our productive sectors can be achieved and consolidated. We have largely weathered the storm of 2008/09, learning hard lessons and making important gains in re-orientating the economy. We have begun to negotiate the complex shifts in trade policy required by our BRICS membership and our efforts to engineer a better balance between defending against low-cost competitors, building stronger linkages with the fastest-growing and most dynamic economies and taking advantage of large emerging consumer markets for value-added products in Asia, Africa and Latin America.

Having recently hosted the highly successful fifth BRICS Summit in Durban, the time is ripe to build on our different economic strengths and leverage complementarities in key growth sectors and value chains. If we pursue this path with energy and determination the real chance exists that we will be able to shift the whole South African economy into a higher gear. It is this kind of equitable, socially inclusive path that will allow us to protect the hard-won gains of our democracy.

Dr Rob Davies, MP
Minister of Trade and Industry

A MESSAGE FROM THE DIRECTOR-GENERAL

The publication of the IPAP 2013/14-2015/16 signals the culmination of significant work and learning over the previous financial year. It fulfils the plans set out in IPAP 2012/13, as captured here in the key progress highlights for the year.

Each successive iteration of the IPAP sets out in some detail the next three years' plan for **the dti**. The IPAP is the apex policy document of **the dti**. It informs the strategies and programmes of the various divisions of the department responsible for trade, investment, export promotion and enterprise development, as well as the work of the incentive division, which directly supports and underpins the work of the Industrial Development: Policy Development Division. The IPAP, therefore, informs and provides a focus for the strategies and programmes of these sister divisions.

Since the IPAP is a plan of the Employment and Economic Sectors Cluster of Government it serves as a roadmap of industrial development for the other departments that actively partner with **the dti** in delivering on all the KAPs where there is shared responsibility for important programmes of national Government.

At the same time, IPAP provides direction and a participatory framework for provincial and local government authorities. For instance, we are increasingly seeing the other spheres of government beginning to own and implement the procurement policies that have been developed and included in successive iterations of IPAP.

On behalf of **the dti**, I wish to express my profound appreciation to all the other government departments that have worked with **the dti** over the past year.

The same appreciation is owed to all those institutions – too many to mention here – that fall under **the dti** 'umbrella' and to other allied institutions such as the Competition Commission, the International Trade Administration Commission (ITAC) and the IDC, all of whom are indispensable partners in the collective efforts of Government.

This appreciation is also due to Government's social partners in industry, labour and civil society that have partnered with us. Both the progress achieved over the last year and our resolve to do more in the year to come are underpinned by the conviction that our efforts are strengthened immeasurably if we work together to grow the economy, create jobs and build a more equitable and just society.

Lionel October
Director-General
The Department of Trade and Industry

INTRODUCTION

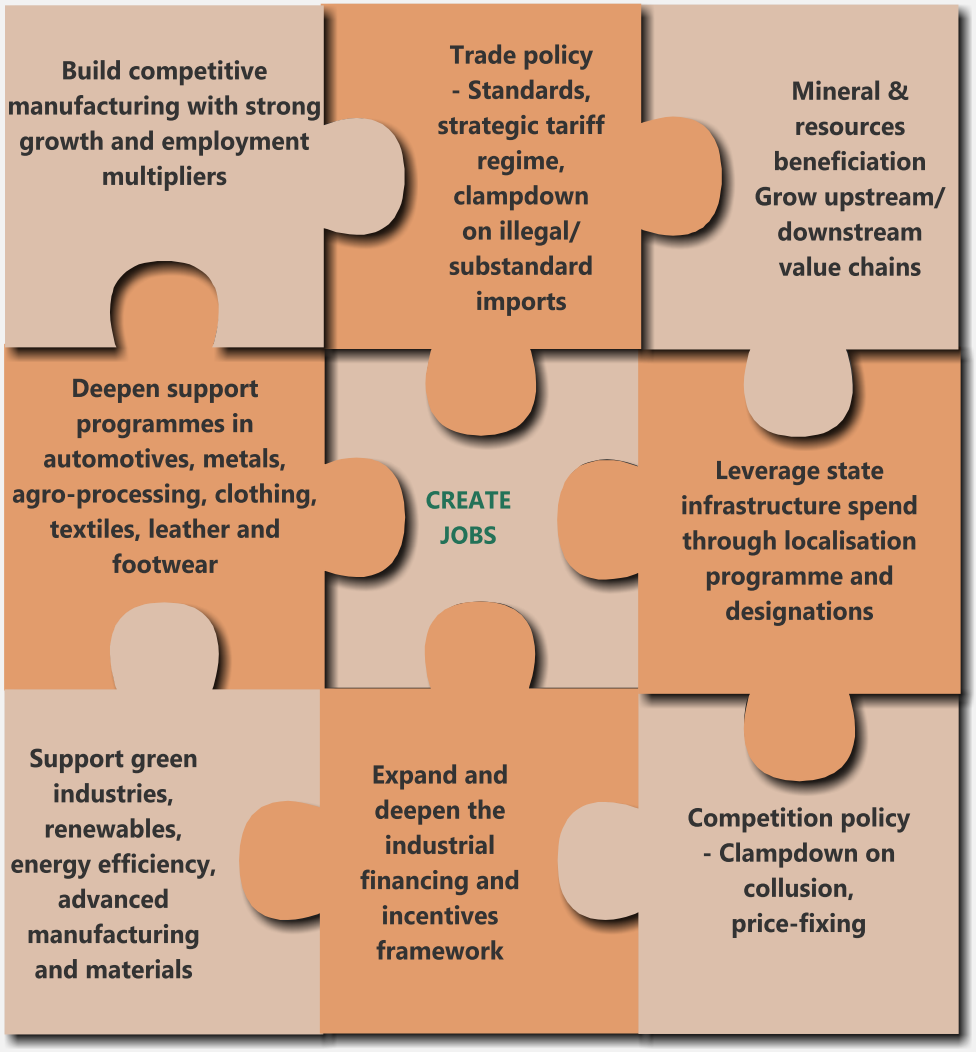
IPAP 2013/14 – 2015/16

The IPAP 2013/14–15/16 is the fifth iteration of what has come to be commonly referred to as IPAP2. The transversal and sector-specific programmes and interventions outlined in successive iterations of IPAP have sought to achieve the following objectives in a process of continuous improvement and learning-by-doing;

- Enabling and strengthening the internal alignment and co-ordination between **the dti** divisions responsible for important related work: industrial development; trade policy; investment and export promotion; incentive support and enterprise development.
- Continuously scaling-up transversal policy interventions by removing KAPs that have been achieved and adding new ones where relevant and appropriate.
- Strengthening and deepening sector plans with the addition of new KAPs based on policy research and stakeholder engagement to identify and correct market failures in key sectors during the previous year. (This process includes the removal of KAPs achieved and, in limited cases, the removal of those that for a variety of reasons have proven unworkable.)
- Enabling and contributing to intra-governmental alignment and co-ordination across a range of Action Plans where other government departments have shared responsibility or are the lead department(s).
- Enabling and strengthening oversight of the time-bound action plans by the executive, Parliament and society at large.

The IPAP also summarises the transversal and sector-specific key progress highlights from the work carried out in 2012. Full progress reports are independently submitted to the executive, legislature and NEDLAC.

FITTING IT ALL TOGETHER



THE POLICY CONTEXT FOR IPAP

The role of manufacturing

South Africa's long-term vision of an equitable society is provided by the National Development Plan. The IPAP is informed by this vision and is both framed by and constitutes a key pillar of the programmatic perspectives set out in a series of 'drivers' and 'packages' contained in the NGP.

Government policy set out in these and other documents seeks to ensure a restructuring of the economy to set it on a more value-adding, labour-intensive and environmentally sustainable growth path.

Principal among the more specific policies is the NIPF of **the dti**, which has the following key objectives:

- To promote diversification beyond the economy's current reliance on traditional and non-tradable services via the promotion of value-addition, characterised particularly by the movement into non-traditional tradable goods and services that can compete effectively in export markets and against imports.
- To promote a labour-absorbing industrialisation path, with the emphasis on tradable labour-absorbing goods and services and the systematic building of economic linkages that create employment.
- To promote industrialisation characterised by increasing participation of historically disadvantaged people and marginalised regions in the industrial economy.
- To contribute towards industrial development in Africa, with a strong emphasis on building the continent's productive capacity and securing deeper regional economic integration.
- To ensure the long-term intensification of South Africa's industrialisation process and movement towards a knowledge economy.

Sustainable long-term development should be underpinned by higher growth, exports and labour-intensive, value-adding economic activity in the production sectors, led by manufacturing. It is widely and increasingly acknowledged that manufacturing should play the critical role in this adjusted model of economic development. The economy is not made up of a set of discrete and isolated activities, but a range of primary and secondary sectors that are fundamentally interlinked and mutually supportive, requiring carefully calibrated, interlocking interventions. This approach is particularly relevant to a resource-rich economy such as South Africa's where:

- Manufacturing has substantial direct employment-creation potential and is the engine of rising per capita income and employment through its stimulation of the rest of the economy. Rising per capita incomes are particularly important for sustained growth and employment creation in the consumption-driven service sectors of the economy, which have become critically dependent on unsustainable levels of household debt. This impacts acutely on women, particularly the working-class and poor urban and rural women. In this regard, the expansion of manufacturing employment can play a significant role in bringing more women, both urban and rural, into the formal workforce and, in particular, providing rural women with access to expanded employment opportunities in the agro-processing and crafts sectors.
- Manufacturing is central to our export strategy, based on value-added, labour-intensive tradable products that generate revenues that have a significant, positive impact on the balance of trade.
- Manufacturing plays a critical and indispensable role as a driver of innovation and productivity growth.
- Manufacturing must increasingly provide machinery and other inputs for the infrastructure build programme, which is central to South Africa's growth strategy and, more generally, into public goods, including transport, health, education and housing.

- An enhanced role for manufacturing in providing these inputs to the infrastructure programme will be critical in reducing its dependence on imports and mitigating wider vulnerabilities, particularly on the balance of trade.
- The evolution and strengthening of manufacturing should be organically linked to the development of an energy-efficient, less carbon-intensive growth strategy designed to limit wasteful resource consumption and mitigate the impact of economic development on the environment.

The NIPF and successive IPAPs have consistently made the point that manufacturing has a vital role to play in dynamising employment and growth in the economy. It has also been stressed that industrial policy should be framed and driven by a particular focus on value-adding sectors that embody a combination of relatively high employment and growth multipliers.

As measured through backward linkages, manufacturing sectors 'pull through' inputs from primary and other manufacturing and services sectors and transform them into high-value products, stimulating employment along the entire value chain. These sectors provide an additional impetus to employment and growth through forward linkages to 'downstream' sectors, predominantly in services. Manufacturing companies depend upon service providers for production in IT, financial services, travel, security and so forth. In this sense, manufacturing 'creates demand' for services inputs and should play an increasingly central dynamising role in the economy. This positive dynamic – a combination of direct and indirect effects – must be developed and deepened if we are to achieve the necessary step-change towards mitigating and eventually overcoming the serious structural imbalances that characterise the South African economy.

The global economy and the manufacturing sector

South Africa's manufacturing base has remained relatively robust and diverse across a range of sectors, despite the prevalence of a wide variety of sector- and company-specific constraints on productivity and competitiveness.

But it has become increasingly clear over recent years that a confluence of factors – external and internal to the domestic economy, short-term and structural – have created a situation where this diversity and capacity have been placed under severe threat.

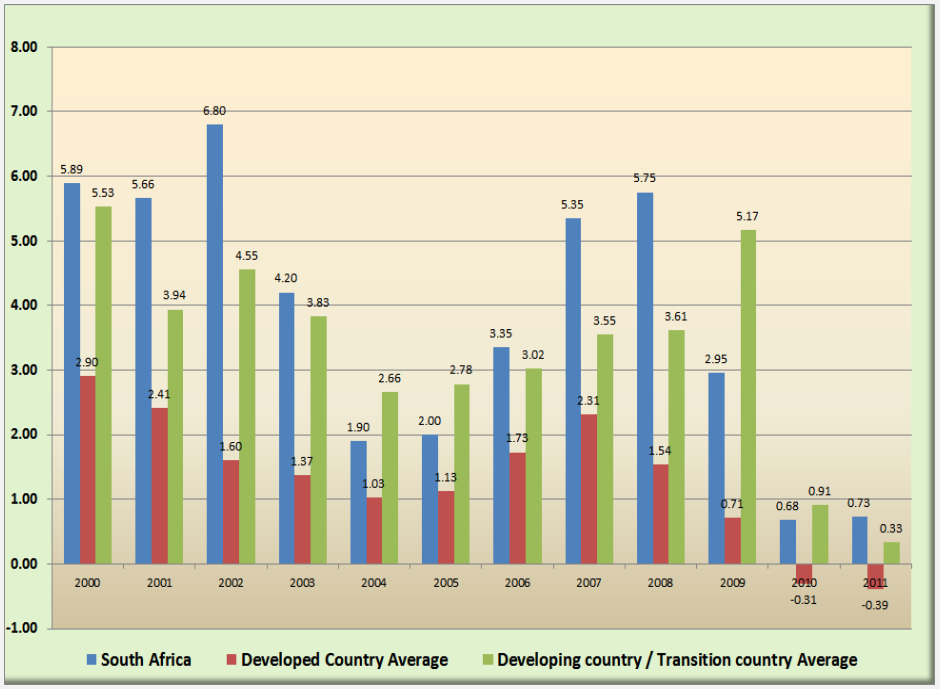
Firstly, the deepest and longest global economic recession since the Great Depression led to the loss of 28 million jobs worldwide and one million jobs in South Africa. On the one hand, the recession has had strong adverse effects on demand from South Africa's traditional trading partners in the Eurozone and North America, significantly lowering opportunities for our domestic exporters. The deteriorating trade balance with the European Union (EU), for example, is reflected in the share of exports to the EU having fallen from 34% in 2001 to 22% in 2011. On the other hand, in the prevailing economic climate, global over-production – particularly in the newly industrialised, fast-growing developing countries – has led to the entry of a wide range of low-priced manufactured goods into the domestic market, negatively impacting upon domestic manufacturers.

Secondly, it is widely and increasingly acknowledged worldwide that inequality constitutes a significant brake on economic and industrial development. South Africa remains one of the most unequal societies in the world, as measured across a range of indicators. Inequality acts to suppress aggregate income and demand and, therefore, production and growth. The absence of a larger domestic market, as a springboard for the building of productive capacity and increased exports, remains a significant problem, with deep and complex social ramifications.

Structural imbalances and the manufacturing sector

South Africa achieved reasonably high growth rates prior to the recession – and particularly during the 2005-2007 period – but its growth trajectory has continued to be hampered by structural imbalances. Pre-dating the onset of the recession – and despite the fact that South Africa did not experience a significant commodity boom – the domestic economy has attracted massive short-term capital inflows into domestic resource and equity shares and the bond market as a direct result of high real interest rates relative to other developing countries.

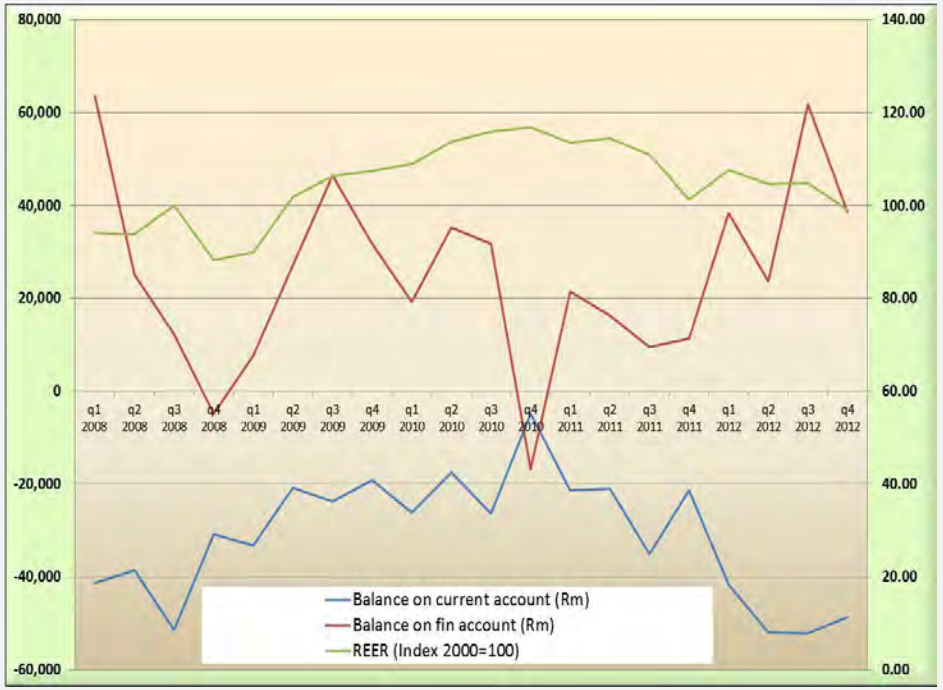
Figure 1: Short-term real interest rates in South Africa and major developed and developing economies



Source: The Economist

This has contributed to preventing the exchange rate from playing its role as a stabiliser of the productive sectors of the economy. The ongoing volatility of the currency has also been a particular problem. Notwithstanding periodic devaluations it has remained consistently over-valued, with South Africa's Real Effective Exchange Rate (REER) routinely figuring among the highest in the world (Fig. 2).

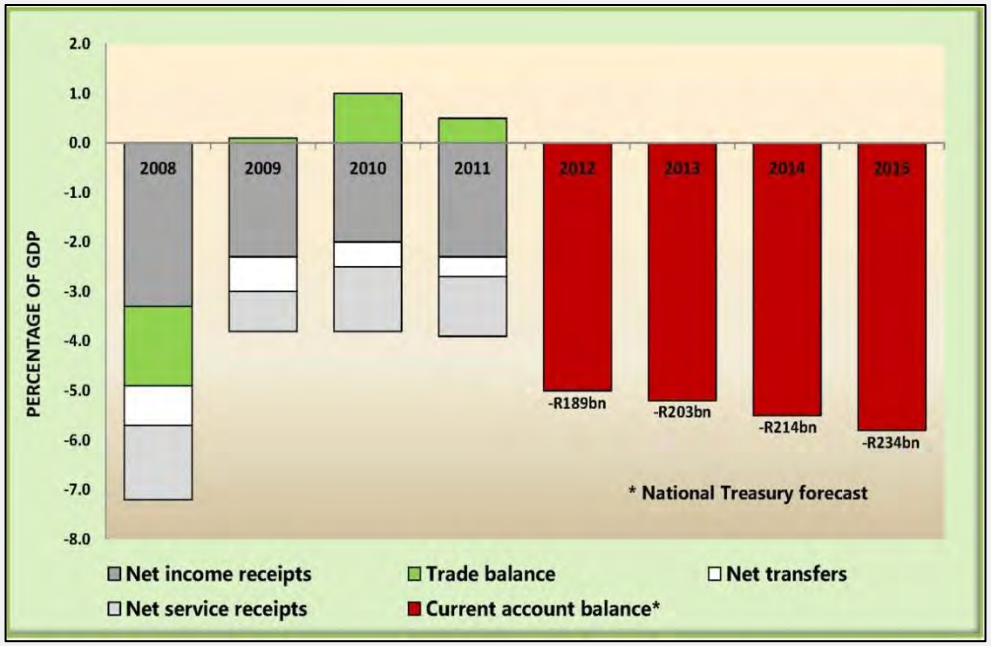
Figure 2: Balance on current account, financial account and real effective exchange rate (R million, Index 2000 = 100)



Source: Quantec

South Africa's growth trajectory has been characterised by a consumption-led, credit-fuelled, import-intensive growth path, with a high and sustained negative balance on the current account – R189 billion in 2012 (Fig. 3).

Figure 3: Current account deficit and projections 2008-2015



Source: Reserve Bank and National Treasury Forecasts

Recent growth in South Africa, also pre-dating the recession, has been driven by consumption and associated unsustainable increases in private credit extension, with insufficient emphasis being placed on the search for a more sustainable growth path underpinned by the growth of the production-driven, employment-creating sectors of the economy.

As things stand, it is the consumption-driven sectors (finance and insurance, real estate, transport and storage, communication, wholesale and retail, catering and accommodation) that have been the driving force of South Africa's modest economic growth, while the production-driven sectors (agriculture, mining, manufacturing, electricity and water, and construction) continue to play a subordinate role (Fig. 4).

This means that formal employment growth occurred chiefly in the services sectors – particularly wholesale and retail – and in the business services sub-sectors. Employment growth in the former has been driven by unsustainable credit-fuelled consumption and in the latter by two main factors: the outsourcing of activities, such as logistics and catering from other sectors, and the steady expansion of the private security sector.

Figure 4: GDP by production and consumption sectors, 1994 – 2011 and Balance on Current Account (R million at 2005 prices)

Source: SARB

As illustrated in Fig. 5 below, significant and sustained growth in the import-intensive retail sector stands in sharp contrast to domestic manufacturing sales, which have reflected a steep decline in domestically manufactured consumer products and industrial inputs.

Figure 5: Percentage growth of manufacturing sales and retail sales

Source: Quantec

Over the past decade and more, the primary productive sectors of the economy have made relatively small contributions to GDP, and South Africa's exports have remained commodity-intensive, with low levels of value-addition. This has been compounded by South Africa's generalised skills deficit and specific sectoral skills mismatches which, taken together, pose a profound developmental problem, with particularly serious ramifications for the skills-intensive manufacturing sectors.

In combination, these factors have resulted in limited growth, which has been unable to overcome levels of inequality and unemployment that are among the highest in the world and continue to seriously inhibit economic growth.

Manufacturing

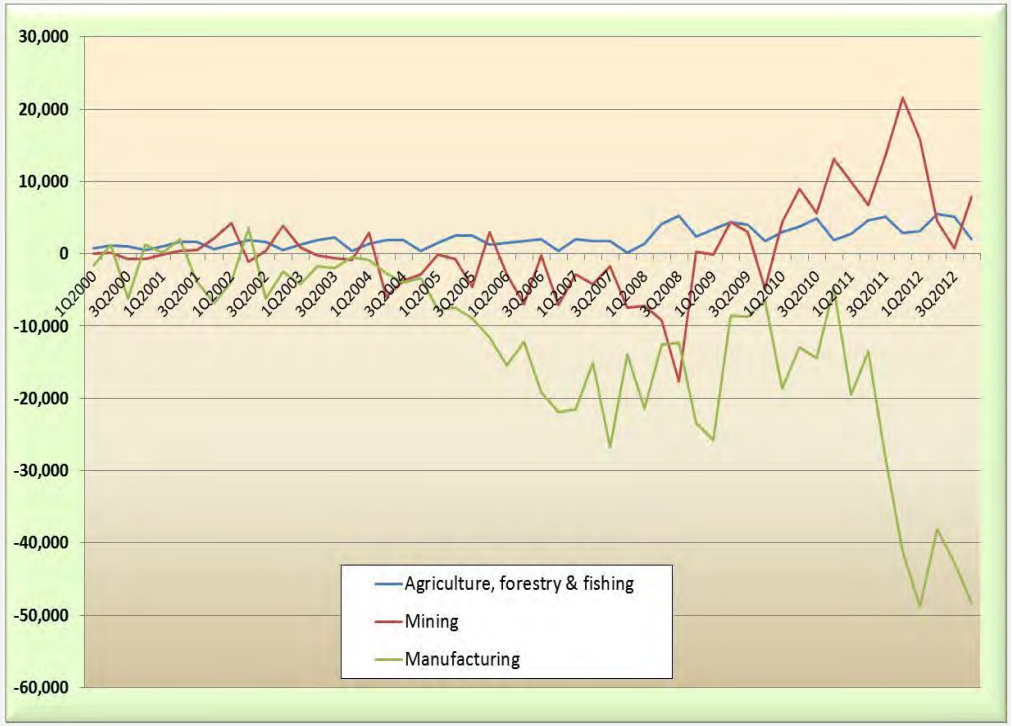
The multiple pressures to which the manufacturing sector has been subjected throughout the recent period have been further intensified by a range of domestic economic shocks including rapidly escalating administered prices – particularly repeated, high-impact electricity price hikes. Although manufacturing growth has recovered somewhat since the onset of the global economic crisis, it has not reached pre-crisis levels and exhibits a steady declining trend over the longer term (Fig.6).

Figure 6: Manufacturing Production and Growth (Seasonally Adjusted)

Source: Quantec

The trade balance by production sector (Fig. 7) demonstrates a significant and increasing negative balance of trade for manufacturing.

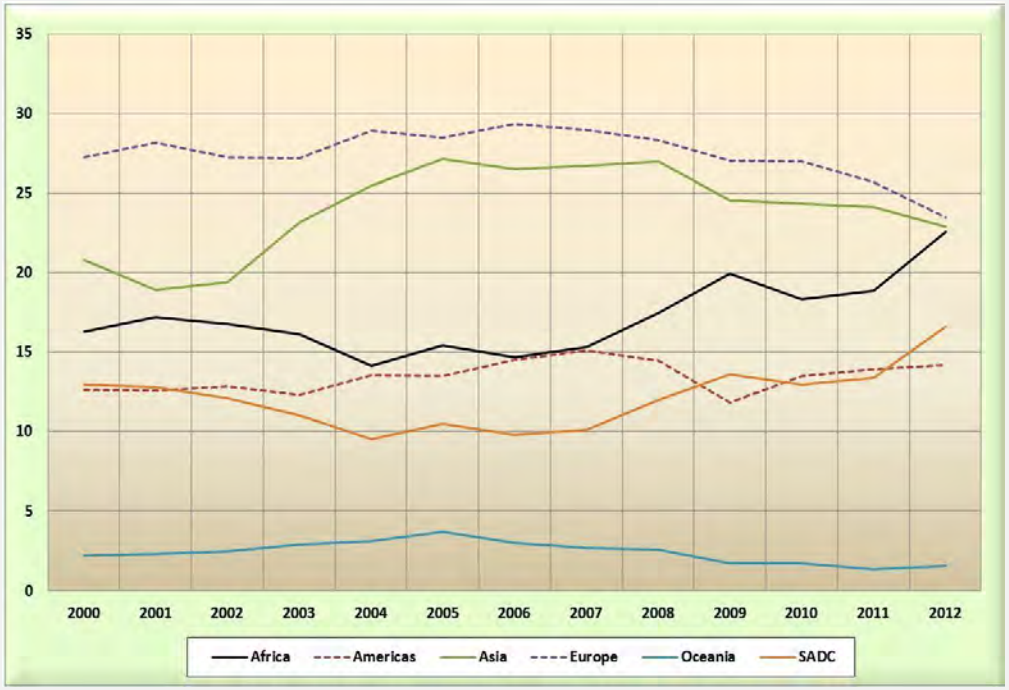
Figure 7: Trade balance by sector (R million) Q1 2000 – Q3 2012



Source: Quantec

Maintaining and regaining the strength of South Africa's exports to traditional trading partners, the Eurozone and the United States (US), remains critically important and will continue to underpin South Africa's industrial effort.

Figure 8: Percentage share of South African exports by region



Source: Quantec

Equally important, however, will be an intensified effort to re-align South Africa's value-added manufacturing exports towards the rapidly developing economies. This has already met with some success, and remains a strategic objective of export promotion. The single most positive factor to emerge in the recent period has been the resilience of manufactured exports to Sub-Saharan African countries, which have held their own overall and shown significant growth in key strategic sectors.

The share of manufactured exports to Southern African Development Community (SADC) countries has increased to 21,8%, somewhat cushioning decreased demand from traditional markets. There is further and significant potential in strategic IPAP sectors such as automotives, transport, capital and mining equipment, agro-processing and chemicals.

Figure 9: Manufacturing exports to SADC by major sector

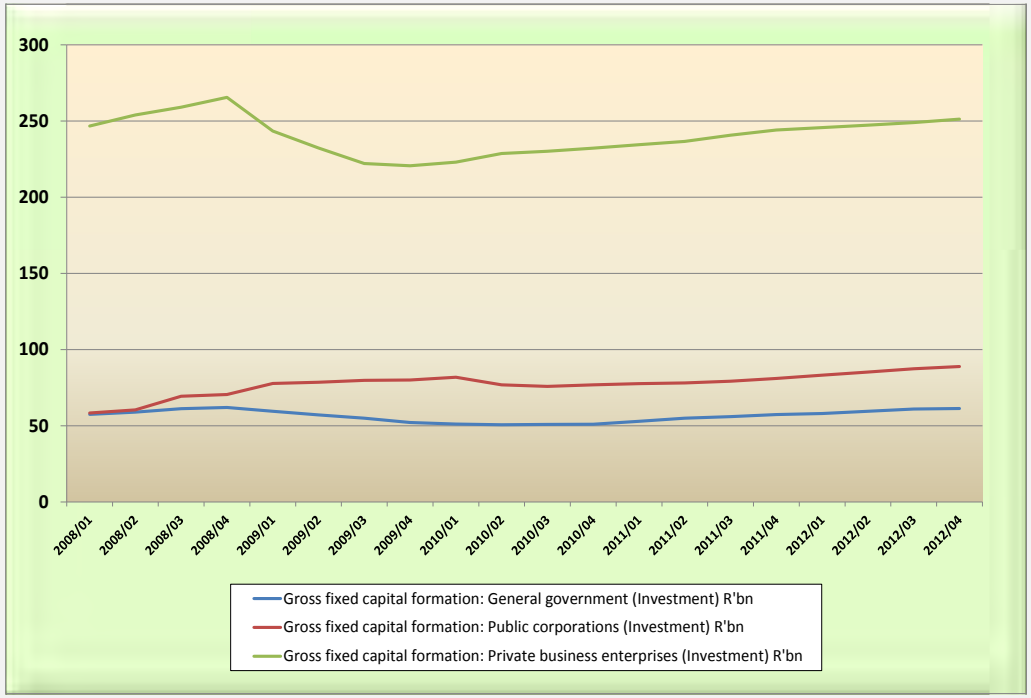
Source: Quantec

Previous iterations of IPAP have made the point that, notwithstanding massive growth in the extension of private credit since 1994, only a small proportion is extended to fixed investment – 6,7% in 2010 and 5,6% in 2011.

Despite relatively low interest rate levels, the underlying real cost of capital in South Africa remains high relative to that of our main trading partners. In manufacturing, the cost-of-capital disadvantage is higher still, with many of South Africa's trading partners benefitting from subsidies and subsidised credit provided through development banks and export credit banks and agencies.

Meanwhile, gross fixed capital formation (of both private enterprises and Government) has shown only marginal growth over recent years.

Figure 10: Real gross fixed capital formation (R bn) Q1 2008 to Q3 2012 (R bn 2005 prices, seasonally adjusted and annualised)



Source: SARB

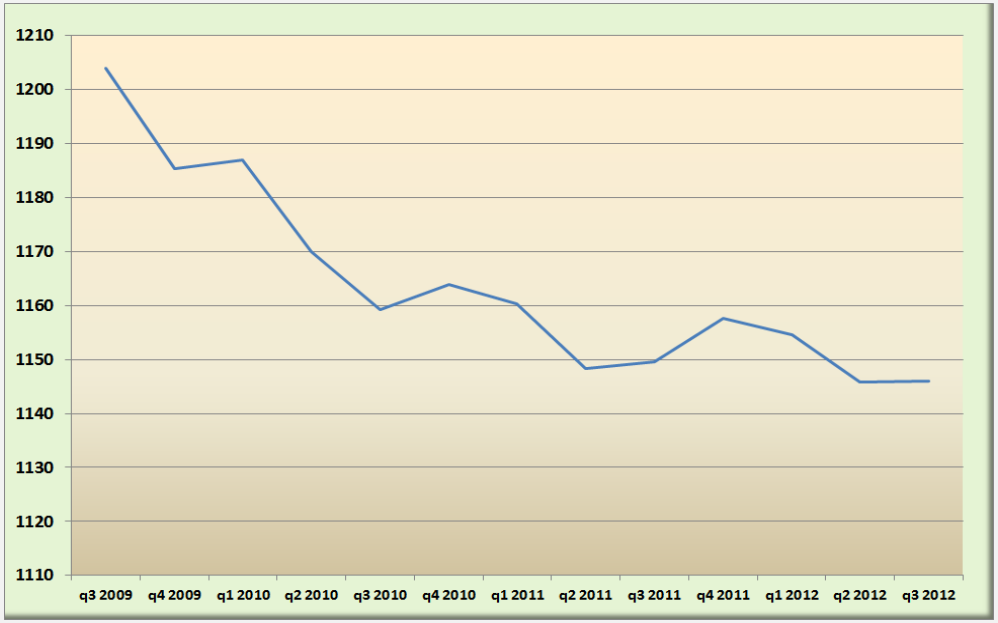
While encouraging in principle, government's very large projected infrastructure spend – R850 billion over the next three years, R4 trillion over 15 years – has not yet significantly picked up momentum. Existing structural blockages and the slow roll-out of public sector infrastructure spending plans remain matters of deep concern for our general growth and employment prospects – and, in particular, for growth and employment in the construction sector. But their impact is also strongly felt in the manufacturing sector, owing to lower demand for inputs.

Furthermore, if the bulk of infrastructure expenditure is financed on the "user pay" principle - and leads to further escalation and additional categories of administered price increases - this will continue to place additional major pressures on the manufacturing sector.

Manufacturing Employment

The recovery in manufacturing employment levels in the third and fourth quarters of 2010 did not last into 2011, against a backdrop of ongoing depressed global and domestic growth (Fig. 11). Manufacturing employment continued to decline from the fourth quarter of 2011 onwards, but seemed to have stabilised in the second and third quarters of 2012. The general trend, however, is a steady and steep decline of manufacturing sector employment.

Figure 11: Manufacturing employment, Q3 2009 to Q3 2012



Source: Stats SA

CONSTRAINTS AND THREATS

The implementation of IPAP has taken place during a period that has witnessed the confluence of the global economic recession, the continued influence of deep-seated structural problems and a set of particular domestic constraints. These include:

- Sharply escalating and 'bunched up' administered prices – most notably double-digit electricity price increases. In some instances, these rise to triple-digit increases where municipal premiums are added and where there is no uniform price structure for companies – in some cases, within one municipal boundary.
- Monopolistic pricing of privately owned key intermediate inputs into the manufacturing sector. The lowering and removal of import tariffs for some of these products, particularly in sectors where single market-dominant firms exist, has provided some moderation of prices, estimated at between 5% and 10%. However, import parity pricing mark-ups are often of a higher order of magnitude, meaning that these tariff reductions have a limited impact on price moderation. The cost of critical intermediate inputs such as steel, plastics and polymers into the manufacturing sectors continues to constitute a major constraint to industrialisation. South Africa's enormous resource endowment should provide the basis for a competitive advantage with respect to a huge suite of input costs into manufacturing. The practices of import parity pricing and excessive profit-taking give rise to a situation where what should be a competitive advantage turns into a disadvantage.
- High port charges for the export of value-added goods, compounded by serious inefficiencies in rail and port freight logistics. The cost of export of value-added tradable goods has for some time been higher than both the cost of exports of primary commodities and the import of tradable goods.

  However, a recent positive development has been the commitment made by the Transnet National Ports Authority (March 2013) to change its pricing model in favour of the export of manufactured goods by lowering tariffs on tradable exports by about 40% as from 1 April 2013. Timely implementation of this initiative will be of significant benefit to South African manufacturing exporters.
- The expeditious roll-out of the public infrastructure investment programme being driven by the Presidential Infrastructure Co-ordinating Commission (PICC) is critical, and will need to be supported by robust localisation measures to ensure that the infrastructure build does not 'suck in' unnecessary imports that could impact negatively on the current account balance.
- Slow progress has been registered with respect to addressing the difficult problem of the skills deficit and mismatch in the economy, particularly for new growth sectors where the shortage becomes critical.
- A significant slowdown has taken place in private sector investment – sometimes described as an 'investment strike' – with a concentration of investment in consumption-driven and capital-intensive sectors. Notwithstanding recent increases in the volume of available funds and improvements in the design and term of loans available from the IDC, the high cost of capital relative to key competitor countries and the generally onerous term of financing for manufacturing remain in place.
- South Africa recently experienced serious volatility and breakdown of labour relations in some sectors of the economy, together with related community-level social unrest related to service delivery and other, more deep-seated institutional and socio-political problems.

OPPORTUNITIES FOR INDUSTRIALISATION

The IPAP is premised on the principle of critical engagement with industry to identify opportunities and constraints and continuous improvement of the corresponding transversal and sector-specific interventions required to unlock industry growth, in close collaboration with all industry stakeholders. In addition, longer term opportunities and policy instruments are identified and inform the research and extensive preparatory work that must underpin the programmes that find expression as KAPs in the IPAP.

The ongoing strength of **the dti**'s work will be deepened from broad sector knowledge to industry- and firm-specific engagement to understand the constraints, unlock the opportunities and develop the appropriate levers for industrial development across sectors.

Key areas of ongoing intervention include:

Beneficiation

South Africa reportedly has the largest reserves of mineral resources in the world (excluding oil), with an estimated value of $2.5 trillion. This endowment is dominated by the platinum group of metals (PGMs) (88% of global reserves), manganese (80%), chrome (72%), vanadium (32%) and gold (30%), but include a range of other substantial mineral reserves.

Mineral beneficiation is an area of work that presents much untapped opportunity, but has lagged in terms of policy development and implementation. Much greater attention will have to be devoted to downstream beneficiation opportunities and the enormous potential that exists to deepen and extend the upstream value chain, with a sharp eye towards meeting the explosion of future demand associated with the sub-Saharan commodity boom.

With this in mind, **the dti** has launched a comprehensive research project that will develop a strategy to identify commercialisation opportunities in projects for forward beneficiation and backward supply chain development in key mineral value-chains.

The project will also seek to craft the policy instruments required to support the further expansion of South Africa's extensive capabilities and competitiveness in this sector.

Infrastructure Development

Another important opportunity is represented by recent Government commitments to massively scale up its own and regional infrastructure investment programmes under the PICC. This offers the possibility of substantially increasing aggregate demand for the key inputs that will be required and, crucially, for the localisation of a wide range of manufactured inputs into the infrastructure build – particularly in the construction, metals, capital and rail transport equipment and renewable energy sectors. A slowdown or interruption of the infrastructure build programme will constitute a threat to its potential positive impact on the manufacturing sector. Significant lessons arising from the Eskom and Transnet build programmes will continue to inform the development of this work.

Regional economic development and industrial integration

Higher resource and agricultural commodity prices have gone hand-in-hand with high rates of growth in many countries on the African continent. This growth impetus can be harnessed to lead to broad-based industrial development across the continent. Regional growth is arguably the biggest stimulus to long-term growth in South Africa. Sustained growth, however, requires the recognition and application of important principles like mutually beneficial interdependence and the need to deepen industrial integration and bilateral trade across the region.

These inter-dependencies include, among other things, trade in goods and services, migration of people, power generation and demand, water and transport infrastructure, finance, and the trans-regional operation of companies, including South African multinational companies.

The policy challenges in this area of work are significant. They range from planning cross-border infrastructure to the effective realisation of upstream and downstream linkages in resource exploitation, to the realisation of massive construction opportunities, hence the inclusion of a strong regional focus in the IPAP since its 2012 iteration.

This work is now the subject of greatly stepped-up research, stakeholder engagement and detailed planning, in the context of complex institutional and governance considerations.

New Export Markets

South Africa has an important opportunity to grow the base of its exports, particularly with respect to its value-added agricultural manufacturing exports to net food-importing countries in the near and Far East and the Gulf states. This requires the strengthening of existing export market research, market and product identification, development and matching, and an export-promotion drive that fully includes strategic domestic manufacturers.

Local Procurement and Supplier Development

The deployment of a range of new procurement instruments across Government has begun to yield significant positive impacts for the domestic economy: for example, the localisation targets in the Transnet and the Passenger Rail Agency of South Africa (PRASA) rail and rolling stock tenders and the supplier development programmes that arise from and have begun to be implemented under the Competitive Supplier Development Programme (CSDP) for SOCs. It is important that the lessons of these programmes are carried over to similar supplier development programmes involving other SOCs and across the full gamut of state procurement.

BRICS

South Africa's participation in the BRICS provides important opportunities to build its domestic manufacturing base, enhance value-added exports, promote technology sharing, support small business development and expand trade and investment opportunities. Innovative proposals relating to the establishment of a BRICS-led Development Bank could contribute to enhanced financial support for domestic and sub-continental infrastructure and regional industrial integration. In the words of Minister Davies: “Deepened co-operation between BRICS countries and Africa offers enormous potential for building Africa-BRICS economic co-operation on a sustainable and mutually beneficial basis.”

These and other opportunities will inform the work of **the dti** and enable the deepening and strengthening of industrial policy in the years to come.

THE ROAD AHEAD

The South African manufacturing sector has borne the brunt of the damaging impacts of the long global recession and a variety of domestic shocks. While manufacturing has been under considerable stress, with severe production cut-backs and job losses in a number of vulnerable sectors, it has largely weathered the recessionary storm.

It is likely, albeit on a tenuous and uneven basis, that the global economy will slowly emerge from its protracted slowdown even as uncertainty and risk remain and may even increase.

It is imperative that having weathered the storm, the domestic manufacturing sector is able to build upon its strengths, overcome its competitive weaknesses and seize new opportunities within an enabling and more strongly supportive Government policy environment.

This will require an understanding of important country-specific opportunities, including those arising from South Africa's resource endowment and geographical location. It will also require alignment with changes in demand arising from significant growth, including consumer demand in newly emergent and fast-growing developing economies.

Policy coherence and intergovernmental co-ordination and integration of programmes and interventions will have to be built on "new analytical rigour and foresight, new capabilities and the conviction to act".

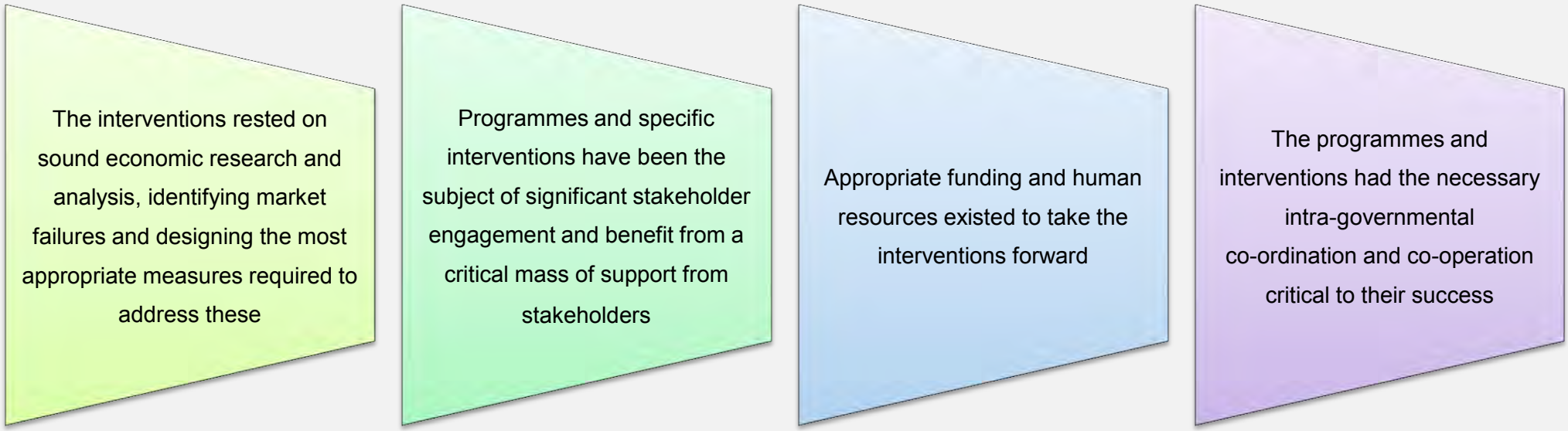
- McKinsey Global Institute: *Manufacturing the future: The next era of global growth and innovation*, November 2012.

IPAP 2012-2013: ACHIEVEMENT HIGHLIGHTS

PROGRESS IN THE IMPLEMENTATION OF IPAP

In this fifth iteration of IPAP, the key progress highlights for the previous year are set out graphically, for both transversal and sector-specific interventions.

These progress highlights do not represent an exhaustive list of all the outcomes and progress platforms built in the course of the previous year. They serve as a snapshot of a much more substantive body of work which underpins these achievements, based on a set of critical and indispensable principles for industrial policy and industrial development. These are as follows:



IPAP TRANSVERSAL HIGHLIGHTS

Public Procurement 1

- **the dti**/Treasury finalised the regulatory framework and verification process to be used by SABS in sectors designated for public procurement
- **Progress on first round sector designations**
  - In December 2012, PRASA awarded a 10-year contract to build 3 600 coaches to Gibela Rail Consortium – committed to achieve 69% local content over the duration of the contract
  - Transnet Freight Rail issued an RFP for procurement of 1 064 locomotives (599 dual-voltage electric and 465 diesel) as part of its R300 billion, seven-year capital investment programme. The RFP incorporated a local content requirement of 55% (diesel) and 60% (electric)
  - Eskom amorphous transformers tender issued: contract awarded to local manufacturers with 80% local content requirement
- **Progress on second round sector designations**
  - R2.55 billionn Oral Solids Tender awarded, with South African firms Aspen Pharmacare and Adcock Ingram winning ±R1 billionn of the tender
  - School and office furniture designated for state procurement

Public Procurement 2

- **"Third wave" of designations** to include:
- Valves, manual and pneumatic actuators
- Electrical and telecommunications cables
- Components for solar water heaters
- **National Industrial Participation Programme**
- Adopted by Cabinet and fully aligned with the Competitive Supplier Development Programme (CSDP), which governs localisation requirements in SOC procurement practices
- **Renewable Energy Independent Power Producer Procurement Programme (REIPPP)**
- Forty-seven bids awarded, with minimum levels of local content ranging from 25% to 45%; set to rise to maximum 65% in solar, wind and solar CSP
- A local content hotline and e-mail address have been established both at **the dti** and SABS to deal with non-compliance on local content
- **Set-top boxes**: The soft launch for digital migration was undertaken by the Department of Communications in September 2012 in the N. Cape
- The technical standard (SANS 862) for STBs was launched by SABS in June 2012 during the ICT Indaba; the process of manufacturing the STB and rollout of digital migration will be kickstarted now that conditional access has been sorted out with broadcasters

IPAP TRANSVERSAL HIGHLIGHTS

Industrial Financing 1

- **Continuing re-orientation of the IDC to finance IPAP/NGP sectors:**
  - IDC calculates that 111,349 jobs were saved or created through funding approvals from 2009 to 2012
  - R12.9 billion worth of approvals expected to create or save approximately 14,500 jobs
  - R5.5 billion committed for investment in the Green Economy
  - R1.1 billion committed for investment in the agriculture and forestry value-chains
  - R501 million approved for the clothing and textiles sector – expected to save 2,400 jobs
  - R5 billion private 'green bond' concluded with the Public Investment Corporation to facilitate funding for businesses looking to invest in clean energy infrastructure developments
  - IDC to lower costs by sourcing R2 billion from the Unemployment Insurance Fund (UIF), specifically for labour-intensive industries
  - Government's Green Fund, administered by the Development Bank of Southern Africa, has processed 590 applications for sustainable development projects worth R10.9 billion

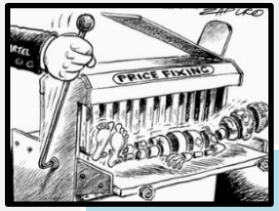
Industrial Financing 2

- R&D Tax Allowance: Since inception (2005/06-2009/10) tax breaks under the scheme are estimated to total about R2 billion
- The 12I Tax Incentive has supported large manufacturing investments worth R6.8 billion, with 1,115 jobs expected to be created
- As at June 2012, R632 million of the available R1 billion rebate to the automotive sector on containers and wheels for export had been paid out
- **Manufacturing Competitiveness Enhancement Programme (MCEP)**
  - Launched in May 2012, with a budget allocation of R5.8 billion over the current three-year MTEF period
  - To date, 110 applications have been approved for grants valued at R512.5 million (under the Production Incentive and the Working Capital Loan Facility). Sectoral distribution as follows:
    - Agro-processing: R384 million
    - Metals: R111 million
    - The remainder spread across the chemicals, plastics, electro-technical, printing and film sectors
  - 16,107 jobs will be retained as a result of MCEP grants
  - 98% of approved applications were for capital investments

IPAP TRANSVERSAL HIGHLIGHTS

Developmenral trade policy

- **MANUFACTURED EXPORTS TARIFF REDUCTION**
  - The Transnet National Ports Authority has committed to changing its pricing model in favour of the export of manufactured goods by lowering tariffs on tradable exports by 40% from 1 April 2013
- **FRAUD, ILLEGAL IMPORTS, SUB-STANDARD GOODS**
  - Roll out of the Customs Modernisation Programme and launch of the South African Revenue Services (SARS)-**the dti** Industry Forum to integrate anti-fraud measures
  - SARS/Customs-led technical capacity upgrading programme under implementation at ports of entry – including real-time electronic systems, risk engine and reference price monitor
  - An electronic case management and inspection process is being rolled out to the Southern African Customs Union (SACU) region, superseding the current manual stop-and-inspect process
  - Work on tackling illegal imports is ongoing in the Clothing and Textile sectors under the Reference Price System; SARS intends extending the system to other sectors
  - An additional 1,500 personnel have been added to Customs Operations to upgrade enforcement capability
  - SARS has also introduced the “Preferred Trader Status” Initiative to importers that demonstrate strict compliance, to reduce the burden on trusted importers



Competition policy

- **FUEL**
  - Competition Commission referred a case of collusion against a group of oil companies to the Competition Tribunal
- **STEEL**
  - Continuing and deepening investigation into excessive pricing
- **CEMENT**
  - Settlement of R148.7 million reached with Lafarge
- **TELECOMMUNICATIONS**
  - Telkom fined R449 million for market abuse
- **FOOD**
  - R88.5 million settlement with FoodCorp on price-fixing in the wheat flour and maize-meal sub-sector
  - Competition Commission settled a R16.7 million price-fixing case in the poultry sub-sector against Astral Operations
  - Oceana fined R35 million for price-fixing

IPAP SECTOR HIGHLIGHTS

Automotives

- **the dti** created a "People Carrier" automotive incentive scheme for minibus and midi-bus taxis, to grow local assembly and production
- Chinese automotive company First Automobile Works (FAW) commences with the construction of a truck plant in COEGA.
- Beijing Automotive Works (BAW) invested R196 million in a taxi assembly plant for the South African/sub-Saharan markets
- Toyota SA opened its new Ses'fikile taxi assembly line in Durban, and a new R363 million parts distribution warehouse (Africa's largest)
- Friedrich Boysen gmbh invested R180 million in a new 10,000m² plant, due to open in mid-2013, which will supply 90,000 exhaust systems annually to Mercedes Benz SA
- Mercedes Benz SA has begun a recruitment drive for 600 new positions in preparation for production of the new C-class in 2014
- 128 projects approved under the Automotive Investment Scheme (AIS); investments of R12 billion; incentives of R3.4 billionn; currently sustaining 56,197 jobs
- In 2012 **the dti**-sponsored three-yr Supplier Development Programme came to an end, with 65 companies having benefitted from improvement interventions
- BMW South Africa introduced a third shift at its Rosslyn plant towards the end of 2012

Clothing, textiles, leather and footwear

- **Clothing and Textiles Competitiveness Programme (CTCP)** has stabilised sectoral production and employment
- Since the introduction of the CTCP, the employment decline has been halted and more than 12,205 new decent permanent jobs have been created
- Some local retailers are now committed to local procurement and participating in **the dti** CIP Cluster programmes. Retailers such as Foschini have even taken over CMT operations like Prestige Clothing to ensure they grow their local procurement
- A combined approval to date of more than R1.5 billion has been achieved and already more than R800 million has been disbursed to the participating enterprises.
- The CTCP is now supporting 49,888 jobs out of a total of 101,511 in the sector
- The footwear sector projects an increase in shoes produced from 52 million to 100 million in next three years
- Approximately 32,000 employed in the footwear and leather value chain
- More than 469 companies assisted under the CTCP

IPAP SECTOR HIGHLIGHTS

Agro-processing 1

- Since the launch of the **Agro-Competitiveness Investment Fund**, the following progress markers may be noted:
  - 16 approvals have been made, to a total value of R76 million – R52.7 million of which has already been disbursed; 11 towards investment in the business process (totalling R74.7 million) and five under the Business Support Grant (totalling R1.3 million)
  - The average investment size is R5.7 million; 409 new jobs will be created
- **the dti** intervention saved 2,000 jobs in SAPPI and FoodCorp
- **the dti** developed 12 new products for the fruit canning sector
- **the dti** has developed joint action Plaps with a number of major companies in the sector including:
  - Astral (construction of a new feed mill in Standerton), which began in October 2012; Tiger Brands (new investments worth R1 billion); ClemenGold, Iglaas Foods and the Wellington Group
- **Biofuels:** Broad agreement has been reached by the Inter-Departmental Team on the design of a fiscal incentive for the biofuels industry. The following key benefits are expected:
  - R8.9 billion annual savings on the balance of payments
  - The creation of 55,000 new jobs
  - Reduction of 498,000 tonnes p/a in CO_2-equivalent emissions

Agro-processing 2

- **the dti** and Foundation of African Business and Consumer Services (FABCOS) launched agro-processing investments worth R1.2 billion to assist in growing sustainable HDI-owned/controlled small, medium and micro enterprises (SMMEs) and support the retailer/supplier development model; the investments are in small-scale milling, malt plants, snack plants, blended foods and incubator farms
- **the dti** launched the Emerging Organic Farmer/Retailer Programme, with Pick'n'Pay, Shoprite and Spar providing shelf space and support to emerging organic farmers' co-operatives
- **the dti** and Department of Agriculture, Forestry and Fisheries (DAFF) approved the Aquaculture Development and Enhancement Programme (ADEP), an incentive scheme to increase investments in the sector, enhance competitiveness and grow employment
- **Rooibos and Honeybush products**
  - Through its facilitation work with Rooibos products, **the dti** was instrumental in Coetzee & Coetzee Tea winning an order for 800,000 boxes of Rooibos for the Chinese market
- **Soya Bean Strategy**
- RusselStone Pty (Ltd.) has invested R150 million in a new soybean processing facility, which has been approved under the Manufacturing Investment Programme (MIP)

IPAP SECTOR HIGHLIGHTS

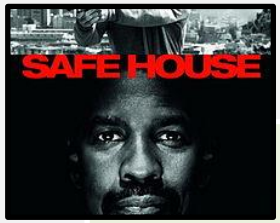
Metal fabrication, capital and rail transport equipment

- **the dti** was instrumental in the opening of a R1 billion metals coating facility (Safal Steel) in KwaZulu-Natal
- R200 million was allocated from the National Skills Fund to train 970 new apprentices under the National Tooling Initiative
- 345 workers were trained under the National Foundry Technology Network
- Under the guidance of a mediation process facilitated by **the dti** sector desk, Sishen Iron Ore Company and Arcelor Mittal South Africa concluded an iron ore interim supply agreement in December 2012
- The Minerals and Petroleum Resource Development Act (MPRDA) Draft Amendment Bill 2012 was published for public comment in December 2012; aimed at strengthening provisions to support beneficiation
- Policy Paper and Amended Regulations were gazetted in January 2013 for public consultation, aimed at strengthening export control measures on scrap metals
- Continuous engagement between **the dti** and SOCs about supplier development and localisation has led to significant instituitonal restructuring at Eskom and Transnet, with new units created at executive level

Pharmaceuticals

- **the dti** was instrumental in securing the application of Regulation 9.3 ("Promotion of Local Contents and Production") of the new Preferential Procurement Regulations to the Large Volume Parenterals (LVP – tender code HP-11) and blood fractions tenders, which were not designated.
- Almost 100% of the two tenders – 100% of the blood fractions tender (worth R294 million) and 99,4% of the Large Volume Parenterals tender (worth more than R750 million) – were awarded to South African manufacturers Adcock-Ingram, Fresenius-Kabi and the National Bio-Products Institute
- 65% of the ARV tender (code HP-13, value R5.8 billion) awarded to South African manufacturers
- **PROJECT KETLAPHELA**
  - **the dti** provided the necessary financial support for the commencement of the R1.5 billion ARV API project, due to start with the construction of a R105 million pilot plant in Pelindaba. The entire project is scheduled for commissioning in Q3 of 2016 and will create approximately 350 high-tech jobs

IPAP SECTOR HIGHLIGHTS



Film industry

- South Africa's film industry contributed R8 billion to the economy between 2008 and 2012
- The movie ***Mad Max 4*** – ***Fury Road*** – one of the biggest ($125 million) feature films ever brought by Warner Bros to South Africa – was approved and is currently being filmed in South Africa and Namibia
- On the basis of sustained support from **the dti**, South Africa has already attracted an impressive roster of locally shot blockbuster films, including ***Chronicle*** and ***Safe House,*** starring Denzel Washington and Ryan Reynolds, the 3D comic-book adventure ***Dredd***, and the TV drama ***Mary and Martha*** starring Hilary Swank
- Twenty-three films approved by **the dti** were premiered at the Durban International Film Festival (DIFF) in July 2012
- ***The Adventures of Zambezia***, a locally produced animated feature film, was selected as the closing film and received outstanding nominations. The film performed excellently at the box office, out-performing *Judge Dredd,* and is said to be doing extraordinarily well in Russia

Business process services

- Over the past five years, South Africa has emerged as a global competitor on the BPS and Offshoring stage, attracting a number of the world's biggest outsourcers/service providers
- These include Aegis, Capita, Genpact, Global Telesales, IBM, British Gas, Amazon, ASDA, Bloomberg, WNS, Serco, iiNet, Kleinwort Benson, Lufthansa, O2, Shell, Shop Direct, TalkTalk and T-Mobile
- South Africa was named Offshoring Destination of the Year in the 2012 at the National Outsourcing Association (NOA) Awards in the United Kingdom
- R1.1 billion worth of investment secured from the BPS Incentive Programme; 4,500 jobs expected to be created over the next three years
- Successful and growing impact of the industry demand-led Monyetla Work-Readiness Programme (see box insert, p.112)

IPAP SECTOR HIGHLIGHTS

Green industries

- **ENERGY EFFICIENCY AND RENEWABLES**

- An Energy-Efficiency Training Centre has been established at the National Cleaner Production Centre; the first 600 students have been accepted for training
- A Radiation Training Facility has been established at the South African Nuclear Energy Corporation
- The IDC approved funding for two local manufacturers of solar water heaters; further investments to follow in wind tower production, solar PV structures, PV panel assembly
- First quarter 2013: DCD, a South African-owned OEM, will begin construction of a wind tower manufacturing facility in the Coega IDC; expected to create 628 construction jobs and 200 full-time operational jobs
- Global wind and solar power developer Mainstream Renewable Power turned the sod on a 138MW wind energy plant in Jeffrey's Bay, Eastern Cape in February 2013
- Sun Edison South Africa broke ground on its first South Afrian project, a 28MW solar plant in Limpopo. This R1.2 billion project will be followed by a 30MW, R1.4 billion project at Witkop, near Polokwane

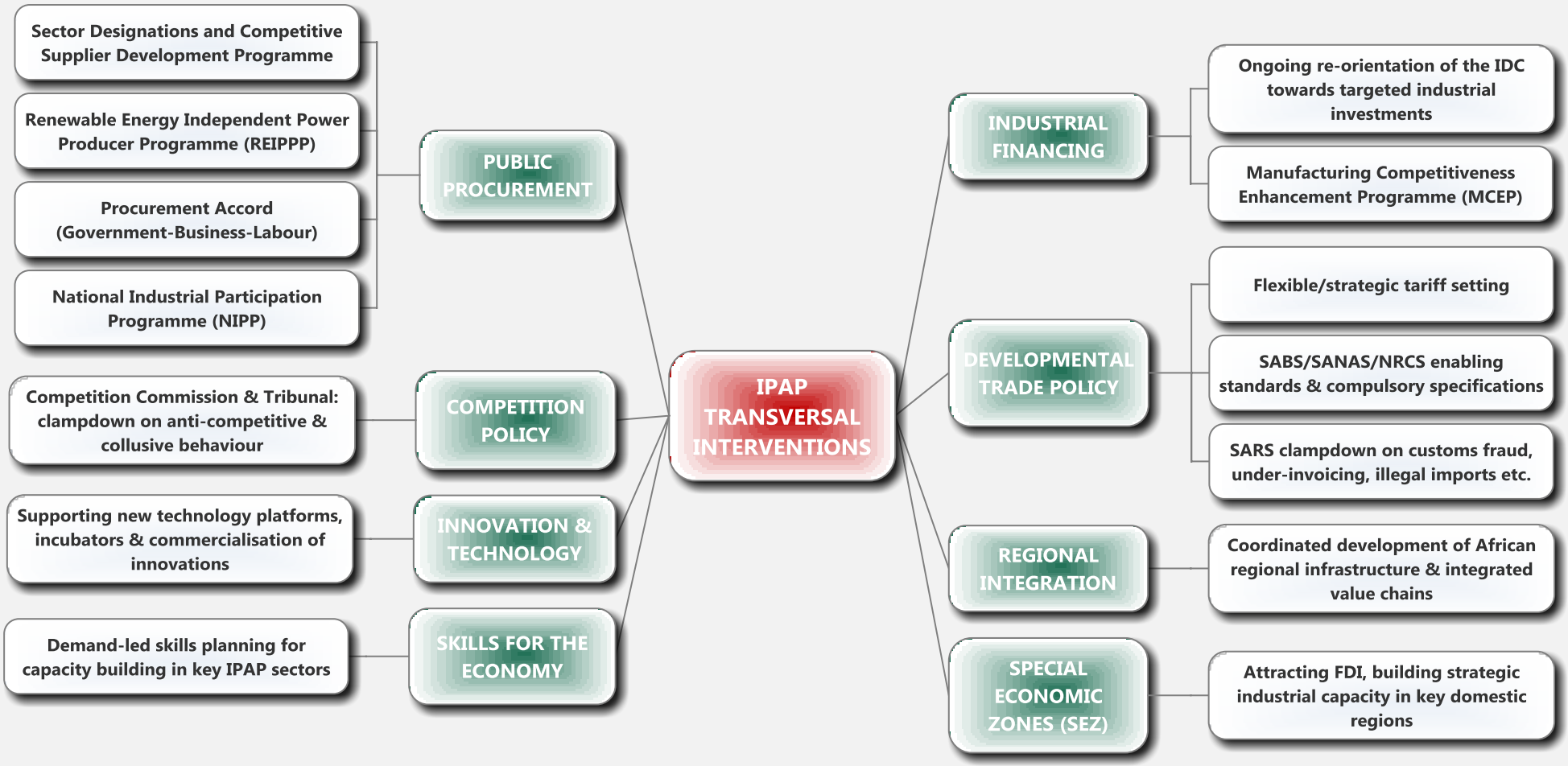
Advanced manufacturing

- **the dti**'s advanced manufacturing desk hase been instrumental in developing sector competitiveness through its support for two Centres of Excellence, at Wits and the University of the North-West
- In January 2013 **t,he dti** and North-West University opened a state-of-the-art super critical fluid extraction laboratory and pilot plant – designed to safely extract essential oils, flavourings and other compounds for the cosmetics, food and medicinal extracts industry
- North-West University is at the forefront of extrusion technology: in the agro-processing sector, SASKO and FeedPro have been assisted with product development through extrusion and have placed orders for their customer-specified extruders with the Advanced Manufacturing Centre at NWU; three further extruders are on the AMC's order book; and significant international interest has developed around NWU's Extru-Africa initiative
- About 70 jobs have been created and new products introduced that were not previously available in the market
- The advanced manufacturing centre at NWU is currently supporting 19 postgraduates in the advanced manufacturing field
- Since its inception, the National Aerospace Centre has supported 59 postgraduate students in the fields of mechanical, electrical, electronic and aeronautical engineering

THE IPAP IN DEPTH

Areas of intervention and Key Action Programmes

MAPPING THE FIELD: IPAP TRANSVERSAL INTERVENTIONS



IPAP TRANSVERSAL INTERVENTIONS

Public Procurement

Public procurement - the process by which the Government and public entities purchase public works, goods and services - represents huge amounts of public expenditure. According to the Estimates of National Expenditure (ENE), total Government expenditure is estimated to be above R1.1 trillion for the 2014/15 financial year; representing 29,1% of GDP.

This demonstrates that Government possesses the necessary purchasing power to leverage procurement in support of broader economic development goals. Given its economic significance, public expenditure has the potential to influence the economy in terms of production and consumption on a large scale. Thus public procurement is one of the key strategic levers for industrial development objectives in the NGP and IPAP.

The revised Preferential Procurement Policy Framework Act (PPPFA) Regulations, which came into effect on 7 December 2011, empower **the dti** to designate industries, sectors and sub-sectors for local production at a specified level of local content. **the dti** has designated eight sectors: rolling stock, power pylons, bus bodies, canned/processed vegetables, and textile, clothing, leather and footwear, set-top boxes for digital TV migration, pharmaceutical and furniture products.

The PPPFA Regulations prescribe that in the case of designated sectors, where local production and content are of critical importance, bids must be advertised with the specific condition that consideration will be given only to locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content.

The PPPFA Regulations further prescribe that where there is no designated sector, an organ of state may include, as a specific tendering condition, that consideration will only be given to locally produced services, works or goods or locally manufactured goods with a stipulated minimum threshold for local production and content – on condition that such prescript and threshold(s) are in accordance with the specific directives issued for this purpose by the National Treasury in consultation with **the dti**.

The National Treasury and **the dti** have jointly developed guidelines for departments and public entities to use clause (9.3) as a condition of the bid to support local production in the Request for Proposals of certain works, goods and/or or services. In 2011, the SABS published the approved South African Technical Specifications (SATS 2011: 1286) for the calculation and measurement of local content. In support of this, **the dti** has developed specific guidelines and templates for the calculation and measurement of local content. Procuring entities and bidders affected by the revised PPPFA regulations will have to apply the SATS 1286 formula when calculating and declaring local content.

Harmonising strategic approaches to local procurement

Significant progress has been registered with respect to localisation and supplier development programmes of some SOCs; most notably, Transnet, Eskom and PRASA. However, a significant proportion of Government procurement is still conducted on an ad hoc rather than a strategic basis and does not deliver adequately on either value for money, economies of scale or key industrial policy objectives. There is thus a need to develop a framework for a purchasing strategy that will directly address these policy issues.

A strategic approach to procurement should also address the delivery models for investments in major infrastructure projects. Planning for all procurement activities should involve a process of identifying and understanding the objectives of the activity, the relevant supplier market, the associated risks, and the nature and quality of the goods and

services to be purchased. **the dti** is working closely with the Department of Economic Development (EDD) and the IDC in this regard.

The focus on harmonising strategic approaches to local procurement will be on the following:

- Working closely with the Department of Public Enterprises (DPE) and SOCs in the CSDP;
- Leveraging public expenditure on strategic infrastructure projects to enhance local production; and
- Working closely with the National Treasury to secure compliance by departments, provincial government and municipalities and to participate in transversal contracts managed by the latter (e.g. textiles, buses). This will assist the Government in negotiating reasonable prices, achieving economies of scale and ensuring value for money for the fiscus.

A strategic approach to procurement allows a reconsideration of longer-term goals and plans to maintain competitive and efficient supply markets. There is a need is to secure a major shift in procurement practices from a focus on process-driven tasks to a much stronger focus on value addition and industrial development initiatives.

A policy review of the NIPP – and the strengthening of alignment with other public procurement levers – has been completed and approved by the Cabinet. This allows for the alignment and consolidation of the public procurement regime through a four-tier system of fleet procurement, including:

- Designation under the PPPFA;
- The CSDP;
- Direct and Indirect NIPP; and
- Exemption of procurements that have been designated – and those that have opted to follow CSDP – but for which Supplier Development Plans are in place.

The Department of Science and Technology-funded Technology Localisation Programme is operating in collaboration with the Department of Public Enterprises (DPE) for CSDP commitments, which are the subject of oversight by Eskom and Transnet. This work on technology assistance to qualifying manufacturing companies will support the new NIPP. Increasingly, provincial governments, metro councils and municipalities will be brought into processes in which integrated local procurement levers will be applied.

The success of designation is dependent upon effective monitoring and evaluation of all tenders and bids in designated sectors. It entails putting in place stronger systems to ensure compliance by all state organs. Coupled with designation is the need to amplify the co-commitments on local procurement agreed by the social partners following the October 2011 Procurement Accord. The Accord commits Government, business, labour and the community constituency to support domestic manufacturers and to be seen to be doing so. The process will be reinforced and given higher visibility with the launch of a national 'Buy SA' campaign, which will kick off in 2013 with the full support of the social partners.

Further work and KAPs will follow, with a strong focus on the key priorities areas of the IPAP:

- Metal fabrication, capital equipment and rail transport equipment;
- Green industries and components of the renewable energy generation build programme; and
- Big ticket items defined in Government's strategic infrastructure projects at all levels of government.

In consultation with **the dti**, the National Treasury is engaged in a comprehensive review of existing procurement legislation, with a view to eradicating ad hoc procurement practices and replacing them with a well-structured, well-planned, strategic procurement regime capable of delivering value for money in line with key industrial policy objectives.

Part of the work will entail the harmonisation of localisation programmes as applied by **the dti,** the DPE, the CSDP and the SOCs' own supplier development programmes.

Priorities for the future include:

- Designation of further sectors/sub-sectors and industries for public procurement;
- Strengthening and deepening of public procurement co-ordination and co-operation with the National Treasury, DPE, EDD and SOCs to further embed policies, systems and supplier development programmes within these entities;
- Monitoring and evaluating the performance of designated sectors; and
- Further review and alignment of the Broad-Based Black Economic Empowerment (B-BBEE) Codes, PPPFA and amended regulations.

Key Action Programmes

1. Monitoring and evaluation of the performance of designated sectors

Nature of the intervention

This intervention is aimed at setting up a system with two main features:

- A framework for monitoring year-to-date procurement: local content as per SATS 2011:1286; expenditure on procurement and outcomes through in-year monitoring reports; and
- The development of indicators of procurement performance aimed at providing early detection of progress – or lack thereof – in designated sectors.

The assessment and verification process involves the application of a formula for identifying the value of local input in goods and services procured by Government and public entities. The SABS is in the process of setting up a facility with the required expertise, coupled with industry knowledge and manufacturing facilities.

Economic rationale

The implication of the revised PPPFA regulations is that all bidders and potential suppliers in the designated sectors will have to meet set minimum local content requirements. Suppliers are required to submit both a 'declaration of local content' and proof of verification (certificate/report from an accredited verification authority). The SABS has been officially appointed by **the dti** to serve as the verification authority on local production and content for designated industries, sectors and sub-sectors in the public sector procurement system. An Action Plan for local content verification has been developed.

Key milestones

2013/14 Q1-Q4: Implement a monitoring and evaluation tool for designated sectors.

Lead departments/agencies: **the dti** and SABS

Supporting departments/agencies: National Treasury, national and provincial departments, ITAC, SARS and AG.

2. Annual Re-prioritisation of the Procurement Plan

Nature of the intervention

This involves overseeing the designation process through ensuring that proper procedures are followed in designating sectors for public procurement.

Economic rationale

The manufacturing sector continues to bear the brunt of the global economic crisis, combined with a range of domestic economic shocks. This poses the real threat of continuous de-industrialisation, with domestic production and employment under constant pressure.

The promotion of public procurement through the PPPFA regulations provides an important means of relieving some of this pressure, as well as a firm basis for further waves of designation. Keeping in line with the prescripts of PPFA, the Procurement Plan would be redrawn on an annual basis.

Key milestones

2013/14 Q1-Q4:	Review of research work done by Sector Desks for further designation of sectors/sub-sectors for local procurement
2013/14 Q1-Q4:	Issue procurement instruction notes for designated sectors
2013/14-2014/15:	Work with other government departments and public entities to identify opportunities for further designation
2013/14-2014/15:	Implement Section 9.3 of the PPPFA Regulations, 2011. Consult with other government departments, state entities and business to identify opportunities for promoting local procurement in non-designated sectors
2013/14 Q1-Q4:	Review the formula and documents developed for calculation of the local content component for both designated and non-designated sectors
2013/14 Q1–Q4:	Support professionalisation of supply chain/procurement/ localisation practitioners. Work with National Treasury, Public Administration Leadership and Management Academy (PALAMA) and other training institutions to empower officials to verify local content declarations before final awards and provide support function to bidders and potential suppliers.

Lead departments/agencies: National Treasury, **the dti**, EDD

Supporting departments/agencies: DPE, SANAS, SABS, PALAMA

3. Develop amended guidelines for the NIPP

Nature of the intervention

This KAP focuses on the amendment of the NIPP guidelines, in line with the revised NIPP as approved by Cabinet.

Economic rationale

Cabinet has recently approved a revision to the NIPP policy, which seeks to align and strengthen public procurement levers through a four-tier system of Fleet Procurement, CSDP, Direct and Indirect NIPP. It has also made recommendations on how the four-tier system should be applied. The existing NIPP guidelines need to be reviewed and new guidelines amended to be in line with Cabinet prescripts.

Outcomes

Aligned and strengthened public procurement instruments, resulting in more effective support for the objectives of industrial policy through support programmes better aligned with industrial sector plans.

Key Milestones

2013/14 Q1: Finalise new NIPP guidelines to align programme with other public procurement instruments and strengthen its effectiveness.

2013/14 Q1 – Q4: Print and publish new guidelines. Ensure that all elements of the approved Cabinet policy are incorporated into supply chain management policies of state entities through presentations by **the dti** and practice notes issued by the National Treasury.

Lead departments/agencies: the dti

Supporting departments/agencies: National Treasury, DPE

4. Review the effectiveness of joint application of NIPP and Defence Industrial Participation (DIP)

Nature of the intervention

Review of the current NIPP arrangement with regard to the offset obligation relating to procurement of defence equipment.

Economic rationale

For the procurement of defence equipment, the offset obligations are split between NIPP and DIP. Flowing from experiences gained and lessons learned from applying both NIPP and DIP to the Strategic Defence Package procurement process, it is necessary to determine whether the greatest impact for industrial development can be achieved by the current arrangement or by limiting industrial participation to DIP only.

This is particularly relevant where the products of either the South African National Defence Force (SANDF) or South Africa Police Service (SAPS) are exclusively for defence purposes and the technologies cannot be adopted for dual-use – e.g. communications and electronic systems. The review will also be informed by the NIPP SDP Project Review, which is expected to be completed by end March 2013.

Outcomes

A more effective application of industrial participation obligations arising from exclusively defence acquisition programmes.

Key milestones

2013/14 Q1: Review impact of application of both NIPP and DIP for defence equipment acquisition programmes.

2013/14 Q2 – Q4: Consult with stakeholders. Develop relevant industrial policy for consideration and approval by Cabinet.

Lead departments/agencies: **the dti**, Armscor

Supporting departments/agencies: Department of Defence, National Treasury, Department of International Relations and Co-operation

Industrial Financing

Previous iterations of the IPAP have stressed the point that the availability, cost and duration of finance is a key determinant of the viability of manufacturing investment. The research data accumulated on this issue clearly demonstrates that:

- South Africa's cost of capital is too high and the average term of loans too short relative to our major trading partners and comparable middle-income developing countries;
- Recent private credit extension has mostly been in the form of debt-driven consumption, much of which has fuelled imports;
- Where credit has been extended for investment, it has been highly concentrated in consumption-driven service sectors and, to a lesser extent, capital- and energy-intensive industries;
- New entrants without substantial equity require grace periods to go through one or more production cycles to generate the necessary liquidity to finance their capital repayments;
- Working capital is of critical importance to the operational performance of a firm: the smaller the firm, the greater the impact of the working capital burden on the performance of the firm; and
- The private sector venture capital market in South Africa is very weak.

The private financial sector in South Africa is not adequately aggregating savings and distributing them towards productive fixed investment in the economy. Inherent market failures exist, the most critical of which is the asset-liability mismatch. The short-term nature of the source of funding, mainly deposits and short-term capital inflows manifests in impatient capital eager to fund either established relatively 'low-risk' industries (e.g. upstream capital- and energy-intensive industries) or industries achieving profitability within a short period of time (e.g. consumption-driven services.)

Consequently, banks are not willing to channel funds towards relatively less well-entrenched or established industries (particularly downstream manufacturing industries) as these require longer-term investment horizons and grace periods for new entrants.

Moreover, downstream manufacturing industries face structural limitations in their ability to raise working capital. The magnitude of working capital is a function of a sector's buying power and the length of time required for value addition. Consequently, working capital is a permanent and significant burden on downstream manufacturing firms because of the length of time required to transform input(s) to final product and the asymmetry in power in favour of upstream input markets, which dictate the terms of their transactions with downstream firms as a result of their financial depth, comparatively large scale and concentration.

In the South African context, an important role exists for public industrial finance to channel capital into productive fixed investments, which have the potential to generate direct and indirect sustainable jobs in strategic value-adding sectors. Relative to GDP, incentives provided by the state have declined in the recent past – with the exception of the MCEP, which came into effect in 2012. There are 'gaps' and opportunities in public-sector financial instruments and support mechanisms for industrial financing, including a stronger support mechanism for commercialisation of innovation and new technologies.

It is, therefore, important that new funding instruments provide the following features:

- A longer term of financing;
- A grace period allowance;
- Lower interest rates; and
- Funding for working capital.

Finally, it is important to stress the point, also made in previous iterations of IPAP, that targeted industrial financing has a number of positive macro-economic impacts. It reduces the pressure on monetary authorities to stimulate investment through unduly low interest rates across the entire economy, which pose the risk of fuelling further rounds of unsustainable debt-driven consumption and speculative investment activities. Increased investment and productivity improvements in the productive sectors lower price pressure in the economy and moderate inflation. Increased investment that generates a mix of import replacement and exports reduces both the current account deficit and associated balance of payments risks and constraints on growth. It also has a positive net tax revenue effect.

Against this background, it should be noted that there has been significant progress by the IDC in re-orienting and prioritising its activities in support of the NGP and IPAP sectors, within the constraints of a commercially based balance sheet. As set out in other sections of the IPAP, this expanded role for the IDC involves the establishment of a range of new financing instruments and the setting aside of more than R100 billion over five years for strategic NGP and IPAP sectors.

However, the management and disbursement of industrial financing of one sort or another lies with a wide range of government departments and public sector institutions: most prominently, **the dti**, the Department of Science and Technology, ITAC and the National Treasury. Notwithstanding significant enhancements in the design and administration of a range of transversal and sector-specific financing schemes, more work in this regard is required. This includes the need to develop a reporting and monitoring system that aggregates information on all major sources of industrial financing and thus provides the capacity to systematically analyse the linkages between funding disbursed and measurable improvements in target objectives such as competitiveness, employment, exports and so forth.

With this in mind, the MCEP was put in place in 2012, with the dual aim of strengthening the overall suite of **the dti** incentives and providing targeted support measures for manufacturing companies suffering under the stress of a range of structural challenges and shocks including:

- An overvalued exchange rate promoting both capital intensity and a high skills bias;
- Rapid and steep increases in electricity and other administered prices;
- Very high port charges – particularly for the export of tradeables – combined with logistics and rail inefficiencies;
- Low absolute and relative levels of profitability, low investment in productivity enhancement, poor product and process innovation and obsolete capital equipment; and
- Inadequate provision of suitable financial instruments by the private financial sector – loan tenure and cost of capital being uppermost.

The rules-bound access criteria of the MCEP, set out in the previous IPAP in detail, included support for the upgrading of production facilities, processes, products and people; support for capital investment, working capital and pre-shipment finance; feasibility studies, product development and process improvement; value chain localisation and supplier development; and cluster studies, new market access and energy efficiency upgrading.

As set out elsewhere in the IPAP, the take-up of the MCEP has been good, particularly considering the fact that there is generally a lag between the inception of a new incentive and significantly increased levels of applications and disbursement.

Arising from the experience of administering the MCEP, the need for a deeper engagement with manufacturing companies has been identified. This would allow for a better understanding of the problems and constraints these companies are experiencing, the impact of the MCEP to date, and the degree to which it is actually achieving what it sets out to do across a range of sectors. This would then provide a sound basis for the implementation of whatever changes may be necessary to enhance its impact and, if appropriate, tighten conditionalities.

The inclusion of certain other sub-sectors, such as the defence industries (with strong conditionalities), is also the subject of further research and stakeholder engagement. **the dti** is working closely with the United Nations Development Organisation (UNIDO) to develop a monitoring, evaluation and impact assessment methodology for the MCEP, benchmarked against other countries.

For a variety of reasons, the breadth and depth of activity by black entrepreneurs in the manufacturing sector of the economy has been limited. One of the main reasons is the perceived unattractiveness of investing in manufacturing, relative to the lower risk and higher returns seen to be available in other sectors, most notably mining. It should be a priority of industrial policy to foster a stratum of majority-owned and managed black manufacturing enterprises with a long-term interest and commitment to the manufacturing sector. This requires work towards developing and designing an industrial financing instrument with a strong set of binding conditionalities that will focus on black entrepreneurs who have a long-term commitment to establishing new manufacturing entities or taking over existing ones.

Finally, it should be noted that substantial untapped potential lies in achieving a greater alignment between the activities of three key financing institutions to provide greater support to exports, including with respect to Sub-Saharan Africa. These are the Export Credit Insurance Corporation (ECIC), the Development Bank of South Africa (DBSA) and the IDC. Given the scale of competitor banks such as the China Development Bank and the Brazilian BNDES, these institutions should secure agreement on a collaborative approach to identify and unlock opportunities for support to South African and African manufacturers across a range of sectors, including mining, construction and energy.

In conclusion, it should be noted that across the global economy as a whole – developed countries included – an enormous variety of incentive and financial support measures are routinely applied to provide targeted support to the productive sectors of domestic economies.

Key Action Programme

1. Manufacturing Competitiveness Enhancement Programme

Nature of the Intervention

To strengthen the range and scope of the public sector financial instruments that make up the overall suite of industrial financing and incentive support mechanisms across a variety of government departments and institutions. The MCEP's core objectives are to boost public sector support for the manufacturing value-adding sectors of the economy and address the critical constraints and market failures that exist. Lessons learned from the successful implementation of sector-specific incentives packages such as the MIDP, the Clothing and Textiles Competitiveness Programme (CTCP) and the (transversal) MCEP will be used to assess existing support measures and design-sector-specific and transversal incentives.

Economic Rationale

South African companies are faced with a wide range of critical problems arising from the extended global recession, rising input costs (particularly electricity) and low and falling levels of investment arising from institutional and private sector market failures.

There is a critical need to ensure that the manufacturing sector is provided with support during the continuing economic downturn and that market failures are actively addressed to raise competitiveness and prevent further industrial decline.

Outcomes

Greater levels of competitiveness arising from access to industrial financing for working capital, product development, new market access, energy efficiency, clustering and other potential outcomes not specifically covered in existing incentive schemes – including enhanced support for Black Economic Empowerment (BEE) in the manufacturing sector.

Key Milestones

2013/14 Q3: Scope the design, range, quantum, conditions, take-up and impact of the full suite of government industrial financing packages and incentives across (and in consultation with) all the relevant departments and institutions.

2013/14 Q4: Develop and design a set of proposals for expanding the suite of existing support mechanisms, including fine-tuning the MCEP and designing a specialised incentive to support BEE in the manufacturing sector.

2013/14 Q4: Develop and design further sector-specific incentives for strategic sectors – in particular Green Industries, Agro-processing and the Metals, Capital and Rail Transport Equipment Sectors.

Lead department/agencies: the dti

Supporting departments/agencies: National Treasury, IDC

Developmental trade policy

Developmental trade policy is a critical instrument of industrial policy, with significant implications for value-addition, employment, investment, technology development and productivity growth. Its relative importance has been enhanced by the global economic crisis, which has led to increasing use of defensive trade measures – both tariffs and non-tariff barriers such as technical and customs regulations. Operating effectively in this complex environment requires strategic use of technical infrastructure and supportive platforms to aid the manufacturing base, while taking into account the relatively small size of the domestic market and the need to simultaneously facilitate exports.

South Africa's trade policy emphasises tariff policy-setting on a sector-by-sector basis as dictated by the imperatives of evolving sector strategies. Successive IPAP iterations have re-emphasised the need to lower tariffs on intermediate inputs into manufacturing, while strategically adjusting tariffs and exploring the water between bound and applied rates in support of manufacturing sectors. IPAP identifies scope for the selective use of tariffs under the following circumstances:

- Potential for the retention and creation of sustainable jobs;
- Potential for increasing industrial capacity and capability with significant import replacement; and
- Formalising and strengthening conditionalities related to tariff increases.

The technical infrastructure institutions will continue to reprioritise their activities to support the development, accreditation and enforcement of standards that can create, scale up and resuscitate certain industries, while simultaneously contributing to broader social benefits.

This re-orientation hinges upon the following broad strategic thrusts:

- 'Locking out' unsafe and poor quality imports;
- 'Locking in' access to increasingly demanding export markets; and
- Supporting the state's comprehensive and integrated drive to scale up industrial policy, with a strong focus on the priority sectors that have been identified as well-positioned for up-scaling: namely, the green industries, agro-processing and metal fabrication, capital and rail transport equipment.

The key technical institutions involved are the South African National Accreditation System (SANAS), National Regulator for Compulsory Specifications (NRCS), South African Bureau of Standards (SABS) and National Metrology Institute of South Africa (NMISA). These institutions – in conjunction with others such as SARS – are also critical in curbing various forms of customs fraud and illegal imports, sub-standard products, smuggling and under-invoicing – all of which undermine productive capacity and employment across a wide range of sectors.

The South African economy is faced with a rapid and increasing growth in illicit trade – illegal imports characterised by undervaluation, false declarations (origin and tariff), rerouting via third countries and misuse of duty rebates and credits.

These practices have a strong negative impact on the economy as they continue to erode the country's manufacturing capacity and its revenue base. Given the complex nature of customs fraud, IPAP highlights the critical need to develop a sophisticated and integrated approach to the problem.

During the 2012/13 financial year, a number of interventions have been implemented by SARS. A comprehensive Customs Modernisation Programme is being rolled out, both domestically and in the SACU region. It is centred on an electronic case management and inspection process that eliminates the current manual stop-and-inspect process. At the same time, work on tackling illegal imports in the Clothing and Textile sectors continues under the Reference Price System, which is now starting to deliver significant results.

One thousand five hundred new personnel have been added to Customs Operations to strengthen the link between trade facilitators and enforcers. SARS has also introduced the Preferred Trader Status Initiative to importers who demonstrate strict compliance. This is aimed at reducing the burden on trusted importers, while allowing SARS to focus its scarce resources on tackling illicit trade.

Key opportunities

The key opportunities that technical infrastructure policies and institutions will exploit over the next three years include:

- Stronger enforcement of existing mandatory standards that will lock out inferior and sub-standard products;
- The introduction of additional mandatory standards that will foster the development of new industries, particularly in the green industry area;
- Strengthened support to export products to unlock significant growth opportunities in identified markets;
- Upscaling both the human and technical capacity of the technical infrastructure institutions and conformity assessment services so as to respond more effectively to the needs of industry; and
- Stronger integrated and co-ordinated programmes with SARS premised upon intelligence-driven information from industry to step up compliance monitoring and increase the rate of successful prosecutions.

Constraints

The lack of a sufficiently integrated approach in handling trade-related matters, coupled with budgetary issues that constrain the ability of the technical infrastructure institutions to deliver fully on their mandates.

Key Action Programmes

1. Ongoing developmental tariff reform

Nature of the intervention

This KAP involves continuous review and tariff setting informed by priorities set out in the various sector strategies.

Economic Rationale

The global economic crisis and the erosion of the manufacturing sector's competitiveness under the impact of global trade liberalisation together pose the risk of a continuing steady decline in the country's manufacturing capabilities. At the same time, the economic crisis has given rise to the widespread use of trade measures internationally, to which South Africa has to find a nuanced set of responses. The selective and flexible use of tariffs is thus regarded as a key instrument in increasing value-addition, employment, investment, innovation and productivity growth.

Outcome

Improved competitiveness through value-addition and increased employment in the manufacturing sector.

Key milestones

2013/14-2015/16 ongoing:	Scope for industries to apply to ITAC for selective tariff increases on products.
2013/14-2015/16 ongoing:	Scope for further selected decreases in tariffs on intermediate inputs into manufacturing and other productive sectors.
2013/14-2015/16 ongoing:	Scope for selective creation of rebates for manufacturing products that attract duties, particularly where these are intermediate products in manufacturing.

Lead departments/agencies: the dti and ITAC

Supporting departments/agencies: EDD

2. Re-alignment of technical infrastructure activities with IPAP sectors

Nature of the intervention

Strengthening and aligning the activities of technical infrastructure institutions with IPAP imperatives through the development of standards and compulsory specifications that serve sector priorities.

Economic Rationale

To ensure that an integrated approach is adopted in developing standards. In line with the approach adopted in the previous IPAP iteration, the Technical Infrastructure Institutions as a collective developed a framework for the appraisal of existing national policies applicable to each IPAP sector, including IPAP objectives. This resulted in synchronised Action Plans in the green industries, agro-processing and metal fabrication, capital and rail transport equipment sectors, as well as in the nuclear industry. The key milestones in the identified sectors reflect targeted responses to the gaps that were identified during this process.

Outcome

Re-aligned and synchronised technical infrastructure institutions activities with IPAP priorities.

2.1. Green industries

Key milestones

2013/14 Q1: Commission the 160A (ampere) power/energy measurement standard to support measurements required by Eskom.

2013/14 Q2: Needs assessment for measuring the thermal properties of materials designed for heat management in buildings.

2013/14 Q4: Research and define the methods and specifications for the accurate measurement of light-emitting diodes (LEDs).

2013/14 Q4: Develop gas reference mixtures for BTEX and Volatile Organic Compounds for Air Pollution Monitoring.

2013/14 Q4: Provide automotive emissions (NO2, NO) and condensable Reference Gas Materials in support of Greenhouse Gas monitoring.

2013/14 Q4: SANS for fuel cells; SANS for smart grids.

2013/14 Q4: Develop and roll out an accreditation programme for Energy Efficiency Management; complete a feasibility study to determine the needs for an accreditation programme for wind turbines.

2013/ 14 Q4: Compulsory specification for energy efficiency for household appliances.

2014/15 Q1: SANS for electric vehicle energy usage; New set of (6) SANS to support SANS/ISO 50001 Energy.

2014/15 Q2: Benchmark the 160 A power/energy measurement standard internationally and provide calibration to industry.

2014/15 Q3: Expand the scope for appliances laboratory to be able to test energy.

2014/15 Q4: Set up a basic laboratory to develop the methods required to measure the photometric properties of LEDs.

2014/15 Q4: Develop facilities for measuring the thermal properties of materials designed for heat management in buildings.

2014/15 Q4: Assist with the establishment of a National Reference Laboratory (NRL) for air quality management and provide the measurement standards.

2014/15 Q4: Carbon footprint of products – requirements and guidelines for quantification and communication; Greenhouse gases (GHG) – quantification and reporting of GHG emissions for organisations (Carbon footprint of organisation) – guidance for the application of ISO 14064.

2014/15 Q4: Feasibility report on hydraulic fracturing standards; supporting standards for biomass products.

2015/16 Q3: SANS for LEDs.

2015/16 Q4: Benchmark the energy-efficient lighting measurement capability internationally and calibrate standards for industry.

Lead departments/ agencies: NMISA, SABS, SANAS, NRCS.

2.2. Agro-processing

Key milestones

2013/14 Q1: Proposal for the amendment of Compulsory Specification (VC 8031) for frozen shrimps, langoustines and crabs submitted to **the dti.**

2013/14 Q3: Develop and publish a method for dioxin analysis on screening/medium level instrumentation available at NMISA as preparation for a dioxin measurement facility for South Africa.

2013/14 Q4: Develop a method for reference measurement of organochlorine pesticides in rooibos tea and organophosphorus pesticides in beverages and water.

2013/14 Q4: Support the grain industry through the analysis of 14 nutritious and potentially toxic elements in imported and exported wheat samples.

2014/15 Q2: SANS for rock lobster, live aquaculture and olive oil.

2014/15 Q4: Develop a method for reference measurement of selected persistent organic pollutants (POPs) in South African line fish.

2014/15 Q4: Expand support to the grain industry through the analysis of nutritious and potentially toxic elements in maize samples and stability testing on certified wheat material.

2014/15 Q4: Establish a dioxin testing facility for South Africa. First phase – procure and commission high-level equipment for the analysis of dioxins and related toxic substances.

2014/15 Q4: Roadmap for the traceability of microbiological measurements in South Africa.

2014/15 Q4: New Compulsory Specification for olive oil; amendment of Compulsory Specification for canned meat products.

2015/16 Q1: New Compulsory Specification for live aquaculture oysters.

2015/16 Q2: Amendment of Compulsory Specification for canned fish products.

2015/16 Q4: Develop specifications for the high-level equipment required to render a dioxin and related toxic substances monitoring and analysis service to the country, in order to comply with EU regulations until this service can be provided by accredited local laboratories.

2015/16 Q3: New compulsory specification for live rock lobster published for public comment.

2013/14 Q4: Complete a feasibility study to determine the requirements for an accreditation programme for Organic Agricultural Production and Processing.

2013/14 Q4: New Compulsory Specification for processed meats.

2014/15 Q4: Develop and roll out an accreditation programme for Organic Agricultural Production and Processing.

Lead departments/ agencies: NMISA, SABS, NRCS

2.3. Metal Fabrication, Capital and Rail Transport Equipment

Key milestones

2013/14 Q4: Roadmap for advanced measurement and traceability of tribology (wear and tear) and tensile testing needed for metal fabrication.

2014/15 Q3: Upgrade the laser tracker dimensional facility at NMISA to enhance the traceability of large dimensional measurements for locomotives and coaches.

2014/15 Q1-Q4: Establish an X-ray diffraction facility for advanced stress and strain measurement. This will also support cutting-edge developments in nanotechnology.

Lead departments/ agencies: NMISA

2.4. Automotive Products and Components

Key milestones

2013/14 Q3: SANS 1103 for electric vehicle propulsion systems.

2013/14 Q4: Commission the high-resolution dimensional co-ordinate measuring machine and benchmark capability.

2013/14 Q4: Amendment of Compulsory Specification (VC 8016) for safety helmets for motorcyclists.

2014/15 Q3: Modernise the force NMS with new operating electronics for the hydraulic amplification machines.

2014/15 Q4: Upgrading safety standards for passenger and commercial category vehicles: Amendment of compulsory specifications for M and N category vehicles to make ABS braking systems compulsory.

2014/15 Q4: SANS 1104 for gas vehicle propulsion systems.

2015/16 Q4: Upgrade the Torque NMS to supply the requirements of industry (up to 20 kNm).

Lead departments/ agencies: NMISA, SABS, NRCS

2.5. Plastics, Pharmaceuticals and Chemicals

Key milestones

2013/14 Q4: Research and develop a measure for the toxicity of nano-gold particles.

2013/14 Q4: Roadmap for analytical facility with requirements for hazardous substances in plastics and packaging materials.

2013/14 Q4: Amendment of Compulsory Specification (VC 8054) for disinfectants and detergent disinfectants.

2014/15 Q4: Publish guidelines on the measurement of toxicity for nano-particle manufacturers and users.

2014/15 Q4: Develop analytical capabilities for the determination of cadmium, lead, mercury, Chrome (VI) and other organic and inorganic substances of major concern in plastic materials.

2015/16 Q4: Establish nano-science facility to address traceable measurements in nano manufacturing (catalysts for petrochemical, nano-particles for aerosols, semiconductor technology, etc.).

2015/16 Q4: Benchmarked capability to provide analytical support to manufacturers/ importers/exporters of plastic materials and consumer products for compliance with environmental regulations on the presence and content of hazardous substances.

Lead departments/ agencies: NMISA, NRCS

2.6. Biofuels

Key milestones

2013/14 Q3: Revised SANS 342 for automotive diesel fuel; revised SANS 1598 for unleaded petrol.

2013/14 Q4: Identify gaps not supported by current measurement standards and certified reference materials and develop Roadmap for biofuels.

2013/14 Q4: Improve viscosity and density measurement standards to provide for biofuel testing needs.

Lead departments/ agencies: NMISA, SABS

2.7. Business Process Services

Key milestones

2013/14 Q4: Design and build a replacement for the current fibre-optic power measurement standard and improve accuracy when measuring the wavelength of a fibre-optic source in support of telecommunication systems.

2014/15 Q4: Design and commission a measurement system to characterise the distortion of a signal caused by polarisation in fibre-optic-based telecommunication systems.

Lead departments/ agencies: NMISA

2.8. Nuclear Energy

Key milestones

2013/14 Q2: Commission the X-ray system as the NMS for air kerma measurements covering radiation therapy and radiation protection services.

2013/14 Q4: In collaboration with the National Nuclear Regulator (NNR) set up a radio-analytical measurement laboratory in support of the South African nuclear regulatory bodies, the DoH and NNR.

2013/14 Q4: Feasibility report on development of national standards for the nuclear industry.

2014/15 Q2: Pilot audits for hospitals in radiation therapy, diagnostic radiology and nuclear medicine in support of DoH and NNR.

2014/15 Q4: Benchmark the upgraded radiation therapy and protection measurement capability against international standards.

2015/16 Q3: Revise SANS 347 and SANS 10227 to include requirements for nuclear technology.

2015/16 Q4: Develop and roll-out an accreditation programme for Nuclear Energy.

2015/16 Q4: Identify technical experts and train as SANAS technical assessors.

2015/16 Q4: Gazette a new national measurement standard for air kerma measurements in medium energy x-rays.

Lead departments/ agencies: NMISA, SABS, SANAS

2.9. Strengthen the South African technical infrastructure to support industrial development

Nature of the intervention

This KAP involves strengthening of the legislative framework to facilitate the development of new standards for emerging industries.

Economic Rationale

Strengthening standards, accreditation and enforcement can create, scale up and resuscitate certain industries.

Outcome

Strengthened and harmonised development in key industrial sectors.

Key milestones

Movement from Trade Metrology to Legal Metrology

2013/14 Q4: Submission of the Bill through the parliamentary process.

2014/15 Q4: Promulgation of the Legal Metrology Act.

Updating of the National Building Regulations and Building Standards Act

2013/14 Q4: New NBR Part XB for water efficient building regulations submitted to **the dti**.

2013/14 Q4: Amendment of relevant National Building Regulation to include plumbing requirements as per the Water Act.

2014/15 Q3: New standards for plumbing components and water-efficient buildings (SANS 10400-XB).

2014/15 Q3: Finalise National Building Regulations and Building Standards Policy Paper for new legislation.

2015/16 Q4: National Building Regulations and Building Standards Bill drafted.

2014/15 Q4: New compulsory specification for plumbing components published for public comment.

Lead departments/ agencies: **the dti**, NRCS, SABS

2.10. Strengthen enforcement system of NRCS

Key milestones

2013/14 Q4: Roll-out of Phase 3 of NRCS border enforcement pilot project finalised. Additional ports of entry to be covered include airports and the Beitbridge and Lesotho border posts.

2014/15 Q2: Gap analysis research report finalised to inform the NRCS risk-based strategy aimed at improving the NRCS coverage of the higher risk industries and regulations.

2014/15 Q4: Report regarding benchmarking of border enforcement internationally and calibration of NRCS enforcement strategy.

Lead departments/ agencies: NRCS

2.11. Consumer protection initiatives

Key milestones

2013/14 Q1: Project for Legal Metrology regulation for automatic rail vehicle scales finalised.

2013/14 Q1: Review of Compulsory Specification (VC 8043) for coal stoves and heaters completed.

2013/14 Q4: Finalisation of projects for Legal Metrology regulation of taxi meters and for measuring liquids other than water.

2013/14 Q4: Review of Compulsory Specification (VC 9088) for shooting ranges completed.

2014/15 Q4: New legal metrology technical regulation for multi-dimensional measuring instruments and gas meters.

2015/16 Q3: Development of standards for consumer warranties and Customer Contact Centres to support the Consumer Protection Act.

2015/16 Q4: New Compulsory Specification (VC) for safety of toys.

Lead departments/ agencies: NRCS, SABS

2.12. Clampdown on customs fraud

Nature of the intervention

Ongoing interventions on customs-related issues, including the roll-out of the Customs Modernisation Programme aimed at curbing customs fraud.

Economic Rationale

To protect the South African manufacturing sector from the threats posed to it by illicit trade.

Outcome

Stronger integrated and co-ordinated programmes in the clampdown of customs fraud.

Key milestones

2013/14 – 2015/16: Strengthening of a range of measures – including closer collaboration between **the dti**, industry, NCRS, SABS and SARS – through multi-sectoral forums.

2013/14 – 2015/16: Extend application of the Indicative Reference Price System to other vulnerable sectors to provide an increasingly effective early warning system.

2013/14– 2015/16: Ongoing development of programmes aimed at improving compliance within industry and contributing to the formulation of best practice in the facilitation of trade, in accordance with all the Acts administered by SARS.

2013/14 – 2015/16: Conduct continuous targeted raids and investigations on vulnerable sectors with the aim of increasing the rate of successful prosecutions.

Lead departments/agencies: SARS/NT

Supporting departments/agencies: the dti and ITAC

Competition Policy

The point of departure for competition policy work (which is led by the EDD) is the recognition that the South African economy continues to experience ongoing problems with regard to low levels of effective competition in sectors dominated by a few entrenched firms. Returns are derived less from effort and innovation than from the historical position inherited by such firms. More specifically, where anti-competitive conduct concerns important inputs to downstream, labour-absorbing activities, it directly impacts on employment. Anti-competitive behaviour also has serious adverse effects on low-income households in that it leads to unnecessarily high prices for the basic consumer goods they rely upon.

In the case of the monopolistic provision of publicly provided strategic goods and services, oversight is provided by a legislatively established Sector Regulator. However, while there is a clear need to continue to strengthen regulation of public entities, the main focus in the IPAP is on the role of competition authorities in relation to private sector behaviour.

It is also recognised that competitive outcomes require more than enforcement by the competition authorities. Interventions across institutions must be geared to monitoring the conduct of dominant firms. They must ensure that such firms' strategies, particularly where they receive state support, are based on dynamic, long-term investments in building capabilities and not on the short-term exploitation of market power. This must be supplemented by support for the entry and growth of new firms wherever practical.

A number of areas of activity remain problematic:

- The concentrated supply of certain strategic inputs into manufacturing and other productive processes such as carbon and stainless steel, aluminium, chemical polymers and fertilizers;

- In addition to the concentrated supply of inputs, there is frequent concentration in the purchasing of inputs. Thus value-adding and labour-absorbing manufacturers often face both upward cost and downward price pressures; and
- Expensive wage goods and other products purchased largely by poor and working-class households, particularly food, pose a serious problem.

The focus of the Competition Commission's activities over the IPAP period will continue to be on the three areas identified above. The Commission will increase its engagement with Government and public institutions to play a more active role in following up on findings of anti-competitive conduct and in making further policy recommendations to Government.

There are additional areas of complementary work that require strengthening. These include the following:

- The strengthening of practical measures and mechanisms for implementation and ensuring accountability;
- The identification of concrete complementary measures to competition enforcement, as part of a broader policy toolkit that could be deployed to address anti-competitive behaviour. This requires the establishment of a statutory mechanism by which the Competition Commission can make recommendations regarding complementary actions required to address anti-competitive conduct. For example, a standard mining licence includes a stipulation that minerals sold in South Africa are to be sold at competitive prices; but there is no mechanism for the monitoring and review of compliance. In this regard, an important aspect of the Mineral and Petroleum Resources Development Act (MPRDA) is to make provision for the Minister to initiate or prescribe measures to incentivise the beneficiation of minerals in South Africa, subject to particular terms and conditions that the Minister may determine. The implementation of this provision is particularly important where the exercise of market power is disincentivising mineral beneficiation.

This work, which dovetails with a set of proposals agreed by Cabinet in terms of proposals arising from the work of the Inter-Departmental Task Team on Iron and Steel, could include the following:

- A process for monitoring and enforcement of mineral licence provisions;
- A process for engagement with ITAC to ensure that it takes into account competition considerations in tariff reviews, such as guarding against further protection of dominant firms exploiting their market power; and
- An exploration of whether the powers of the National Electricity Regulator of SA (NERSA) can be extended to regulate the pricing of by-products from fuels such as ammonia and polymer chemicals.

Key Action Programmes

1. Strengthening implementation of competition policy

Nature of the intervention

This programme seeks to actively conduct comprehensive investigations on targeted manufacturing and services sectors with the aim of improving compliance and reducing anti-trust behaviour in the economy.

Economic Rationale

The South African economy continues to be dominated by a few entrenched firms, which tend to abuse their dominance through anti-competitive behaviour. Many producers are squeezed between monopolistic providers of their inputs (for example, steel and chemicals) and purchasers of their outputs (e.g. retailers). Monopolistic provision of key goods and services, therefore, remains a major challenge that needs to be addressed for the long-term benefit of the manufacturing sector.

Outcome

Improved economic welfare for consumers and reduced barriers to entry for small and medium manufacturers.

Key milestones

201314 - 2015/16: Continued active focus of competition authorities on investigation, prosecution and policy advocacy with regard to:

- Intermediate industrial and energy-intensive products, such as steel, chemicals, coal, fuel and cement;
- Air transport, information technology;
- Food and agro-processing;
- Banking and insurance;
- Infrastructure and construction.

2013/14 - 2015/16: Annual reporting on the impact of competition enforcement in these sectors, and identification of appropriate complementary measures to be taken by Government and public institutions to improve competitive outcomes.

2013/14 – 2015/16: A small number (at least one per year) of strategically identified market enquiries initiated by the Competition Commission into priority areas identified in consultation with Government.

Lead departments/agencies: EDD and Competition Commission

Supporting departments/agencies: the dti

2. Ensuring competitive outcomes

Nature of the intervention

This intervention focuses on the economic impacts revealed by the findings of investigations into anti-competitive behaviour. This would entail strictly monitoring compliance on the conditions attached to penalties imposed on firms.

Economic Rationale

The competition authorities have been actively pursuing investigations, some of which have led to penalties being imposed on a number of medium to large firms. A significant number of these firms have historically benefitted from state support, and some continue to benefit without adequate criteria or conditions attached to the support provided. The prevalence of abuse of market power by entrenched firms, therefore, requires the tightening of conditionalities associated with state support. This also requires putting in place monitoring mechanisms to ensure that such conditionalities are adhered to.

Outcome

Increased competition within the South African economy through increased support for new entrants into the market.

Key milestones

2013/14 – 2015/16: Stronger conditionalities to be established on state support for large firms, including development finance, linked to competitive conduct.

2013/14 – 2015/16: Monitoring of compliance with conditions, in consultation with the Competition Commission.

2013/14 – 2015/16: Evaluation of sectoral trade policy measures in light of the conduct of firms in particular sectors, to ensure that dynamic comparative advantages are developed (in consultation with the Competition Commission).

2013/14 – 2015/16: Wider actions to be identified, including possible regulatory measures, against dominant firms engaging in anti-competitive conduct, particularly with regard to key inputs into labour-absorbing sectors and the pricing of wage goods.

2013/14 – 2015/16: Increased support for entrants and smaller rivals relative to entrenched dominant firms.

Lead departments/agencies: EDD

Supporting departments/agencies: the dti, Competition Commission, IDC, ITAC, **seda.**

Regional integration

Over the last four years South Africa has worked with partner countries in the region to advance a developmental regional integration agenda. This represents the beginning of a departure from the narrow market integration approach, which focused primarily on the reduction and elimination of tariffs and neglected to address the most significant constraints to regional integration: primarily, underdeveloped productive capacity and inadequate infrastructure.

While efforts to reduce tariffs have had a good deal of success, particularly within the regional economic communities, this has not translated into dynamic increases in trade – mainly because of similarities in both demand and production structures in most countries in the region. Despite trade liberalisation, the level of development remains low and countries are still producing primary products with limited value-added. Countries on the continent are largely confined to the lower end of global value chains.

Development of competitive manufacturing activities is proving to be a necessary condition for sustained and inclusive growth within the continent, as it is in other parts of the world. The current status quo, where Africa engages with the world primarily as a consumer rather than a producer of manufactured goods, has yielded minimal developmental returns and is unsustainable in the long term. Trade in relatively lower-priced primary goods, in exchange for highly priced manufactured goods, is contributing to the continent becoming poorer. This in part constrains its ability to increase value-addition and competitiveness to alleviate poverty and joblessness and ensure sustainable livelihoods for its people.

National-based industrial strategies are, therefore, increasingly being seen as critically important to the promotion of balanced growth and development across the continent. Combining such strategies with systematic regional industrial development initiatives will play a big part in moving African manufacturing activities higher up global value chains. Focused development and implementation of such initiatives is, therefore, a strong policy priority and should be instrumental in guiding collaboration between key partners.

Over the past year, South Africa has worked with fellow member states in SADC to develop a framework to support the development of productive capacity and build the requisite infrastructure to achieve real economic integration. The framework provides a practical agenda to build supply-side capacities through the development of strong regional value chains to underpin intra-regional growth and diversification of trade.

Within SACU, work is currently under way to concretise collaboration with development finance institutions to promote the development and integration of regional value chains. In support of this work, South Africa has opened up its policy development capacity-building programmes to participation by other SADC member states, practically demonstrating its commitment to building productive capacity through shared knowledge and proactive regional collaboration.

Key Action Programmes

1. Agreed Work Programme with Regional Economic Communities

Nature of the intervention

Implementation of the work programme with Regional Economic Communities as agreed by SADC member states.

Economic Rationale

The South African economy is inextricably linked to that of the region. It must, therefore, continue to work with fellow African states on a bilateral and multilateral basis to facilitate development of productive capacity and the requisite infrastructure to achieve real economic integration. South Africa will continue to work with partner countries to implement agreed priorities, including the establishment of joint infrastructure development projects, development of regional value chains and the provision of technical assistance for policy and institutional development.

Outcome

Increased economic integration and co-operation between the regional economic communities.

Key milestones

2013 - 2018: Work with fellow member states to implement the approved SADC Industrial Development Implementation Matrix.

2013 - 2014: Work with member states to concretise collaboration with DFIs to support development of regional value chains in SACU.

2013 - 2014: Work with member states to develop a SACU industrial policy.

2013 - 2016: Work with fellow member states on a tripartite industrial development roadmap and work programme.

Industrial Financing

2. Strengthen the role of Development Finance Institutions to channel funding towards productive sectors of the economy

Nature of the intervention

This intervention involves working closely with DFIs to secure funding for productive activities in the region and to ensure that conditions attached to funding support industrial development.

Economic Rationale

Industrial financing is an important component of industrial development. It helps correct some of the built-in constraints of industrialisation, such as inadequate infrastructure, and skills and technology acquisition. Because industrialisation is inherently a risky process – more so at a regional level where countries with varying operating environments are involved – finance is typically under-provided and may not be made available for a sufficient duration. The level of Africa's success in industrialising will, in part, be determined by its ability to mobilise the required resources to channel into the productive sectors of its economies.

Experience from countries that have industrialised rapidly bears witness to the fact that DFIs are extremely important in allocating capital to the productive sectors of the economy, where the private sector can be leveraged in. DFIs in the region are already engaged in a range of activities in a number of countries. Their experience and expertise will be key to taking forward the co-ordinated effort to promote development of regional value chains based on each country's comparative advantages in various sectors.

Outcomes

Industrialisation and economic development through the promotion of regional value chains.

Key milestones

2013 / 2014 Q2: Work with IDC and DBSA in implementing their expanded role in investing in the productive sectors of economies across the region.

2013 / 2014 Q2: Explore how South Africa can work with regional banks to assist in securing funding lines and ensuring that attached conditions support the industrial development priorities of recipient countries.

2013 / 2014 Q2: Exploit new opportunities created by South-South co-operation by exploring how South Africa can work with large developing countries that have substantial financial and other resources which African countries could benefit from through strengthened partnerships.

3. Support effective use of ODA to promote industrial development

Nature of the intervention

This involves supporting African countries seeking to extricate themselves from over-reliance on aid by ensuring that conditionalities placed on development assistance do not stifle development, the building of productive capacity and good governance.

Economic Rationale

Official Development Assistance (ODA) will continue to play a key role as long as many African countries remain aid-dependent – a situation that inhibits their ability to direct significant funds towards industrial development. Governments need to be increasingly freed from the compulsion to spend aid money on foreign technical consultants, experts and products rather than using and building local capacity and expertise.

In this context, ODA can begin to play a significant developmental role by making its finance constraints less binding, so that funds can be directed more strongly towards strategic industrial development. However, a great deal more creative thinking is required on how to shape ODA as an instrument for boosting the productive capacity of recipient countries.

Outcome

Improved industrial development through effective use of aid.

Key milestones

2013/2014 Q3: Prepare for the 2013 UNIDO-coordinated celebration of African Industrialisation Day by working with UNIDO and countries in the region to develop a focused session themed *Aid for Industrial Development*, to craft an aid delivery model that prioritises the building of manufacturing capacity.

Lead department: the dti

Supporting agencies/departments: DFIs, DIRCO, EDD

4. Co-operation on Standards, Quality Assurance, Metrology and Accreditation (Technical Infrastructure)

Nature of the intervention

South Africa will work with countries in the region to strengthen co-ordination of technical infrastructure activities, including standards, metrology and accreditation and conformity assessment services, mindful of the fact that the development of such capacity has a long lead time.

Economic Rationale

The capacity to comply with international standards, norms and technical regulations underpins the potential for economic and industrial growth. The strengthening of technical infrastructure capacity in African countries is a precondition of industrialisation efforts, including with respect to metrology, standards, accreditation and conformity assessment and compliance.

The dumping of cheap, sub-standard manufactured goods on African markets has sometimes led to the collapse of local industries and acted as a major barrier to industrial development. Tightened standards and conformity assessment are, therefore, of great importance in preventing the influx of sub-standard and injurious products into African markets.

Outcome

Improved quality and enhanced potential access of African products to export markets.

Key milestones

2013 / 2014 Q4: Identify relevant international and regional standards that need to be adopted or adapted for use by the agro-processing, mineral beneficiation and pharmaceutical sectors – singled out as priority sectors by the 19th Conference of African Ministers of Trade and Industry.

2013/2014 Q4: Identify and establish the measurement capabilities that will support the development of the agro-processing, mineral beneficiation and pharmaceutical sectors.

2013/2014 Q4: Develop and provide accreditation support for the agro-processing, mineral beneficiation and pharmaceutical sectors, including an arrangement that will facilitate the acceptance of accredited

certification, inspection and testing in many African markets based on single accreditation.

2013/2014 Q4: Identify and establish accredited testing, certification and inspection services that will be required by the agro-processing, mineral beneficiation and pharmaceutical sectors.

Lead department: the dti

Supporting departments/agencies: SQAM institutions, DIRCO, EDD

5. Cross-border infrastructure and sector development

Nature of the intervention

This intervention seeks to promote cross-border infrastructure and sector development through corridors and Regional Spatial Development Initiatives.

Economic Rationale

A critical constraint to regional industrial development and integration is the continuing prevalence of weak cross-border infrastructure. In 1996, Government launched its Spatial Development Initiatives (SDI) Programme to provide support measures to attract investors into selected, viable projects in regions with clearly identified growth potential.

This approach heralded a shift from a narrow focus on transport corridors to a broader focus on regional development linked to strategic investment. By the end of 2001, the focus shifted to the Regional SDI Programme (RSDIP) within the SADC region. The RSDIP has recently been reconfigured in consultation with Angola, the Democratic Republic of Congo (DRC), Mozambique, Namibia and Tanzania, resulting in a range of proposed SDIs earmarked for support over the three-year period from June 2010 to August 2013.

Outcome

Integrated cross-border infrastructure that facilitates investment and regional industrial development.

Key Milestones

Promote the North-South corridor, with principal road and rail routes linking the port of Durban to Dar es Salaam:

2013/14 – 2015/16: Scope and roll-out road and rail links in partnership with regional economic communities.

Roll-out of in-country spatial development initiatives within the continent:

2013/14 – 2015/16: Leverage trade and investment in oil and gas sectors based on synergies between South Africa and Angola.

2013/14 – 2015/16: Finalise and implement recommendations of the SDI scoping study on the Trans-Caprivi and Trans-Cunene Corridors.

2013/14 – 2015/16: Scoping study on Bas-Congo Development Corridor.

2013/14 – 2015/16: Partner with countries in the region to scope possible areas of co-operation to fast-track infrastructure development to support industrialisation through bilateral and established multilateral arrangements.

Lead department: the dti

Supporting agencies/departments: DIRCO, EDD, DBSA and Regional Economic Communities.

6. Expansion of the Capacity-Building Programme for Countries within the Region

Nature of the intervention

This programme seeks to increase co-operation on the development of skills to support industrial development.

Economic Rationale

Two major challenges have impacted on the ability to effectively formulate and implement a regional industrial development framework over the last decade. First, there has been insufficient co-ordination around industrial initiatives at regional level. Second, capacity to formulate and implement high-quality industrial policy interventions is uneven across various countries.

Outcome

Enlarged regional skills pool to underpin the implementation of industrial policy interventions and support measures.

2013/14 Q4: Propose one potential Centre of Excellence as a pilot to improve productive capacity in agro-processing.

2013/14 Q4: Work with the SADC Secretariat to assist with scoping regional incubators to assist SMMEs in the SADC priority sectors.

Lead department: the dti

Supporting agencies/departments: DIRCO, EDD, DBSA and Regional Economic Communities

Skills for the economy

A key structural constraint to sustainable industrialisation in South Africa has been the absence of demand-driven, sector-specific skills strategies and programmes, aligned with investment, employment and technological imperatives flowing from the key industrial sector strategies under IPAP. The situation up until quite recently has been characterised by a narrow supply driven approach to skills planning and delivery, compounded by poor interpretation and measurement of medium-to-long term skills demand.

However, the foundations of a more adequate approach to the problem have been laid by three significant institutional developments: the launch of the National Skills Development Strategy for 2011-2016; the establishment of the Human Resource Development Council of South Africa (HRDC-SA); and the conclusion of the National Skills Accord (NSA) between Government, business and labour.

One early marker of this changed approach has been the establishment by the HRDC of the Artisan and Technicians Development Technical Task Team (ATD-TTT), whose mandate is to develop a more co-ordinated approach to target-setting and funding of artisan development through the years 2012/13/14. Among other things, the Task Team will urgently seek to address the existing problem of the low pass rate in the trade test, which has acted as a constraint on the scale and quality of apprentices entering into the employment pipeline.

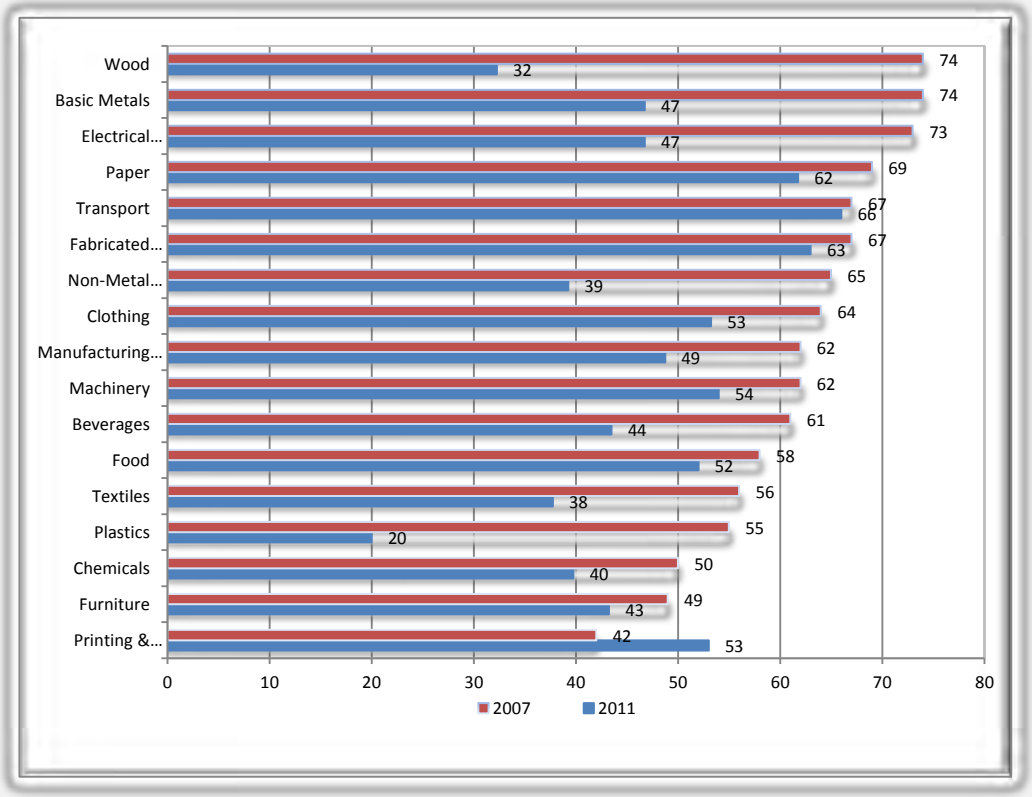
Other HRDC-SA initiatives are also under way, but have yet to bear fruit in terms of improved sector-skills alignment interventions that could address the critical problem of high- and mid-level skills shortages and underpin sustainable long-term, demand-driven skills interventions of sufficient scale, appropriateness, quality and speed (timing of delivery). Over time, the aim is to engineer a decisive shift away from the current over-supply of lower-skill qualifications (e.g. NQF levels 1-3) towards an increased supply of mid- and high-level qualifications or 'deep' capabilities (NQF levels 4 and higher).

The National Skills Accord aims to strengthen more effective co-ordination and articulation across the entire education and skills development pipeline, with key commitments by Government, business and labour.

However, a fundamental challenge remains the fact that training curricula, lecturer capacity, equipment, machinery and training facilities have lagged behind production and technological changes. The FET colleges have become the focal point for artisanal skills delivery, with increased funding support being channelled into capacity development (both human resource and capital upgrading). The relative absence from the picture of other tertiary institutions has, however, meant that the aggregate size and quality of graduate supply across the education and skills development chain has not provided a sufficient base to support growth opportunities in the manufacturing sector in general and new and emerging sectors in particular.

Nevertheless, some signs of progress have been registered over the recent past. Figure 12 shows that while shortages of skilled labour continue to be an important constraint, there have been modest improvements in the provision of skilled labour across most manufacturing sub-sectors.

Figure 12: Proportion of firms reporting shortages of skilled labour as a constraint to manufacturing (2007-2011) (%)

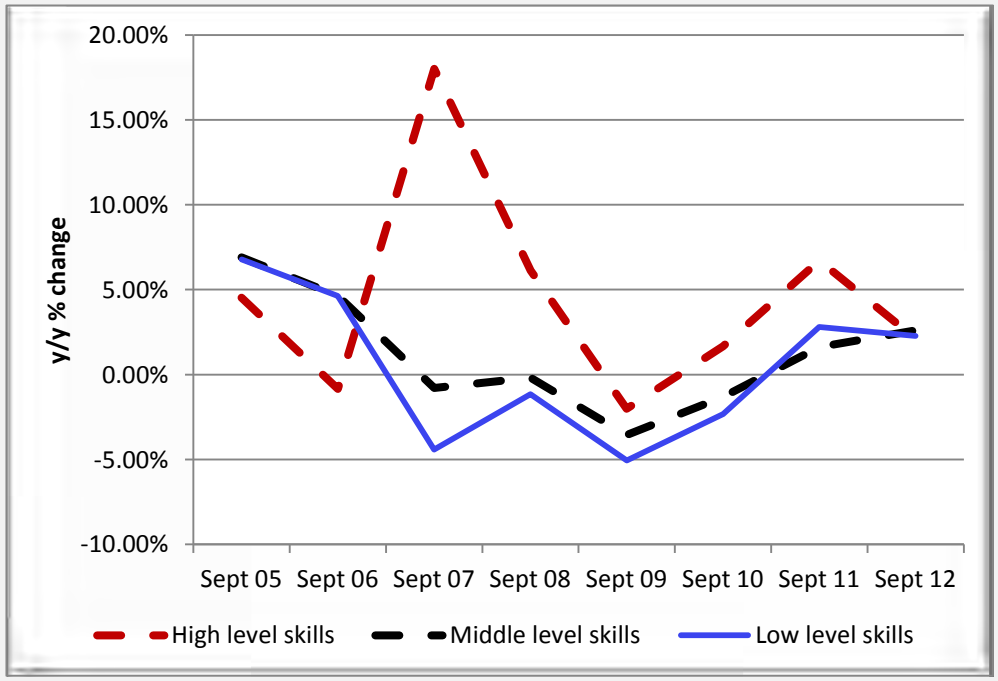


Source: BER Manufacturing Survey

The general improvement in reporting of skilled shortages is reflected in the employment trends for high and mid-level skills in Figure 13. This confirms that in line with the local economic recovery there has also been a recovery across all skill levels since the 2009 recession – particularly notable for mid- and low-level skilled employment.

However, since 2011, the recovery of high skill employment has been reversed, a shift to be monitored. Overall, therefore, since 2011 there has been a convergence of employment across all skill levels.

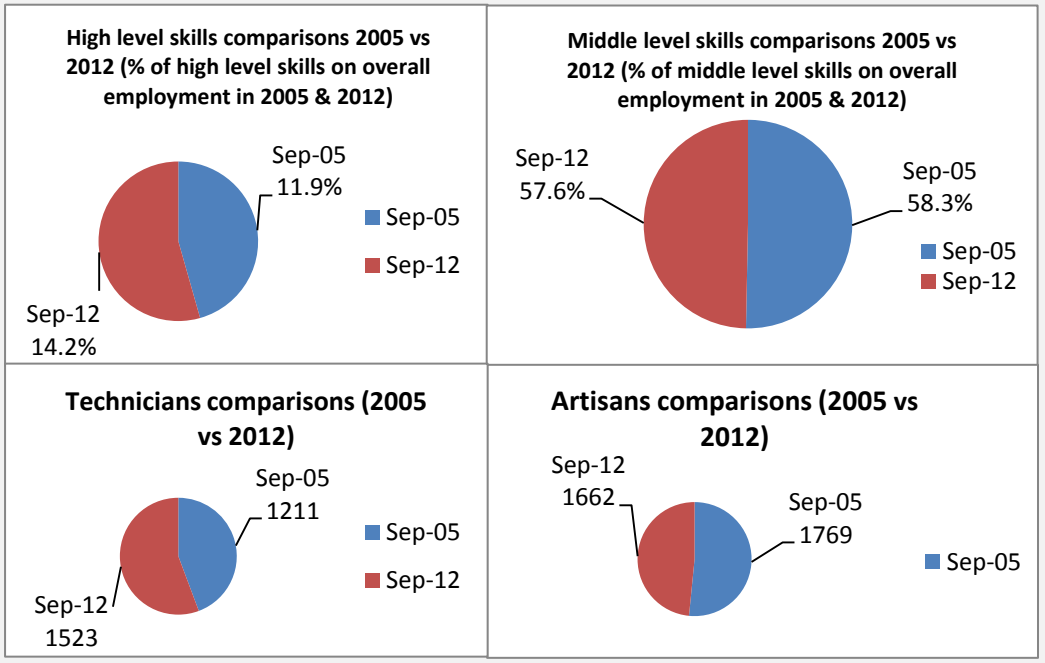
Figure 13: Annual growth trends by high, middle and low level skills (Sept 2005-Sept 2012) (%)



Source: Statistics SA, Labour Force Survey (2005-2012); own calculations

Figure 14 shows that while there has been a small increase in the share of high skills to overall employment, the share of mid-level skills has remained relatively static. The latter trend is amplified by the small decline in artisanal employment. On the other hand, technicians' employment increased by 26% over the period, albeit from a low base. This disaggregation of the labour market underlines the continued mismatch between the skills profile of the labour force and the growth and technological opportunities arising from IPAP in the foreseeable future.

Figure 14: Changes in employment of high, mid-level and artisanal skills (Sept 2005- Sept2012) ('000)



Source: Statistics SA, Labour Force Survey (2005-2012); own calculations

Key opportunities and constraints

The third phase of the National Skills Development Strategy commits to more responsive skills planning to secure alignment between the SETA planning and delivery system and national development priorities, including IPAP. In pursuit of this, **the dti** and the Department of Higher Education and Training (DHET) have established an inter-departmental task team on skills to fast-track the alignment process. A key achievement has been the approval of NSF funding for **the dti** priorities, including the National Tooling Initiative and the Unemployed Graduate Work Experience Placement Programme. Both of these programmes will support the National Skills Accord, which provides for clearer commitments by Government, business and labour to deliver on specific skills targets.

The role of SOCs in producing skills beyond their own immediate operational needs has been resuscitated through the establishment of the SOCs Artisan Development Task Team (SOC-ATD TTT) and some progress has been made in aligning the training capacity of SOCs with national artisan training targets.

the dti has participated in these structures to facilitate the integration of IPAP priorities. Support for the FET college system to revive its contributory role in artisan supply is now more evident, although there is still a long way to go before quality delivery can be assured.

Likewise, progress on demand-side planning on the part of SETAs, private training providers, FET colleges and universities remains slow. To address this issue, **the dti** has concluded formal Memoranda of Understanding with some SETAs (e.g. merSETA), while at the same time entering into informal arrangements with others (FPMSETA, for example) to integrate both **the dti**-wide and IPAP-specific priorities into their Sector Skills Plans (SSPs) and/or Strategic Plans.

The establishment of the **dti**-driven industry working groups (metals, plastics and pharmaceuticals) will provide further impetus for alignment with IPAP priorities, while putting a stronger focus on the promotion of a medium- to long-term perspective on training for employment.

A further key challenge requiring urgent attention is the quality and relevance of the training delivered across all qualifications, where undue emphasis continues to be placed on certification at the expense of skills acquisition for employability. The global recession and slow economic recovery have brought the structural vulnerability of the skills formation system into sharp relief, clearly demonstrating the linkage between employment losses and the continued replication of outdated low and intermediate qualifications, insufficiently responsive to changing economic and/or technological demand.

In addressing the need for a consolidated focus on building specialised skills for the future, it will be necessary to provide coherent responses to the following market failures:

- Lack of information and accurate prediction of skills requirements given the vagaries of the economic cycle;
- Lack of co-ordination and collective action plans due to inadequate inter-firm interaction and collaboration; and
- Deficient institutional capacity to co-ordinate and develop specialised competencies and capabilities to support the industrialisation path.

Experience thus far has shown that the design and implementation of specialised and industry-led training interventions needs to foreground the role of IPAP sector development and investment strategies and plans more effectively than has been the case to date. The nascent moves towards co-ordination on artisan development should be strengthened and implemented on a scale beyond artisan training.

Key Action Programmes

1. Strengthen demand-side skills planning through the development of customised artisan programmes in support of priority or growing IPAP sectors

Nature of the intervention

The programme seeks to develop customised artisan programmes in support of IPAP sectors as informed by the skills value chain analysis.

Economic Rationale

Through the National Skills Accord and subsequent establishment of the Artisan and Technicians' Development Technical Task Team (ATD-TTT), national artisan training targets have been set in various sectors. A proposal for a centralised funding system has been accepted and planning is under way for a pilot Recognition of Prior Learning (RPL) Programme. **the dti** has taken an active role in the ATD-TTT and will continue to promote the integration of IPAP sector priorities for artisan development, with particular emphasis on priority and new trades. The ongoing work of **the dti-**driven industry working group on metals and plastics will continue to shape the development and promotion of customised artisan training plans for IPAP.

Based on a skills projection model, the industry working group will assist **the dti** in defining the scale and scope of appropriate artisanal trades based on a skills value chain analysis. This should allow for more accurate prediction of sectoral artisan demand than is currently the case; and should contribute to fast-tracking the design and accreditation of appropriate curricula and qualifications through the Quality Council for Trades and Occupations (QCTO). A key complementary factor to be addressed will be the scope and quality of lecturing capacity development at public FET colleges.

Outcome

Increased supply of skills required to meet the needs of industry as a whole.

Key milestones

2013/14 Q1-2:	Revision of draft IPAP artisan plan based on industry feedback, sector desk and SETA consultations.
2013/14 Q3:	Concept proposal on priority artisan trades, new occupations and related matters to be finalised.
2013/14 Q4:	Stakeholder consultations and agreement with DHET, key SETAs and NSF on options for implementation.
2014/15: Q1-2:	Finalisation of implementation plan, including governance, funding and roll-out of the IPAP Artisan Plan.
2014/15: Q3-4:	Commence roll-out.
2015/16:	Monitor and evaluate roll-out.

Lead departments/agencies: DHET and **the dti**

Supporting departments/agencies: EDD, Manufacturing, Engineering and Related Services SETA (MerSETA), Chieta, FoodBev SETA, Clothing, Textile and Leather SETA, Service SETA and HRD Council, National Skills Fund (NSF).

2. Streamline the skills delivery system through piloting dedicated Industry-Skills Hubs in a growth, new or 'emerging' sector

Nature of the intervention

The intervention proposes the pooling of existing infrastructure within specified industrial or geographical regions or areas to optimise skills delivery and ensure that training provision becomes more responsive to both short- and long-terms skills requirements.

Economic Rationale

The purpose of dedicated skills hubs as a delivery system for IPAP priorities is to ensure greater coherence in the delivery of specialised intermediate and high-level skills and the growth, technological and investment trajectories in a key IPAP sector. It is proposed that strategic delivery partnership agreements be reached among **the dti**, DHET, industry stakeholders, selected universities and FET colleges in specific regions, industrial centres or manufacturing supply parks. Subject to the implementation of a successful pilot, the initial model may be rolled out in full and replicated to other sectors as appropriate.

Key milestones

2013/14 Q1-2: Completion of research report on skills hubs.
2013/14 Q3: Conduct workshop on a pilot Skills Hub Model with industry working group, DHET and other external stakeholders.
2013/14 Q4: Develop a draft business case on a pilot Skills Hub.
2014/15: Q1-2: Finalisation of business case, funding framework and commitments in partnership with DHET, SETAs and industry stakeholders.
2014/15: Q3-4: Delivery agreements with partners and delivery model approved.
2015/16: Begin roll-out of pilot; monitor progress.

Lead departments/agencies: DHET, NSF, **the dti** and Treasury
Supporting departments/agencies: Selected SETAs

3. Support for National Centres of Excellence to integrate sector competitiveness and skills needs

Nature of the intervention

Development of a sustainable funding architecture for the Centres of Excellence within the existing skills system.

Economic Rationale

the dti is currently supporting industrial Centres of Excellence in priority sectors (advanced manufacturing, clothing and leather, and aerospace) to support best practice in skills support for enhanced sector competitiveness. A research report to review the options for improved operational and financial sustainability was recently completed. The implications of the proposed model will have to be operationalised over the next few years to ensure the sustainability of the Centres of Excellence and explore further options within the existing SETA system.

Outcome

Provision of long-term funding for the improvement of competitiveness and skills support for IPAP-related sectors.

Key milestones

2013/14: Q1-Q2: Stakeholder consultation on the proposed models for sustainability.
2013/14: Q3-Q4: Finalisation of the appropriate institutional and funding model for the Centres of Excellence.
2014/15: Begin roll-out of the new institutional and funding arrangements.
2015/16: Monitor roll-out.

Lead departments/agencies: DHET, **the dti** and Centres of Excellence.

Supporting departments/agencies: Selected SETA

Innovation and Technology

In the context of intense global competition, it is imperative for South Africa to strengthen its innovation and technology capabilities across the entire innovation value chain from conception and research through to commercialisation. There is increasing recognition that more emphasis should be placed on technology acquisition – and its application in the continuous, incremental improvement of industry processes and capabilities – rather than fixating on new and, in some cases, 'vanity' projects. This requires a carefully calibrated strategy, an integrated institutional architecture and optimum mix of funding support.

The DST, together with its associated Science Councils and research institutions, occupies the research and innovation end of the innovation value chain. **the dti** occupies the other end of the chain, associated with commercialisation and support for the 'learning and effort' required for the commercialisation of new and acquired technologies. Government has set a target of increasing and sustaining research and development expenditure to at least 1% of GDP. The DST's National Research and Development Strategy sets the overarching framework for technological interventions, particularly on the research side of the overall process.

The focus of **the dti**'s efforts lies with increasing support for companies that enhance their competitiveness and production capacity through the application of new technologies. **the dti** operates three main support mechanisms: the MCEP; the Support Programme for Industrial Innovation (SPII); and the Technology and Human Resources for Industry Programme (THRIP).

The MCEP includes a facility that assists companies to upgrade existing plant and machinery.

The SPII is designed to promote technology in industry through the provision of financial assistance for the development of innovative products and processes. Its focus is on the development phase, which begins at the conclusion of basic research and ends when a production prototype has been produced.

Finally, the THRIP facility, working in partnership with the National Research Foundation, supports science, engineering and technology research collaborations focused on the technology needs of participating firms, and encourages the development of research personnel and students and their mobility among participating organisations.

It is worth noting that the South African innovation and technology landscape is characterised by a weak private sector venture capital market, particularly in regard to 'bricks and mortar' industrial Greenfield investment. It is also apparent that there is a large gap in the value chain between better support and tailor-made instruments for the commercialisation stage of the value chain. Though significant research and development work is ongoing, particularly under the auspices of the DST, its fruits are not routinely and consistently 'passed through' to commercialisation, mainly due to the limited scale and scope of existing innovation and commercialisation instruments. To effectively begin to address this limitation, much closer co-ordination must be developed between the DST, **the dti** and their respective associated institutions.

With this end in mind, a full review of existing support measures will be carried out, primarily focused on the design, efficacy benefits and outcomes of these measures, and will include a reassessment of the optimal location of **the dti**'s support instruments, SPII and THRIP.

This exercise will be carried out mindful of the existence of other support mechanisms that exist under the aegis of the DST and of the Technology Venture Capital fund (TVC) administered by the IDC.

In addition, technology platforms will be created to take into account the fact that sectoral needs and dynamics differ and, therefore, require distinctive approaches to innovation that appropriately meet sector-specific needs and challenges.

Three enabling technologies will be prioritised in the 2013/14 financial year: namely, advanced materials, nanotechnology, and micro and nano-electronics.

Key Action Programmes

1. Review of SPII and THRIP

Economic rationale

Both support mechanisms are administered by the IDC and form two legs of a broader suite of support mechanisms across a range of departments and institutions, including the DST and the IDC. A review of both will serve to ascertain efficacy and impact, take-up, design, correlation with other support mechanisms, and institutional placement.

Key Milestones

2013/14 Q2: Complete the review.
2013/14 Q3: Proposals for design and institutional placement.
2013/14 Q4: Operationalise the new arrangements.

2. Establishment of Technology Platforms

While strengthening the existing technology platforms, new ones will be established. These technology platforms will have applications that are not limited to one particular industry sector, but have multiple applications across a range of products, processes and services. To encourage competitiveness in different sectors and sub-sectors by improving their technical and technological skills, **the dti** will create enabling platforms and facilitate the development of sectoral funds to support them.

Economic Rationale

To promote connectedness between industry and academia, and encourage small and medium enterprises in research and technology development activities.

Key milestones

2013/14 Q2: Draft proposal for the development of new sectoral funds.
2013/14 Q3: Stakeholder workshops for the establishment of the advanced materials, nanotechnology, micro- and nano-electronics technology platforms to support IPAP sectors.
2013/14 Q4: Existing platforms aligned to IPAP sectors supported through the Technology Venture Capital Fund.

3. Incubation Support Programme

Nature of the intervention

The purpose of this intervention – to increase the number of business incubators attached to either a university or science council – is to promote technology development and transfer and stimulate the establishment of high-technology firms.

For a university or science council to establish an incubator, it will be required to partner with a business company. An institution will be expected to identify and incubate local entrepreneurs who would then supply the private partner or be involved in future venture creation and the promotion of entrepreneurship among university students and graduates. These incubators will contribute to the country's technology-based growth and will continue to function as experiential learning laboratories.

Economic Rationale

To encourage partnership between research institutions and business and to stimulate the development and leveraging of the competences of high- and emerging-technology firms.

Key milestone

2013/14 Q3: Feasibility studies for university- or science council-based incubators.

4. Strategy of Technology Commercialisation for Innovative Enterprises

Nature of the intervention

The strategy, to be developed in close co-ordination with the DST, seeks to accelerate the journey between the idea-generation and technology commercialisation phases of innovation. The strategy will provide guidance with respect to funding options and will seek to address the inherent complexity of innovation exploitation. Through the strategy, Government will provide leadership and harmonise existing innovation programmes and instruments to eliminate duplication and dilution of efforts.

Economic Rationale

To enhance the probability of successfully commercialising new technologies and enhancing enterprise return on investment (ROI).

Key milestones

2013/14 Q4: Draft Strategy of Technology Commercialisation for Innovative Enterprises.

2013/14 Q4: In collaboration with the Department of Science and Technology, develop an online one-stop shop for all existing innovation instruments.

Lead departments/agencies: the dti

Supporting departments/agencies: DST, IDC, CSIR, TIA, NRF, Universities

Special Economic Zones (SEZ) and Industrial Development

The 2012/13 IPAP identified Special Economic Zones (SEZs) as key levers in support of long-term industrial and economic development. SEZs are a conduit for the creation of an appropriate environment for foreign direct and domestic investment and the development of strategic industrial capabilities. SEZs facilitate the development of new industrial regions and the strengthening of existing ones. They are central to Government's strategic objectives of industrialisation, regional development and employment creation.

The SEZs Programme was specifically developed to promote the creation of a regionally diversified industrial economy by establishing new industrial hubs in underdeveloped regions of the country. To ensure that the SEZ programme is effective, a dedicated and integrated legislative framework is currently being finalised. This will enable Government to effectively regulate all SEZs, including Industrial Development Zones (IDZs), which are one category of SEZ. This will mark a break with the existing situation in which IDZs are separately regulated in terms of the Manufacturing Development Act.

It is the intention that industrial production in the SEZs will focus on support for the manufacture of value-added goods. Once designated, each SEZ should create backward and forward linkages between companies inside and outside of it, while at the same time building and strengthening localisation and supplier development programmes.

Key Opportunities

- Increased foreign and domestic investment;
- Increased production output;
- Increased exports of value-added manufactured goods;
- Employment creation;
- Regional industrial development.

Constraints

- Energy constraints
- Skills shortages in strategic manufacturing sectors and in the availability of the necessary expertise to develop and manage SEZs;
- Inefficiencies in the South African ports network (container terminal capacity constraints);
- Under-developed infrastructure, including rail branch-lines, roads, electricity and water supply;
- Complex regulatory and inter-governmental integration regimes.

Key Action Programmes

1. SEZ Roll-out

Nature of the intervention

Designation of SEZs across the country to promote industrial development, export of value-added goods and job creation.

Economic rationale

Designation and development of SEZs will provide a platform for various areas and provinces of the country that will support implementation of the IPAP, regional industrial development strategies and the NDP. The overriding aims of the SEZ roll-out will be to contribute towards strengthening South Africa's terms of trade through the export of value-added commodities, the creation of stronger value chains and provision of much-needed jobs in previously disadvantaged regions.

Key milestones

2013/14 Q2: Designation of the Saldanha Bay IDZ (negotiations for land delayed submission of the application, the target thus moved to 2013/14).
2013/14 Q2: Pre-feasibility study for the Platinum Valley Hub.
2013/14 Q3: Roll-out of the OR Tambo IDZ's Jewellery Manufacturing Precinct.
2013/14 Q3: Roll-out of the Saldanha Bay IDZ.

Lead departments/agencies: **the dti**

Supporting departments/agencies: NT, NPC, EDD, DoE, DPE, DHA, DMR, DEA, Eskom, Transnet, SARS, and the DFIs.

2. SEZ Bill

Nature of the intervention

The Bill seeks to provide for the designation, development, promotion, operation and management of SEZs.

Economic rationale

To provide for the establishment of the SEZ Board, to regulate the application and issuing of SEZ operator permits, and provide for the establishment of the SEZ Fund. The Bill will further support the acceleration of industrial development and the creation of a regionally diverse industrial economy through the creation of new industrial hubs in underdeveloped regions of the country.

Outcomes

Concurrent, incremental establishment of SEZs within the appropriate legislative, regulatory, institutional and governance framework, to achieve:

- Increased foreign and domestic investment;
- Increased beneficiation of mineral and agricultural resources;
- Increased export of beneficiated products;
- World-class infrastructure;
- Increased job opportunities; and
- Regional industrial development.

Key milestones

2013/14 Q1-Q2: Parliamentary Legislative process and finalisation of SEZ Bill
2013/14 Q3: Draft SEZ Guidelines (in line with approval of the Bill)
2013/14 Q3: Draft SEZ Regulations and Guidelines
2013/13 Q3: Establishment of the SEZ Board (once the Act is promulgated)

3. SEZ: Planning and Development

Nature of the intervention

Effective planning and development of SEZs, including identification of the strategic industrial opportunities and capabilities to be developed, the regions that can successfully host and anchor the development of the desired capabilities, and the customisation of support measures in line with the needs of the identified industrial sectors and host regions.

Economic rationale

SEZs cannot be developed in all regions at the same time. There are currently 10 concept proposals for SEZs across the country. These will have to be carefully analysed to distinguish between those that show the strongest potential for long-term economic viability and those that show less potential viability. The required long-term plans for those zones that have been identified as economically viable will then be developed and implemented through a range of broad-based partnerships, including the three spheres of Government, academia, research agencies and other key partners.

Outcomes

Effective planning and development of SEZs, driven through a collaborative effort between and across the spheres of Government, and a comprehensive support package, including industrial and social infrastructure, technology and innovation, human capital development, and leading to:

- Development of industrial eco-systems in targeted regions;
- Excellence and mastery of targeted industrial capabilities;
- Attraction of foreign and domestic direct investment; and
- Employment generation and growth.

Key milestones:

2013/14 Q1:	Pre-feasibility study reports for three proposed SEZs.
2013/14 Q2:	Three technical feasibility study reports (from Q1).
2013/14 Q2:	Seven pre-feasibility study reports (remaining concept proposals).
2013/14 Q3:	Seven technical feasibility reports (from Q2),
2013/14 Q4:	Master plans of three SEZs.
2013/14 Q4:	Three applications for designation.
2013/14-2015/16:	Ongoing establishment of SEZs.

Lead department/agencies: the dti

Supporting departments/agencies: NT, DMR, SARS, DAFF, DOC, EDD, Eskom, Transnet and the DFIs

4. SEZ Capacity Building Programme

Nature of the intervention

Capacity-building programme to develop a pool of skills across the three spheres of Government for the effective planning, development and management of SEZs.

Economic rationale

The planning, development and management of SEZs in South Africa is a relatively new practice. The country needs to rapidly develop a large pool of skills across the three spheres of Government (including state agencies) for effective planning, development and management of SEZs.

Outcomes

Increase in the quality and quantity of skilled professionals, across the three spheres of Government, required for the planning, development and management of SEZs.

Key milestones:

2013/14 Q1: Recruitment of 30 candidates, across the country, to be trained in China on SEZ planning, development and management.

2013/14 Q2: Training of 30 officials in China on the planning, development and management of SEZs.

2013/14 Q2: Expanded SEZ Capacity-Building Programme Concept.

2013/14 Q3: Finalisation and approval of the Expanded SEZ Capacity-Building Programme.

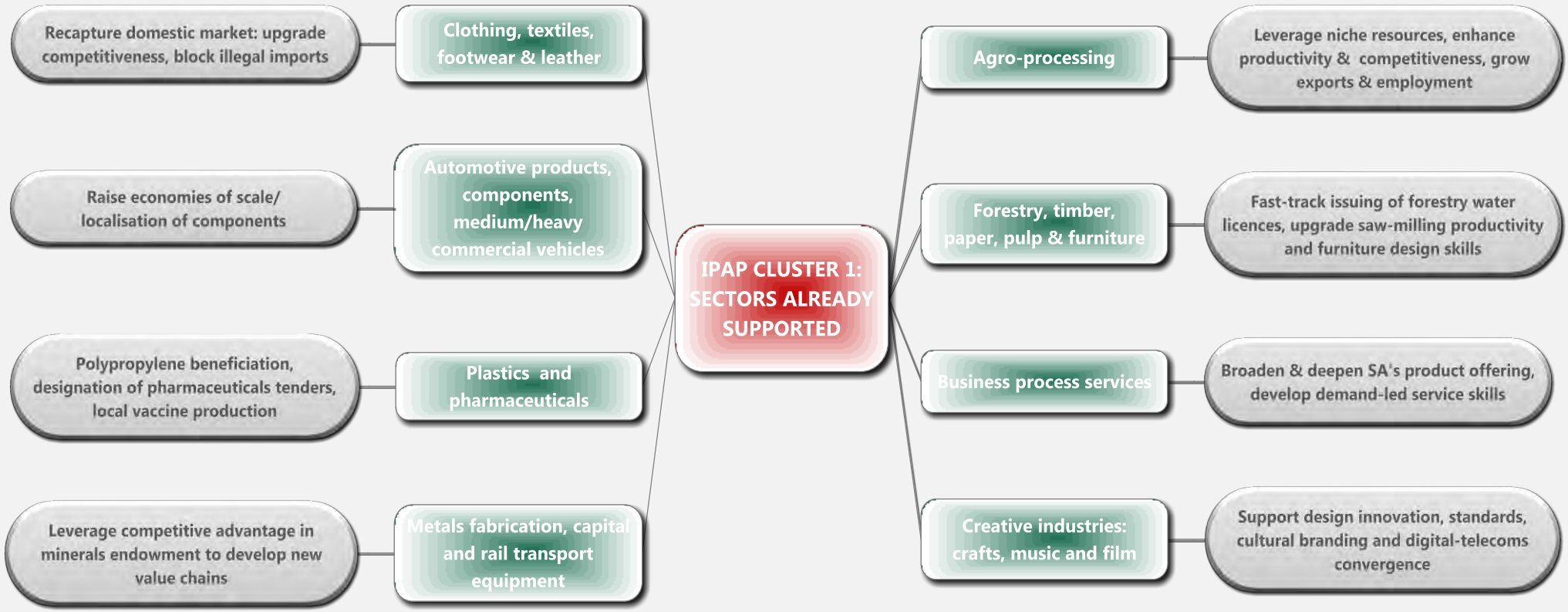
2013/14 Q4: Preparation for implementation of Expanded SEZ Capacity Building Programme in the following year.

Lead department/agencies: the dti

Supporting departments/agencies: NT, SARS, EDD, DHET and DFIs

MAPPING THE FIELD: IPAP SECTORAL INTERVENTIONS 1

Sectors supported since 2007: scale up and broaden interventions



IPAP SECTORAL INTERVENTIONS 1

Clothing, Textiles, Leather and Footwear

Sector profile

The introduction of the CTCP has had a substantial impact on the textiles, clothing, leather and footwear (CTLF) sector in South Africa. However, the sector is still faced with a range of significant challenges: currency strength and volatility; under-invoicing and illegal imports; skills and competitiveness deficits; and limited economies of scale in parts of the textiles sub-sector.

One of the main reasons for the high priority assigned by IPAP to the CTLF sector is its labour-intensive character; it has often been used by developing countries as a platform for sustained economic growth and job creation. In South Africa, the employment trend has until very recently been downward across the entire sector. However, from the period after the CTCP was launched in 2010, the decline has been slowed and is being reversed.

The CTCP includes two main programmes: the Production Incentive Programme (PIP) and the Competitiveness Improvement Programme (CIP). Both of them operate across the full spectrum of textiles, clothing, leather and footwear. The statistics tell an important story. Since the introduction of the CTCP:

- More than 12,200 new decent permanent jobs have been created;
- 469 companies have been assisted under the PIP and 112 companies under the CIP;
- A combined approval to date of more than R1.5 billion has been achieved, of which more than R800 million has already been disbursed to the participating enterprises.

The local retailers who are participating in the CIP cluster programmes have significantly reduced their imported merchandise and are supporting local manufacturers, who are becoming globally competitive through the cluster interventions.
The retailers are taking advantage of the flexibility, low stock holdings and quick fashion change responses that local manufacturers are now offering.

These developments lay the basis for reducing the trade balance deficit that has been consistently recorded since 2000 in all the industries across the sectors, with the clothing industry being worst affected.

Sector economic data

Variable	Contribution in 2011
Manufacturing value-add (% of GDP)	R12 billion (0.7%)
Manufacturing formal employment (% of manufacturing informal employment)	101,511 (8.79%)
Trade balance	-R25 billion

Source: Quantec

Key opportunities

The key opportunity is to recapture a bigger share of the domestic market by improving competitiveness through a range of interventions. These include an enhanced focus on product, process and delivery efficiencies and the strategic harnessing of proximity to local retailers. Ongoing clampdowns on under-invoicing and other illegal activities are helping to level the playing field. The industry has seized the opportunity of a coherent and comprehensive set of support instruments to fundamentally transform its competitiveness.

In future, the commercialisation of new technologies should give both the textile and footwear industries an added advantage. These will include the beneficiation of new fibres now being grown in South Africa and the finalisation of the garment-sizing initiative. The war against illegal imports is being fought on all fronts and the impact of "reference price" utilisation is beginning to bear fruit.

Constraints

The constraints facing the industry are well-documented and include:

- Currency strength and volatility;
- The ongoing surge of global imports that has been under way since the expiry of the Multi-fibre Agreement;
- Illegal imports and fraudulent under-invoicing;
- Inadequate compliance with 'country of origin' labelling legislation;
- Shortage of skilled personnel to take over from ageing industrial executives and senior management, who generally did not have succession plans in place;
- Historical failure to develop and implement skills development plans, particularly for critical areas of operations and in production;
- Outdated capital equipment and technology resulting from inadequate capital investment and technology upgrading; and
- An historical deficit with respect to innovation, research and development.

Key Action Programmes

1. Clothing, Textiles, Footwear and Leather Competitiveness Programme

Nature of the intervention

The programme will enable the sector to compete sustainably and effectively against international competitors in both domestic and export markets. In addition, company-level competitiveness will improve substantially.

Economic rationale

The sector lags behind its international competitors in terms of conversion efficiencies and other key indicators of world-class manufacturing principles – of which quality, cost and delivery are the main drivers.

Outcomes

The programme will assist in securing the stability and competitiveness of all the CTLF sub-sectors. The roll-out of the CTCP will be extended to new companies in the CTLF industries.

Key milestones

2013/14 Q1-Q4: Ongoing roll-out of the PIP and CIP programmes.

Lead departments/agencies: the dti and IDC

Supporting department/agencies: National Treasury

2. Illegal Imports Programme

Nature of the intervention

The programme is designed to clamp down on the illegal imports that have been flooding the country, using documentation that under-invoices consignments. The programme will also scale up the policing of "country-of-origin" labelling and SADC rules of origin.

Economic rationale

Cheap or illegal imports landing in the country are the main threat to CTLF companies. The elimination of illegal imports will help level the playing field for local manufacturers. The programme will build on the successes achieved so far by the introduction of the "reference price" by SARS in the clothing sector – a system that is now being rolled out to the other CTLF manufacturing sectors.

Outcome

Reduction of illegal imports, with a view to their total elimination, will be rigorously pursued over the next three years.

Key milestone

2013/14 – 2015/16: Ongoing and targeted campaigns against under-invoicing and other illegal activities in the sector.

Lead departments/agencies: SARS and National Treasury and ITAC.

Supporting departments/agencies: the dti, EDD

3. Skills Development

Nature of the intervention

The programme is focused on upgrading skills across all the CTLF sub-sectors. Its success will hinge of effective collaboration with the DHET, through the National Skills Fund. Financial support could not be secured in the 2012/13 financial year as the NSF was unable to support the programme due to lack of funds, but this constraint is now set to be overcome. The skills programme will be administered by the Textiles and Clothing Centre of Excellence established at the CSIR for the textiles and clothing programmes, while the Vaal University of Technology will be responsible for skills development in leather and footwear technologies.

Economic rationale

Skills development in the sectors has focused on operator level for a long time through various SETA programmes, with very little attention being paid to technology and scientific development training. The few universities that had sector programmes discontinued them due to lack of consolidated support from the industry.

Outcomes

The programme outcomes will include the graduation of technicians, technologists, engineers, production managers and scientists for the CTLF sector.

Key milestone

2013/14 Q1- Q4: Ongoing roll-out of skills development programmes through CSIR, Vaal University of Technology and Manufacturing (FPM) SETA.

Lead departments/agencies: the dti, CSIR, Vaal University of technology.

Supporting departments/agencies: DHET, DST and FPM SETA

4. Communal Hides Beneficiation

Nature of the intervention

The programme will cover the training of communal farmers and rural households in caring for their animals to maximise hide quality. Included will be slaughtering techniques, hide tanning and marketing know-how.

Economic rationale

It is estimated that communal farmers are responsible for nearly 30% of the country's cattle livestock; this project will help in increasing the production and processing of quality hides for the market.

Outcomes

Improved beneficiation of hides, allowing the sector to compete more effectively and substantially improve rural standards of living.

Key milestones

2013/14 Q2: Appointment of the service provider.
2013/14 Q4: Implementation of the research recommendations.

Lead departments/agencies: the dti, KZN provincial government
Supporting departments/agencies: DOAF

5. Innovation and Technology

Nature of the intervention

This will entail the identification of distinctive new technologies and their commercialisation where possible. The technologies to be pursued will include a three-dimensional (3-D) body-scanner, computer-aided design using 3-D scanner data and the establishment of a South African garment-sizing database. It will involve the processing of new natural fibres such as flax, wild silk, cashmere and kenaf. New technologies such as non-woven products and fibre-reinforced composites will be commercialised and new technologies in garment design and services for the fashion industries will also be pursued.

Economic rationale

South Africa cannot compete globally in commodity textiles. It has to focus on niche markets and not those sectors of the textile trade in which developing economies are better positioned to compete.

Outcomes

The main outcome of the programme will be a transformed clothing industry, which will be in a position to compete globally on the back of home-grown garment technologies.

Key milestones

2013/14 Q1: Finalisation of the data consolidation exercise.
2013/14 Q4: Implementation of the garment-sizing database by South African garment manufacturers.

Lead departments/agencies: the dti
Supporting departments/agencies: CSIR, UNISA and IDC

6. Exotic Leather Cluster

Nature of the intervention

The project is aimed at the establishment of an Exotic Leather Cluster with special focus on crocodile industry.

Economic rationale

The crocodile industry has been working under the radar-screen for a long time, with very little local beneficiation taking place – more than 90% of skins being exported in raw form. The project will promote local beneficiation and the export of finished high-value exotic leather goods (e.g. belts and bags).

Outcome

Exportation of high value-added exotic leather goods

Key milestones

2013/14 Q2: Secure funding from CTCP

2013/14 Q4: Establish the Exotic Leather Cluster

Automotives

(Automotive Products, Components, and Medium and Heavy Commercial Vehicles)

Sector profile

The automotive production sector remains a critical segment of many economies, because of its cross-cutting linkages across several industries and services as well as its documented contribution to various economic development imperatives. The production of a vehicle incorporates a wide range of industrial activities and, as such, the sector is South Africa's leading manufacturing industry, contributing 6.8% of the country's ±R2.960 billion GDP in 2011.

As at year-end 2011, almost 100,000 people were employed in the manufacture of vehicles and components, with 200,000 employed in retail and repair. The total vehicle production volume in 2011 was approximately 540,000 vehicles, compared to 470,000 for 2010, translating into a production growth rate of close to 15%. There are also, however, significant volumes of imported automotive products in South Africa, with import levels to a total value of more than R120 billion outstripping exports of just more than R80 billion in 2010 – thus leading to a trade deficit of R38.6 billion.

Sector economic data

Variable	Contribution in 2011
Manufacturing value-add (% of GDP)	6.8%
Manufacturing employment	97,000
Trade balance	-R38.6 billion

Key opportunities

The start of 2013 has seen the automotive industry make its long-anticipated move into the new APDP support framework, after 17 years of the MIDP (see box, p.78). The year 2013 is, therefore, expected be one of learning, consolidation and innovation within South Africa's automotive production environment as local producers continue to shape their businesses to synergise with the sector-specific support programmes.

Two key objectives of the APDP are to raise volumes to 1.2 million vehicles per annum by 2020 and substantially diversify and deepen the components supply chain. This will require ongoing increases in minimum plant volume thresholds and working with the vehicle assemblers or OEMs to identify areas where greater economies of scale in component sourcing and/or value chain development are possible. All of this needs to be done on the back of South Africa continuously developing itself as a globally competitive destination for automotive investment and production.

The medium and heavy commercial vehicle (MHCV) sector has also received – and will continue to receive – its fair share of policy attention. Opportunities exist to resuscitate bus production in South Africa as well as other MHCV sectors, leveraging off the roll-out of Bus Rapid Transport Systems in the leading Metros and the revised state preferential procurement framework. Recent progress made in this regard has included updates to the Automotive Investment Scheme (AIS).

There continues to be growing demand for other MHCVs in areas such as infrastructure, construction, mining and agriculture, while at the same time a strong policy focus continues to be placed on the so-called 'yellow metals' manufacturers.

Like many industries globally – but more intensively than most – the automotive sector is impacted by the imperatives of climate change, which have led to greatly heightened demands for products with lower emission levels. A strong focus will need to be placed on ensuring that these technological developments are incorporated throughout the South African automotive production landscape, with particular attention to be given to the opportunities afforded by Electric Vehicle (EV) production.

Constraints

Notwithstanding the successes achieved since 1995, the industry still faces a number of challenges as it enters into the APDP paradigm. Economies of scale in assembly and the depth of domestic component manufacturing are not yet internationally optimal. A relatively small number of automotive components dominate the export basket and local content has tended to stagnate.

Several studies have drawn attention to gaps in the manufacturing competitiveness levels of South African automotive component suppliers. To address this issue, various supplier initiatives have been implemented over the years, with the most recent iteration being **the dti**-driven Supplier Development Programme, delivered in conjunction with the AIDC and UNIDO. This three-year programme ran from 2010 to 2012 and while it delivered documented improvements over these years, the country will now have to develop a heightened, co-ordinated and ramped-up effort to improve manufacturing competitiveness across the entire domestic automotive value chain. **the dti** continues to engage with industry stakeholders to finalise this optimum framework.

The rapid liberalisation of the MHCV sector as well as the apparent lack of co-ordination between various government agencies has in the recent past diminished Government's ability to increase state procurement of buses or bus services in support of the sector.

The procurement processes at the various agencies have also been marred by delays, leading to low levels of local build of buses as timelines have become too compressed.

In parallel with the launch of the APDP, there have also been significant developments on other, complementary policy fronts – including the design of the Electric Vehicle Roadmap and the MHCV strategy. In these circumstances, it would be prudent to allow this year to be a year of consolidation, as manufacturers shape their operations in line with the new frameworks. Thus, while there are not expected to be major new policy initiatives during the year, **the dti** will continue to focus on its work of developing industry competitiveness and providing support to the sector in its own attempts to increase aggregate levels of trade, investment and production.

Key Action Programme

1. Competitiveness Improvement Initiatives

Nature of the intervention

Consolidation and ramping-up of initiatives aimed at improving firm-level manufacturing competitiveness through activities such as benchmarking, gap identification and assistance by engineers and specialist industry advisers to close competitiveness gaps and provide post-intervention assessments.

Economic rationale

An estimated 160,000 direct jobs can be created in the industry over the next 10 years. Investment levels exceeding R20 billion have been projected for the period between 2009 and 2013, with the potential for a further annual R3 billion up until 2020. All of this needs to be supported and maximised by empowering the South African automotive industry to continuously develop its levels of manufacturing competitiveness, drive further localisation and exploit value chain opportunities.

Outcome

A ramped-up Competitiveness Improvement Initiative aimed at improving firm level manufacturing competitiveness.

Key milestones

2013/14 Q1: Draft proposal for a new manufacturing competitiveness improvement support framework.

2013/14 Q3: Approval of new competitiveness improvement support framework.

Lead departments/agencies: the dti in conjunction with automotive industry stakeholders

Supporting departments/agencies: Provincial and local government

AUTOMOTIVES: THE MOVE FROM MIDP TO APDP

What it means for the industry

Since the introduction of the MIDP in 1995, the South African motor industry has performed remarkably well. Vehicle exports were almost non-existent at the beginning of 1995. But by 2011, vehicle exports amounted to 239,465.

One of the key objectives of the MIDP was to encourage manufacturers to achieve economies of scale. This also implied that manufacturers had to specialise in at least one high-volume model in production.

The MIDP (which concluded at the end of 2012) centred on encouraging motor vehicle and component exports by allowing duty-free imports or reduced import tariffs, depending on the level of local content of exports. One of the purposes of the programme was to rationalise the number of vehicle models being produced in South Africa.

Its successor, the APDP, has evolved from an export-based incentive to a local manufacturing incentive, regardless of whether the motor vehicles are sold locally or abroad.

The key objectives behind the APDP are not different from MIDP in that the following concerns are still in place – namely to:

- Improve the international competitiveness of the automotive industry;
- Continue to encourage overall production growth and improve the industry's current trade imbalance by optimising export levels, while at the same time encouraging a greater usage of domestically manufactured products as part of the South African auto value chain;
- Stabilise and potentially increase employment levels;
- Encourage the rationalisation of platforms so as to achieve economies of scale in assembly; and
- Encourage further capital investment into South Africa.

However, the APDP has added two crucial new objectives to the mix:

1) To raise volumes to 1.2 million vehicles produced per annum by 2020.
2) To provide assistance to component manufactures so that they can provide cost-competitive components to the OEMs and international markets via exports.

Metal Fabrication, Capital and Rail Transport Equipment

Sector profile

The metal fabrication, capital and rail transport equipment cluster of sectors includes:

- Primary iron and steel (flat-rolled and long products);
- Primary non-ferrous (aluminium, copper, rare earth, brass, lead, tin and zinc);
- Metal products (tubes, structural steel, extrusions and wire);
- Capital equipment and machinery;
- Rail transport equipment;
- Jewellery; and
- Engineering and allied services.

These industries are at the centre of economic development because they produce products, applications and services used across the entire economy. This includes infrastructure programmes, construction, general engineering, mining, automotives and packaging. The metal fabrication, capital and rail transport equipment cluster of industries forms an important component of any industrialisation path and is a key driver of the manufacturing sector's overall competitiveness.

The industries in this cluster have rather different and uneven characteristics. For example, South Africa has well-developed niche capabilities in areas such as mining equipment and structural steel, which can effectively compete in global markets, while other sub-sectors such as the casting and tooling industries are stagnant or in decline.

Sector economic data

Variable	Contribution in 2011
Manufacturing value-added (%GDP) • Basic iron and steel and basic non-ferrous metals • Metal fabrication, capital equipment and rail and transport equipment	R25 billion (1.47%) R45 billion (2.67%)
Manufacturing employment • Basic iron and steel and basic non-ferrous metals • Metal fabrication, capital equipment and rail transport equipment	71,387 (6.18%) 272,070 (23.56%)
Trade balance • Basic iron and steel and basic non-ferrous metals • Metal fabrication, capital equipment and rail and transport equipment	R211 billion - R109 billion

Source: Quantec

Key opportunities

Key areas of opportunity for growing the sector or achieving higher impact include:

- Boosting the public infrastructure programme: this presents the single largest opportunity to stimulate the industry, and can be strengthened via a reduction of the import leakage of the capital and operational expenditure programmes of SOCs; and, indeed, of all spheres of Government. The localisation programme launched under the PICC will present significant opportunities for the sector.
- Embedding prescribed local content in the sectors designated thus far, i.e. rolling stock and steel power pylons.
- Leveraging opportunities presented by the Integrated Resource Plan 2010.

- Seizing export opportunities that exist in relation to infrastructure programmes on the African continent, especially the North-South Corridor.
- Mining turnkey projects in South Africa, the rest of Africa and South America.
- Opportunities to extend value chains through further downstream manufacturing initiatives, turning the lack of maturity in existing South African beneficiation chains into a strength.
- Taking advantage of the APDP to create additional opportunities for metal-component manufacturing.

Constraints

Current procurement practices by SOCs and government departments in relation to large contracts are not optimal:

- Uncompetitive input costs (electricity, logistics, raw materials):
  - Escalating electricity prices are rendering firms, particularly high energy consumers, uncompetitive. This will be exacerbated by the 8% tariff increase granted to Eskom over the next five years and compounded by further additional premiums likely to be imposed by municipalities.
  - The import parity pricing of major material inputs such as steel and aluminium remains a major impediment to the further development of these sectors.
  - Access and pricing of scrap metals.
  - Inefficiencies and high costs of road, rail and port infrastructure.

- Technological inefficiencies across the entire value chain:
  - Inadequate capital investment due to three decades of low demand, which has led to plant, machinery and equipment not being continuously upgraded or replaced.
  - Variable and often out-of-date production and technological capabilities have resulted in the industry losing ground in maintaining local content and being unable to effectively capture new opportunities offered by both private and public capital expenditure programmes.
  - Severe skills shortages at artisan, technical, engineering and project management levels.
  - Unequal trading platforms.
  - Increasingly stiff tariff and non-tariff barriers in potential markets.
  - Downward tariff pressures on a number of value-added products, which is resulting in a surge of imports, particularly in low-value, high-volume manufactured goods.

- Leveraging procurement:
  - A lack of competitive financing impedes the ability of South African companies – particularly lower-tier suppliers – to compete on an equal footing with foreign companies. Foreign companies often receive highly concessional export financing from their home countries' export banks or agencies.

Key Action Programmes

1. Leveraging Government's Capital (CAPEX) and Operational (OPEX) Expenditure Programmes

Nature of the intervention

This incorporates a strategic assessment of current and future Government capital and operational expenditure programmes, which will facilitate the standardisation and designation of fleets[1] within the programmes. The analysis will have to demonstrate adequate demand from capex requirements and/or long-term opex opportunities to justify an investment by a supplier in a relevant industrial capability and, therefore, the prioritisation of such an industry/product.

The areas that have already been designated include locomotives and EMU components related to Transnet and PRASA rolling stock programmes and steel power pylons. The instruction notes for designation of these fleets that specify the minimum local content thresholds were issued in July 2012.

Transformer and valve designation reports have been concluded and approval has been granted to designate specific industrial valves, while the designation of transformers has been temporarily deferred to address outstanding industry challenges. The instruction note for the approved valves will be issued during the course of 2013/14.

[1] Fleet refers to any ongoing and repetitive procurement requiring fabricated products or equipment of a similar function that is essential to build or maintain an operation or service.

Economic rationale

While improvements have been registered in smoothing procurement processes by SOCs, long-term procurement planning and demand forecasting remain key challenges In major areas, state procurement is still lumpy, *ad hoc* and characterised by short delivery times, which undermine local manufacturing and associated investments.

Outcomes

This KAP is aimed at optimising localisation opportunities presented by state infrastructure programmes. It is expected to reduce import leakage, increase investments in key manufacturing processes and activities driving supply into the domestic market, capture after-market opportunities, revive lost manufacturing capacity, and increase both employment and exports.

Key milestones

2013/14 Q1:	Obtain financial/commercial closure on PRASA's first Rolling Stock Fleet Renewal contract.
2013/14 Q2:	Completed detailed industry analysis for possible designation of steel conveyance piping.
2013/14 Q4:	Completed detailed industry analysis for possible designation of rail signalling components.
2013/14 Q4:	Finalise the rail infrastructure strategy and the action plan.
2013/14 Q4:	Analysis of the South African tariff structure and stage consignment facilities for products relevant to the localisation programme in consultation with the industry; make recommendations to ITAC and SARS.
2014/15 Q1-Q2:	DoT and PRASA to table the first localisation report.
2014/15 Q3:	Monitor and report on the localisation of Transnet's 95 locomotive tender.

2014/15 Q4: Obtain financial/commercial closure on Transnet's 1,064 Locomotive contract.
2015/16 Q1-Q2: First train batch delivered for PRASA operations.
2015/16 Q3-Q4: **the dti** to review the rail rolling stock components designated under PPPFA and make adjustments to the levels of local content and components.

Lead department: DPE and DoT
Supporting departments/agencies: **the dti**, EDD, NT, DST, SOCs and IDC

2. National Tooling Initiative

Nature of the intervention

The National Tooling Initiative (NTI) is a joint programme between **the dti** and the tooling industry. The initiative comprises programmes aimed at rehabilitating the South African tool, die and mould-making industry. The NTI aims to increase and strengthen the human capacity and competitiveness of the tooling industry in South Africa to strengthen its overall competitiveness.

In 2010, a new competency-based apprenticeship programme was introduced in partnership with FET colleges. To date, the Foundation and Level 1 and 2 apprenticeship programmes have been completed. This has created a pipeline of more than 1,000 new students.

In 2012, the National Skills Fund approved funding to up-scale this programme and support the enrolment of a further 1,000 students from Foundation phase to Level 3 apprenticeship.

Economic rationale

The erosion of the tooling industry over the past 20 years has led to the underperformance of the sector and contributed significantly to the trade deficit as South Africa is a net importer of tools. In the immediate term, there will be prioritisation of skills development and training programmes to address the dire skills shortage in the sector.

Outcomes

This KAP will reduce reliance on imported tooling, particularly in the more advanced tooling segments, capture after-market opportunities, increase investments in tooling manufacturing, increase local content, enhance capacity in South Africa's tooling industry skills upgrading programme, and increase employment, exports and manufacturing competitiveness.

Key milestones

2013/2014 Q1: 160 students enrolled on foundation programme.
2013/2014 Q1: 490 students enrolled Level I apprenticeship programme.
2013/2014 Q1: 90 students enrolled on Level II apprenticeship programme.
2013/2014 Q1: 300 students enrolled Level III apprenticeship programme.
2013/2014 Q4: 50 students enrolled on Level III apprenticeship programme.
2013/2014 Q4: 150 students enrolled for Master Artisan Level I.
2014/2015 Q1: 160 students enrolled on foundation programme.
2014/2015 Q1: 375 students enrolled on Level II apprenticeship programme.
2014/2015 Q3: Accreditation and certification of the apprenticeship programme (level 1 – 3) finalised with MerSETA and QCTO.
2015/2016 Q1: 160 students enrolled on foundation programme.
2015/2016 Q1: 260 students enrolled on Level III apprenticeship programme.

Lead department: **the dti**

Supporting departments/agencies: NT, DST, DHET and E, NTI, QCTO, MerSETA and National Artisan Moderating Board (NAMB)

3. National Foundry Technology Network

Nature of the intervention

The National Foundry Technology Network (NFTN) is a foundry industry support initiative. Its key objective is to facilitate the development of a revitalised foundry industry through appropriate skills training, technology transfer and diffusion of state-of-the-art technologies. The programme is aimed at starting to reverse the erosion of the industry, which has negatively impacted on the competitiveness of manufacturing as a whole.

Economic rationale

The NFTN represents a concerted effort to reverse the significant decline that the foundry industry has experienced over the past two decades and the consequent weakening of the important linkages that this industry has with the entire manufacturing sector.

Outcomes

Reduced import leakage, increased human skills capacity, investments in key manufacturing processes and activities, and employment creation.

Key milestones

2013/14 Q1–Q4:	Train 200 workers on the formal foundry qualifications (NQF 2–4).
2013/14 Q1–Q4:	20 foundries assisted under the Competitiveness Improvement Programme (CIP).
2014/15 Q1–Q4:	Train 250 workers on the formal foundry qualifications (NQF 2-4).
2014/15 Q1–Q4:	40 foundries assisted under the CIP.
2014/15 Q4:	NTFN to conduct a feasibility study into the establishment of a Training Centre in KwaZulu-Natal.
2015/16 Q1–Q4:	Train 250 workers on the formal foundry qualifications (NQF 2–4).
2015/16 Q1–Q4:	40 foundries assisted under the CIP.
2015/16 Q4:	NTFN to implement the recommendation of the feasibility study for the KwaZulu-Natal Training Centre.

Lead department: **the dti**

Supporting departments/agencies: NT, DST, DHET and E, NFTN, Merseta

Agro-Processing

Sector profile

A key characteristic of the agro-processing sector is its strong up- and downstream linkages. Upstream, the sector links to primary agriculture across a wide variety of farming models and products. Downstream, agro-processing outputs are both intermediate products to which further value is added and final goods that are marketed through wholesale and retail chains, as well as through a diverse array of restaurants, pubs, shebeens and fast-food franchises.

The food-processing sector is the largest manufacturing sector in employment terms, with 183,502 employees in 2011. For the purposes of data continuity, the agro-processing sector is defined in statistical terms by the food-processing and beverage manufacturing sub-sectors only. This narrowly defined agro-processing sector's contribution to the economy is summarised in the table below.

Sector economic data

Variable	Contribution in 2011
Manufacturing value-add (%GDP)	R52 billion (3.1%)
Manufacturing employment	205,097 (17.8%)
Trade balance	-R8.8 billion

Source: Quantec

Key opportunities

The agriculture and agro-processing value chain represents an important source of labour-intensive growth. In addition, this value chain is central to Government's rural development and smallholder farmer development objectives.

The agro-processing sector's economic performance is closely related to the overall rate of economic growth in South Africa and key export markets. South Africa's domestic economy is expected to grow faster than those of the major developed economies and it will be important to ensure that local producers are appropriately positioned to benefit from growth in domestic demand for food, beverages and furniture.

Export-focused sub-sectors such as horticulture and aquaculture are likely to experience stagnant or slow growth in traditional export markets such as the EU and the US. Substantially more attractive opportunities are likely to be found in Asia and sub-Saharan Africa where the combination of positive growth rates and rapid urbanisation is creating significant opportunities for the export of middle-income consumer products. The Middle East and China represent important new markets for upper-income consumer products such as confectionery, fruit juices, indigenous teas, fruits and wine.

Parts of South Africa's agro-processing sector have an unfortunate history of engaging in anti-competitive conduct, thereby contributing to the high prices of basic food products in the domestic market. The competition authorities have been aggressively pursuing a number of cases against delinquent companies in the sector, and it is expected that firms will in future become increasingly wary of engaging in such conduct. Simultaneously, technology development and the increasing cost of road transport have created new opportunities for small-scale processing of agricultural produce. In the maize milling and soybean processing sub-sectors, this has led to the availability of small-scale production plants that can be located close to either the maize and soybean feedstock or major consumption markets.

While these plants do not typically create large numbers of jobs, their main impact is in reducing the cost of key basic food products such as maize-meal and intermediate goods such as soybean meal for cattle and poultry production.

Constraints

Given the diversity of the sub-sectors that make up the agro-processing sector, the constraints are relatively sector-specific.

Export-focused producers in the wine and spirit, fresh and canned fruit, indigenous tea and flowers, confectionery, processed food, fruit juice and aquaculture subsectors face constraints that are related to developed-country trade policy – including subsidies, tariffs, and sanitary and phyto-sanitary standards (SPS). With developed countries expected to grow relatively slowly over the next two to three years, a much greater emphasis is required on penetrating new export markets. This will necessitate more sophisticated export intelligence, better export marketing, more visible South African 'presence', and dynamic product innovation and customisation to meet these new consumer demands.

Producers primarily focused on supplying the domestic market – such as in soybean processing, fruit juice, processed vegetables, confectionery, meat and processed food sub-sectors – currently face heightened competition from imports. Import competition is particularly severe in the poultry, frozen vegetables, wheat, pasta and confectionery sub-sectors.

Increased import penetration has coincided with rising domestic cost pressures resulting from a range of production inputs, including electricity and water, road transport, fertiliser and seed costs. The resulting margin squeeze has led to some employment losses, increased use of labour brokers and/or seasonal workers, and under-investment in productivity-enhancing measures and plant-level maintenance.

the dti will address these constraints on a sub-sector basis, focusing on developing comprehensive interventions that will include, where applicable, trade measures, support for local procurement, financial assistance for productivity-enhancing investments, financial assistance for the development of competitive 'clusters' and appropriate infrastructure development.

Key Action Programmes

1. Development of a Food-processing Strategy and Action Plan

Nature of the intervention

The food-processing CEOs' Forum has been established and a number of company-specific initiatives to accelerate growth, transformation and job creation are under way. In this phase, existing company-specific Action Plans will be expanded to include more companies and cross-cutting interventions identified through the CEOs' Forum will be implemented.

Economic rationale

The company-specific Action Plans have facilitated an acceleration of investment in expansions and Greenfield plants as well as introducing competitiveness-enhancing investments by the relevant companies. The Action Plans have also been moderately successful in introducing changes to corporate strategy by emphasising smallholder farmer development and linkages, local procurement of capital equipment in the investment process, rapid sharing of information on industrial development blockages and potential threats and opportunities. This alignment between the work of the Agro-processing Business Unit and companies' needs (and *vice versa*), is increasingly the hallmark of modern industrial policy where Government and the private sector work in co-ordinated and collaborative structures.

This approach seeks to reduce the likelihood of **the dti**'s agro-processing strategies and interventions being imposed on companies, which can lead to wasted resources and sub-optimal implementation.

Outcome

Accelerated growth in the food-processing sector

Key milestones:

2013/14 Q1: **the dti** continues implementation of company-level Action Plans with eight food-processing companies.

2013/14 Q1: **the dti** develops company-level Action Plans with five additional food-processing companies.

2013/14 Q2: **the dti**, the Food technology Station and the South African Chocolate Manufacturers Association launch the Chocolate Micro-incubator at the Cape Peninsula University of Technology.

2014/15 Q1: **the dti** and the Food Technology Station complete the first intake of incubates.

Lead department: the dti

Supporting departments/agencies: Cape Peninsula University of Technology, SACMSA

2. Development of a small-scale milling industry

Nature of the intervention

This intervention will facilitate the entry of small-scale maize millers into the South African market. They are expected to be particularly competitive in rural areas, where high transport and logistics costs raise the price of basic food products. The intervention consists of the packaging of a range of support measures from **the dti** to facilitate the market entry of small-scale maize mills.

Economic rationale

The maize milling sector is highly concentrated and domestic prices appear to be subject to anti-competitive practices. There is significant potential for the development of a class of small-scale millers, which could sustainably reduce the current high cost of basic food products, contributing to poverty reduction and alleviating pressure on real wages (given that lower-income workers spend a substantial proportion of their income on basic food products).

Outcomes

Small-scale maize milling enterprises producing for local markets at competitive prices, thereby creating jobs and contributing to poverty alleviation and enterprise development.

Key milestones

2013/14 Q1: **the dti** to facilitate the roll-out of small-scale maize milling in one additional province.

2013/14 Q3: **the dti** and FoodBev Seta develop a milling skills development programme

2013/14 Q4: **the dti** to facilitate the roll-out of small-scale maize milling in one additional province

Lead department: the dti

Supporting departments/agencies: IDC, EDD and provincial departments of economic development.

3. Enhancement of Competition in the Fruit and Vegetable Canning Industry

Nature of the intervention

Implementation of a PPP fruit canning initiative designed to raise competitiveness for the long-term sustainability of the fruit canning industry.

Economic rationale

The fruit canning industry employs approximately 11,000 factory workers, more than 500 administrative employees and ±17,000 farm workers on 1,200 farm units that supply the fruit to factories. These are situated in an economically depressed area with limited alternative employment opportunities, making the fruit canning industry a major source of employment in the area.

Outcome

The creation of a sustainable platform for the long-term growth and competitiveness of the industry.

Key milestones

2013/14 Q1: In collaboration with the NCPC-SA, **the dti** will identify and recruit companies from the South African Fruits and Vegetables Canners Association (SAFVCA) to participate in the Resource Efficient and Cleaner Production Programme (RECPP). It will then conduct RECPP training and awareness courses for employees at the companies and roll out the programme in the identified companies.

2013/14 Q1-2: **the dti** will support initiatives of SAFVCA in terms of market access and will facilitate the launch of new products as part of product development.

2013/14 Q2: In further collaboration with the NCPC-SA, **the dti** will facilitate the application processes of companies seeking to access the incentive grants of the MCEP for implementation of the Resource Efficient and Cleaner Production (RECP) Recommendation.

2013/14 Q3: In collaboration with SAFVCA, **the dti** will facilitate a transformation programme that will establish new fruit orchards in the Western Cape.

Lead departments: NCPC-SA, supporting departments/agencies, IDC, Western Cape Department of Agriculture and SAFVCA

4. Development of a Soybean Action Plan promoting market linkages between primary agricultural producers and processors

Nature of the intervention

Facilitate the development of business and strategic alliances between existing and new soybean producers and processors to increase the manufacturing capacity of the sector and reduce dependency on imports.

Economic rationale

South Africa currently imports large quantities of unprocessed soybeans as well as processed soybean products such as meal and oil. Soybean demand for animal feed and human consumption in South Africa is forecast to increase substantially over the next five to 10 years and there is significant potential to increase local production of soybeans by both commercial and smallholder farmers. To promote soybean cultivation by new farmers, guaranteed off-take agreements are required, thereby creating a market for newcomers into the value chain. This initiative will contribute to increased production and processing of soybeans as well as the re-balancing of the maize, wheat, sunflower and soybean agricultural markets, where South African farmers currently oversupply maize and undersupply wheat, sunflower and soybeans.

Outcome

Increased manufacturing capacity of affordable soybean products as well as reduced dependency on imports.

Key milestones

2013/14 Q1-Q2: **the dti** facilitates the establishment of one new project linking primary soybean producers and processors.

2013/14 Q2-Q4: ITAC undertakes a review of the tariff dispensation for the soybean value-chain.

2013/14 Q3: **the dti** develops and implements measures to reduce the prices of soy-based food products for purposes of increasing affordability.

2013/14 Q4: **the dti** implements a collaboration programme with Food Science institutions to develop new soybean-based food products.

Lead department: the dti

Supporting departments/agencies: ITAC, soybean industry

5. Development of the organic food sector

Nature of the intervention

Implementation of the Organic Produce Strategy.

Economic rationale

The organic food sector represents a high-value niche sub-sector with the potential to create 20,000 jobs over five years in both the primary agriculture and agro-processing stages of the value chain. Moreover, since South Africa currently imports a significant proportion of the organic food demanded by consumers, there are both import replacement and export possibilities for the sub-sector.

Outcome

A competitive organic sub-sector producing high-quality food products for both local and export markets.

Key milestones

2013/14 Q4: **the dti**, industry, DAFF and SABS to finalise and begin implementing the South African Organic Food Standard.

2013/14 Q2: **the dti** to facilitate the development of a local organic market supplied by both commercial and smallholder farmers.

2013/14 Q1-4: **the dti** and DAFF to facilitate the certification of 100 smallholder farmers as organically compliant.

2013/14 Q4: **the dti**, DAFF and DRDLR to facilitate smallholder farmers' development so as to supply 100 formal retail stores.

Lead departments: the dti and DAFF

Supporting departments/agencies: DRDLR, provincial departments of Agriculture and retailers

6. Supporting the Public-Private Partnership for Food Security

Nature of the intervention

The PPP for Food Security is being co-ordinated by the DRDLR and DAFF. **the dti**'s role is to develop the market for the products produced by the (mainly) smallholder farmers. This includes facilitating access to the formal retail market, Government procurement opportunities and small-scale, localised processing opportunities.

Economic rationale

Smallholder farmers have the potential to supply significant quantities of primary agricultural commodities and, to a lesser extent, processed produce. A key constraint to the development of smallholder farmers is the lack of information on market opportunities, the quality standards that need to be met, and adequate scheduling and processing of production so as to supply increasingly formal markets. If these constraints are addressed, smallholder farmers have the potential to contribute to food security, rural development and enterprise development.

Outcome

Smallholder farmer access to formal retail chains, Government procurement and small-scale processing opportunities.

Key milestones

2013/14 Q1: **the dti** to convene an Advisory Body of food science professionals to provide guidance on the development of a programme of small-scale processing technology acquisition and development.

2013/14 Q2: **the dti**, DAFF and DRDLR to develop a GIS-based dashboard of smallholder production potential, current production, crops and harvest schedules so as to link to market opportunities.

2013/14 Q2: **the dti** to provide co-operative development support in priority areas to assist in increasing smallholder co-operatives' production potential.

2013/14 Q4: **the dti** to package small-scale processing opportunities for DRDLR, co-operatives and other enterprises to invest in and develop small-scale processing capabilities.

Lead departments: the dti, DAFF and DRDLR

Supporting departments/agencies: Provincial departments of Agriculture and retailers

Biofuels

Sector profile

The biofuels sector has grown rapidly internationally. However, up to now, South Africa has remained only a peripheral participant in the sector's growth. There are a number of reasons for this. First, because it is a relatively new sector there are a variety of complex regulatory barriers that need to be overcome.

Second, the global economic crisis and the resultant reduction in oil prices have combined to reduce the commercial viability of some types of investment in the sector and, more generally, have negatively affected investor sentiment.

Third, national debates have tended to focus on food-versus-fuel arguments, while taking relatively little cognisance of the dynamic nature of agriculture and the potential to produce biofuels from crops that do not directly enter the food chain or where surplus production exists.

The biofuels sector has strong linkages to agriculture, manufacturing and distribution and has the potential to create substantial numbers of labour-intensive jobs in the agriculture sector in particular. In addition, second-generation biofuel technology will contribute to South Africa meeting its renewable-energy targets in a sustainable manner.

Key opportunities

Intensive collaboration between the departments of Energy, Economic Development, Rural Development and Land Reform, National Treasury and **the dti** has resulted in significant progress in the development of an investor-friendly regulatory environment for the biofuels sector. This culminated in the publication of Regulation No. R.671 issued by the Minister of Energy in terms of the Petroleum Products Act, 1977 (Act No. 120 of 1977).

These regulations, commonly known as the Mandatory Blending Regulations, compel licensed petroleum petrol and diesel manufacturers to purchase biofuels for blending into the national fuel pool at a price mandated by the Minister of Energy.

Mandatory Blending Regulations are a common feature of most successful biofuel-producing countries and in SA represent an important milestone in the development of the biofuels sector by catalysing the creation of market demand for biofuels.

Introduction of a Biofuels Production Incentive

In parallel with the publication of the Mandatory Blending Regulations, work has continued apace to develop an incentive regime to improve the financial viability of biofuel investments. The incentive regime was announced in the Minister of Finance's 27 February 2013 Budget Speech and is expected to provide investors with the certainty required to unlock significant new investments in the sector.

An important element of the incentive regime is the requirement for biofuel manufacturers to procure feedstock from emerging and smallholder farmers. This approach seeks to contribute to Government's objective of expanding and transforming the agricultural sector in an equitable and sustainable manner. The incentive regime also contributes directly to employment creation as production of allowed biofuel crops such as grain sorghum, soybeans and sugar cane will need to increase substantially to supply the feedstock required by biofuel manufacturers.

Government is convinced that the regulatory environment put in place will contribute to sustainable rural development, job creation and further agricultural development.

Key Action Programme

1. Accelerated development in the biofuels sector

Nature of the intervention

The architecture of the incentive regime for biofuels was announced in the Minister of Finance's Budget speech. The role of **the dti** is to develop the rules and institutional arrangements to ensure that the incentive programme is ready for launch on 1 April 2014.

Economic rationale

The biofuels sector will not develop in South Africa without the supportive incentive regime that is common in most biofuel-producing countries. The cost-benefit analysis for biofuels suggests that with modest incentive provision by Government, a substantial impact on GDP can be expected that substantially outweighs the cost of the incentive.

Outcome

Accelerated investment in the biofuels and upstream agricultural sectors.

Key milestones

2013/14 Q2: Publish draft Biofuel Incentive Programme Guidelines for public comment.
2013/14 Q3: Publish final Biofuel Incentive Guidelines.
2013/14 Q4: Launch Biofuel Incentive Programme.

Lead department: DoE

Supporting departments/agencies: the dti, National Treasury, EDD, DRDLR and DAFF

Aquaculture

While the global demand for aquatic products is increasing, wild harvest fisheries are under considerable pressure and their growth is either stagnant or declining. It is now internationally accepted that the increased supply of fish products to meet this demand will be sourced through aquaculture. Many countries around the world have taken up this challenge and developed a suite of technologies to farm a range of globally available aquatic organisms to meet local and international demand.

Consequently, aquaculture is the fastest-growing food production sector in the world, growing at an annual rate of 8-10% per annum for the last two decades and outstripping livestock three to fold; while South Africa's sector has grown at only 3% annually. One reason for this has been lack of sector planning and Government involvement in driving development of the sector. This has, however begun to change and Government is now fully involved, having recognised the need to develop and roll out a range of targeted interventions to spark new growth in this sector.

Key Action Programmes

1. Promote public and private investments in aquaculture

Nature of the intervention

This intervention is intended to leverage substantially increased investment levels in the aquaculture sector.

Economic rationale

Even though South Africa's contribution of 6,600 tons is very minimal in relation to global aquaculture production, it has demonstrated consistent modest growth over the years. It is now a reality that aquaculture in South Africa has the potential to supplement the supply of wild stock with cultured fish products. The IDC has shown an appetite for investing in this sub-sector as commercial viability has been adequately proven and markets are also starting to warm up to farmed marine finfish products, particularly dusky kob.

There is also a need to commercialise the freshwater sub-sector. Catfish producers for instance have been struggling with markets locally. But recent research work by the Catfish Farmers Association has had considerable success in identifying new and exciting market opportunities. With the growing Central and West Africa migrant populations in the major cities of Johannesburg and Cape Town (where catfish is regarded very much as a delicacy), catfish farmers find themselves well-placed for entry into a sustainable cash market ready to absorb smoked catfish products.

Outcome

Increased investment in the aquaculture sector, leading to increased production and job creation in the sector.

Key milestones

2013/14 Q2: **the dti** and DAFF to develop and implement company-level action plans with two abalone companies (on the South and West Coasts of the Western Cape) and a catfish company (in the North West).

2014/15 Q1: **the dti** to facilitate development financing through IDC and National Empowerment Fund (NEF) to support four major new investments, two in the marine finfish sub-sector (in the Eastern Cape and KwaZulu-Natal) and two in the trout sub-sector (in Mpumalanga and the Western Cape).

Lead departments/agencies: the dti, DAFF

Supporting departments/agencies: IDC, WCADI, ECDC, Trade and Investment KwaZulu-Natal, KwaZulu-Natal Growth Fund, East London and Coega IDZ, provincial Agriculture, Economic Development and Environment departments, municipalities

2. Sector promotion, marketing and trade

Nature of the intervention

This intervention will seek to promote the development of the marine finfish sub-sector, which is still in its infancy, by supporting the growing number of commercial producers entering the sector farming dusky kob and yellowtail.

Economic rationale

With a constant growth rate of approximately 5% over the past 10 years, the prospect of achieving 10-20% growth in the near future is realistic. The industry increased production in most of the sub-sectors during 2011 (mussels, oysters and abalone). In parallel, Tilapia has also become popular; but largely as an import product, mainly from Zimbabwe.

Trout, with a current production level of 1,500 tons per annum, has shown successful growth in local markets, but local production is not meeting demand, with a shortfall of about 500 tons. It is, however, a species that has huge potential to substitute imports of salmon, being of comparable quality and selling for around R40/kg as compared to R120/kg for the imported salmon.

Outcome

This intervention will promote and market the growth of the aquaculture sub-sector of South Africa, leading to diversification of the sector and significant job creation.

Key milestones

2014/15 Q3: DAFF, **the dti**, industry and Proudly South Africa to develop a farmed kabeljou (dusky kob) campaign.

2015/16 Q1: **the dti** to assist industry to further penetrate Asian markets and achieve sales to the value of R500 million.

Lead departments/agencies: the dti, industry

Supporting departments/agencies: DAFF, Proudly South Africa, NRCS

Plastics, pharmaceuticals, chemicals and cosmetics

Plastics

South African plastics manufacturing contributed approximately 0.5% to South Africa's GDP and 4.5% to the manufacturing sector in 2011. The largest contributor to plastic production is the plastic packaging market. Value added in the plastics sector was R45 billion in 2011 and the sector employed 60,000 people in that year. The export value of plastic products was R7 billion in 2011, compared to an import value of R14.5 billion, representing a trade deficit of R7.5 billion.

Variable	Contribution in 2011
Manufacturing value-add	R45 billion
Manufacturing employment	60,000
Trade balance	-R7.5 billion

Key opportunities

Key areas of opportunity for growing the sector include:

- Automotive interior and exterior products;
- Food packaging;
- Medical products (e.g. syringes and administrative sets);
- Buildings –– pipes, flooring and building sheet;
- Electrical and electronics cables, appliances and casing components.

The recent phase-out of import tariffs on polymers and other inputs will contribute to more competitive input prices.

Constraints

- A relatively small local and regional market;
- South Africa's geographic location and resultant logistics costs;
- Insufficient R&D and innovation; and, perhaps most significantly in the short term,
- Import parity pricing (IPP) of polymers and other key inputs.

Key Action Programmes

1. Polypropylene Beneficiation

Nature of the intervention

South Africa enjoys a supply of polypropylene in excess of local demand. The bulk of the materials are currently exported in raw form; their beneficiation therefore offers substantial potential to create growth and employment downstream.

Economic rationale

To manufacture high value-added and fast-growing products for the local and export market. Advantages are both a high return on investment and foreign currency savings.

Outcomes

An increase in local production to meet at least half of the total domestic demand. This will lead to increased export, investment and employment opportunities.

Key milestone

2013/14 Q1-Q4: Develop a business case on syringe manufacturing in conjunction with the IDC.

Lead departments/agencies: the dti

Supporting departments/agencies: DST, Plastics SA, IDC, Merseta, NAACAM, NAAMSA, SABS

2. Plastics trade policy measures

Nature of the intervention

Encourage and support local production of components to help the sector to compete effectively and sustainably against international competition. The intervention on incorrect coding is aimed at clamping down on illegal imports that have up to now been massively penetrating the country.

Economic rationale

On the one hand, the sector lags behind its international competitors in terms of conversion efficiencies and other key indicators of world-class manufacturing practice – of which quality, cost and timely delivery are the main drivers. On the other hand, plastics companies face a severe threat from cheap and/or illegal imports. The elimination of illegal imports will, therefore, represent an important step in levelling the playing field for local manufacturers.

Given full implementation, the polypropylene conversion project will result in an increase in the number of new plastic products being fabricated, making full productive use of the polypropylene feedstock that is currently being exported.

In addition, the project will boost revenue figures, replace imports and provide new export opportunities. Through the use of technologies such as blow and injection moulding, capital expenditure is expected to increase and new manufacturing jobs will be created.

Outcomes

Eliminate illegal imports and encourage local manufacturing.

Key milestones

2013/14 Q1-Q4: Industry to identify intermediate and finished products to be considered for introduction or adjustment in duties.

2013/14 Q1-Q4: Development of an indicative reference price system to alert customs officials to possible under-invoicing and other types of customs fraud.

Lead departments/agencies: the dti

Supporting departments/agencies: SABS, NRCS, SANAS, ITAC, SARS, Stats SA, Plastics SA

Pharmaceuticals

The South African pharmaceutical market – at the ex-factory price level – was estimated at US$4 billion (R30 billion) in 2011. While it is the largest pharmaceutical market in Africa (ahead of Egypt, Nigeria and Kenya) it accounts for only 0,4% and 1% of the global market by value and volume. The sector's import penetration is 65%, while the ratio of pharmaceutical imports to exports (excluding active pharmaceutical ingredients) was 14.3:1. (Imports R15.96 billion, exports R1.12 billion), giving a negative trade balance of R14.84 billion in 2011.

The pharmaceutical sector plays a strategic role in the South African economy; most prominently in healthcare, science and tertiary education. Pharmaceutical manufacturing contributes 1,6% to South African GDP, provides direct employment to 9,600 people (most of them professionals and skilled workers) and creates a further 11,100 indirect jobs. The downstream segment (logistics, warehousing and distribution, and sales through retail pharmacies) provides 25,000 direct jobs.

Global trends (consolidation, mergers and acquisitions) led to extensive divestment in the sector in South Africa during the late 1990s and the early 2000s, resulting in the loss of 37 manufacturing plants and 40% of manufacturing jobs.

The rate of new investment has recently accelerated, assisted by **the dti** economic incentives (mainly the SIP tax allowance of R900 million from 2003 to 2006). But the recovery of the industry is slow and precarious, vulnerable to factors such as competition with imports from low-cost countries (chiefly India) and historically negligible references in South African Government tenders – despite **the dti** efforts to designate locally manufactured pharmaceuticals in state procurement contracts, which have now at last begun to bear fruit. [2]

Constraints

The sector faces other significant difficulties too: a relatively small domestic market unprotected by customs duties; regulatory and tariff barriers to entry to most export markets; the loss of traditional export markets in Africa to competition from low-cost, often sub-standard imports; and long regulatory delays affecting the launch of new products in South Africa.

Despite all these challenges, however, the South African pharmaceutical industry has remained remarkably resilient and competitive. In many areas, it has proven it can compete effectively against imports from any other countries – with the big exception of India. More than just 14 years since its founding, Aspen-Pharmacare has become the world's ninth-largest generic pharmaceutical company, with a market capitalisation R72 billion and manufacturing operations in 12 countries, but at a cost: less than 40% of Aspen revenue comes from and less than 50% of its assets are now held in South Africa.

The second-largest South African pharmaceutical company, Adcock-Ingram, experienced difficult times from 2011 through 2012, chiefly due to the loss of the 2010 anti-retroviral (ARV) tender in the midst of its R2.5 billion upgrade programme. Adcock's market capitalisation is R10 billion.

Key opportunities

The public health sector accounts for 75% of the pharmaceutical market by volume and 35% by value. The public (tender) sector is essential to most domestic manufacturers of generic medicines, by providing production volumes of sufficient scale to keep costs and prices low. The cost of procurement of medicines in the public sector, excluding vaccines, escalated from R3.0 billion in 2003/2004 to R6.5 billion in 2009/2010 – i.e. at 11,7% per year.

Government's decision to extend access to antiretroviral treatment (ART) to all AIDS patients with a CD4 count below 350 will more than double the demand for ARVs, from the current level of 1.7 million ART patients to 3.5 million by the end of 2016. The cost of procurement of ARVs for these 3.5 million patients will be US$ 390 million – i.e. more than R3 billion per year. At the same time, the demand for anti-TB medicines will increase in parallel with the number of ART patients.

Finally, a sharp rise in demand is expected for medicines to treat non-communicable diseases, including diabetes, cardio-vascular and cancer.

[2] The first pharmaceutical tender (Oral Solid Dosage, OSD, code HP-09) was designated in April 2012.

Key Action Programmes

1. Designation of pharmaceutical tenders

Nature of the intervention

Designating the entire volume or parts of pharmaceutical tenders for domestic manufacturers, in consultation with the Department of Health (DoH) and taking into account the following: installed domestic manufacturing capacity; number of independent domestic manufacturers; impact on the security of supply; additional costs (if any) due to necessary price premiums.

Economic rationale

Reducing the sector's trade deficit; reducing the cost of procurement of medicines to the South African economy (caused by the primary and secondary taxes paid by domestic manufacturers); improving security of supply due to faster response times for the local supply of designated products as against imports.

Outcomes

The designation of pharmaceutical tenders for domestic manufacturing to further increase competitiveness and create more direct and indirect employment.

Key milestones

2013/14 Q1:	Seminar with DoH, Treasury and industry to review the impact and refine the rules of designation of pharmaceutical tenders, with the aim of producing a Joint Report with recommendations to the relevant Ministers.
2013/14 Q2-4:	Implementation of designation of pharmaceutical tenders, learning from errors made in tenders HP-09, HP-10, HP-11 and HP-13, where justified.

2. Facilitation of Project Ketlaphela

Nature of the intervention

A R1.6 billion ARV active pharmaceutical ingredients (APIs) project in Pelindaba – a joint venture between the IDC, Pelchem and Lonza Switzerland. This KAP aims to facilitate the project through getting the necessary consensus and support of all the departments involved (**the dti**, DST, DoH, National Treasury and the EDD). **the dti** is providing necessary financial support for the project via incentives (the Critical Infrastructure Fund, the 12I Tax Incentive etc.). **the dti** is also facilitating funding for overseas training of Ketlaphela personnel (50 people) by CHIETA.

Economic rationale

Project Ketlaphela is a R1.6 billion joint venture of the IDC and Pelchem (NECSA) in partnership with the Swiss company Lonza. The project will meet 50% of South Africa's needs for ARV APIs from 2017. Further independent projects planned in the Ketlaphela cluster (the Pelindaba valley) are bio-pharmaceuticals (insulin, erythropoietin etc.), various fluorine-related APIs and fine chemicals.

Outcome

Facilitation of the Ketlaphela project so as to get the necessary support from all the departments involved **(the dti**, DST, DoH, NT and EDD).

Key milestones

2013/14 Q1:	Construction of the first built component of the project (a R105 million pilot plant), together with the necessary R&D, training and technology validation unit.
2013/14–2014/15:	Environmental Impact Assessment (EIA).
2013/14 Q3:	Completion of basic engineering.
2016/17 Q4:	Commissioning of the entire plant.
2017/18: Q1:	MCC audit, followed by start of production.

3. Facilitation of the Biovac Project (Manufacture of Vaccines)

Nature of the intervention

Facilitating the project by building consensus and getting the support of all the departments involved (**the dti**, DST, DoH, National Treasury and the EDD)

- **the dti** will provide the necessary financial support for the project via incentives (offsets) and grants (from the Italian Government, UNIDO, UN AIDS and the Gates Foundation).
- **the dti** will facilitate funding for overseas training of Biovac personnel (five to 10 people) by CHIETA.

Economic rationale

New vaccines (against rotavirus and streptococcal pneumonia) added to the Government's Extended Programme of Immunisation (EPI) in 2009 increased the cost of procurement of vaccines four-fold, to R1 billion a year.

The SA vaccine project, Biovac, a 40-60 public-private partnership has been experiencing long delays since its inception in 2003 due to a sharp increase in the project's capital cost – from R40 million (2003 estimates) to R250 million – driven by the need to keep up with rapid advances in the sophistication of vaccine technology globally. Biovac is expected to be fully operational by 2017. It will be the third vaccine factory in Africa (after Egypt and Senegal).

Outcome

Reduced dependency on vaccine imports.

Key milestones

2013/14 Q1:	Completion of inspection of compliance with the current Good Manufacturing Practice (cGMP) and approval by the SA Medicines Control Council (MCC).
2013/14 Q4:	Completion of construction of a R75 million Inspection (Viewing), Labelling and Packaging (VLP) facility.
2014/15 Q1:	Manufacturing of the first commercial-scale batch of vaccine (Hepatitis B).
2014/15 Q2:	Installation/commissioning of R20 million pre-filled syringe line.

4. Pharmaceutical skills strategy

Nature of the intervention

To develop a skills development strategy to meet the pharmaceutical, public and private healthcare sectors' demands for skilled staff.

Economic rationale

Providing the required skills for the domestic pharmaceutical industry and the broader public and private healthcare sector, by adjusting training programmes to meet demand for specific scarce skills.

Outcomes

Verification and validation of the demand for skills within the pharmaceutical sector.

Key milestones

2013/14 Q1:	Training programme for medicine control regulators and industry regulatory affairs personnel, regarding manufacture of active pharma ingredients, biological medicines and vaccines.
2013/14 Q2:	Training programme to be provided for Project Ketlaphela.
2013/14 Q2:	Training programme to be provided for Biovac project.

Cosmetics

Worldwide, “Beauty and Personal Care” achieved double-digit growth in 2010 (Euromonitor, 2011).

Although the global cosmetics industry was affected by the recession of 2008/09, by 2010/11 it appeared to be recovering.

The South African cosmetic and personal care industry is vibrant and dynamic. It comprises an interesting mix of multinational giants, small, medium and large local brand owners and small entrepreneurial companies. It is self-regulated, subscribes to high quality standards and is well placed to make its mark in the international arena. Though the sector remains dominated by global players, local companies are increasingly beginning to make their presence felt.

Sector economic data

Variable	Contribution in 2011
Manufacturing value-add	1%
Manufacturing employment	50 000
Trade balance	-R555 million

[Note the significant employment factor]

The main challenge to the sector as a whole is to maintain good quality at affordable prices in the context of increasing raw materials and packaging costs.

Leading departmental retail stores in South Africa are increasing their ranges of premium skin care, colour cosmetics and fragrances to promote product reach, and a number of local SMMEs have seen a promising gap that is there for the taking. However, they are still finding it difficult to access shelf space in local retail stores and to raise their profile among local consumers.

Key opportunities

- To assist SMMEs to penetrate local markets, contract manufacturers are required that will cater specifically for their requirements and help them with technology upgrading.

Key constraints

- *Ad valorem* taxes on cosmetics products – currently ranging from 5-7% – need to be evaluated and selectively removed. This implies re-categorising many cosmetics products as necessities for personal health and hygiene rather than as luxury items. Likewise, attention must be given to unnecessarily high import duties on a number of raw materials used as inputs to the sector.

Key Action Programmes

1. Development of the cosmetics sector strategy

Nature of the intervention

the dti will develop a cosmetic sector strategy through interaction with key stakeholders.

Economic rationale

The strategy seeks to alleviate constraints experienced by cosmetics companies in South Africa, so as to encourage expansion and growth in the cosmetics manufacturing sector.

Outcomes

Accelerated growth in the cosmetics sector, which will create jobs and enhance skills development.

Key milestones

2013/2014: Cosmetics Strategy developed.

Lead departments/agencies: the dti

Supporting departments/agencies: DST, Cosmetics, Toiletries and Fragrances Association (CTFA), Chemin, CECOSA, Tshumisano, Chemcity, EgoliBio

2. Quality, safety standards and toxicology skills in the cosmetics sector

Nature of the intervention

the dti worked with the Toxicology Association of South Africa (TOXSA) and the (CTFA) to request the DST to amend the Natural Scientific Professions Act 27 of 2003 to recognise toxicology as a profession. This approval and the amendment of the Act became effective in March 2012.

Economic rationale

To facilitate safety testing of cosmetic products produced in South Africa, products will get tested and certified locally by toxicologists; tested products will be more readily acceptable in export markets, while their local certification will greatly reduce the exorbitant costs currently paid by companies to have their products tested overseas.

Outcomes

Cosmetics products produced in South Africa will be tested and certified locally by South African toxicologists, ensuring more cost-effective compliance with international safety requirements and making South African products more competitive in global markets.

Key milestones

2013/2014 Q1: Identify quality and safety standards required for toxicology tests.

2013/2014 Q2: Work with TOXSA to identify skills requirements.

2013/2014 Q3: Upgrade current facilities and laboratories to enable enhanced toxicology testing.

2013/2014 Q4: Workplan produced to set up a dedicated laboratory to perform toxicology tests locally.

Lead departments/agencies: the dti

Supporting departments/agencies: DST, TOXSA, SABS, University institutions, CHIETA

Forestry, Timber, Paper, Pulp and Furniture

Forestry

Sector profile

The forest resources of South Africa represent a considerable natural asset for economic growth, based upon both enterprise and employment opportunities in poor rural communities. Between the third quarters of 2010 and 2011, forestry products recorded an increase of 11% in export value (from R2.6 billion to R2.9 billion) and a 4% increase in import value (from R1.7 billion to R1.8 billion).

Key opportunities

Strategic Environmental Assessments (SEAs) and provincial basic assessments conducted by DAFF have estimated that there is more than 100,000ha of potential land available for afforestation. In the Eastern Cape, an estimated 100,000ha has been identified; 6,000ha in Limpopo; and 39,000ha in KwaZulu-Natal. Afforestation has the potential to create 14,500 jobs countrywide, particularly for the rural unskilled, where the identified land is mostly located. There is also potential to improve the yields of existing plantations and convert existing wattle jungles into commercial plantations

Most of the forests exist on communal land where a number of value-added opportunities can be explored for small growers who are currently supplying their timber to big companies for pulp and paper mills. Opportunities exist to expand the small scale saw-milling industry, since most of the saw-millers are located close to forests in rural areas.

Constraints

Key economic constraints that are holding back development in the forestry and processing sectors are as follows:

- **Water licences**: The issuing of water licences has become a serious obstacle for forestry development. Communities are sometimes unable to afford the cost of undertaking the mandatory EIA to apply for water-use licences. There are also often delays in the processing of licence requests as a result of lack of capacity in regional offices of the Department of Water Affairs. Lack of business skills in rural communities also result in incomplete applications being submitted, which further delays the process.
- **Skills development and technology transfer:** The new forest growers and beneficiaries of land reform do not necessarily have the skills and relevant technology to grow the trees optimally.
- **Investment finance:** Tree-planting cannot take place without securing investment finance. Long rotations in forestry require long-term capital for forest establishment, maintenance and harvesting operations; income streams only appear a relatively long time after the investment has been made. As a result, there is quite widespread reluctance to invest in the forestry business.
- **Land tenure:** Most of the land that has been identified as suitable for new afforestation is tribal land or land belonging to communities where land-claims settlement issues still need to be resolved before tree planting can take place. There is often a lack of proper consultation and mobilisation within communities in line with forestry development protocols.

- **Demand for raw material exceeds supply:** The demand for raw material far exceeds supply and this has resulted in the closure of some downstream processing industries. Timber volumes declined to 15.2 million tons in 2010, as compared to 19 million tons in 2008. The small players in the industry are most affected by this because of the vertically integrated nature of the industry, where big companies own plantations and small businesses rely on supply from DAFF plantations.

Key Action Programmes

1. Integrated approach to fast-tracking the issuance of water licences and accelerate forestry development

Nature of the intervention

Supporting rural communities owning land with potential for forestry development, where communities demonstrate an interest in afforestation.

Support will be in the form of:

- Providing capacity to put together applications for water-use licences;
- Funding the EIA;
- Assisting in crafting business plans to apply for investment capital;
- Providing skills and technology for forest development and business management; and
- Leveraging financial support for forestry development.

This approach will be targeted to specific catchments in both the Eastern Cape and KwaZulu-Natal.

Economic rationale

To increase the supply of raw material and stimulate downstream processing activities. This has the potential to create 15,600 jobs at both plantation and value-adding levels.

Outcomes

Accelerated forestry development and well-maintained plantations.

Key milestones

2013/14 Q1: **the dti** and DAFF to commence support for the EIAs for the issuance of licences for the identified areas in the Eastern Cape and KwaZulu-Natal through the appointment of Environmental Assessment Practitioners (EAPs).

2013/14 Q2: **the dti** and IDC to commence a pre-feasibility study on 5,750ha of suitable land and support forestry development by assisting communities with water licence applications in Eastern Cape.

2013/14 Q3: **the dti** and IDC to provide continuous assistance to communities on project preparation and development and ensure that a pre-feasibility study for at least one project is completed in KwaZulu-Natal and one in the Eastern Cape.

2013/14 Q4: **the dti** to facilitate financial resources to support afforestation for at least one project in KwaZulu-Natal and one in the Eastern Cape.

Lead departments/agencies: DWEA/ DAFF

Supporting departments/agencies: the dti, DAFF, Forestry South Africa (FSA), Eastern Cape Rural Development Agency (ECRDA) and IDC

Sawmilling sector

Sector Profile

The small-scale sawmilling industry supplies timber and timber products to processing industries such as furniture manufacturing. There are about 200 sawmills countrywide, concentrated mainly in KwaZulu-Natal, Eastern Cape, Mpumalanga and Limpopo.

The South African forestry sector is dominated by the pulp and paper industry, which consumed close to 13 million m^3 of timber (compared to 4.4 million m^3 by sawmilling – the second-largest industry). The sawmilling industry, however, makes a significant contribution to total annual sector sales. In 2009, this stood at R20.4 billion.

The sector is a major source of employment for rural women and has high multiplier effects in rural areas. It is labour-intensive and has one of the highest ratios of workers to volume of roundwood timber processed – with approximately 30,000 people employed, both directly and indirectly.

Key constraints

- **Timber shortages and log quality**: Small- and medium-scale sawmills obtain the bulk of their sawlog supplies from either Safcol or DAFF. Most of the timber is provided in terms of *ad hoc* or short-term (one-year contracts), which makes it impossible for these enterprises to plan effectively. Most of the saw-mills have the capacity to process 5,000 m^3 of sawlogs per annum, but they are currently running at a processing capacity of less than 4,000 m^3 per annum owing to the shortage of timber. Research and development is needed in the industry to shorten rotations without compromising the quality and yields of timber.
- **Few opportunities for value-addition:** The bulk of the timber produced by small-scale sawmills is 'wet-off-saw' and mostly ungraded. It includes building materials such as purlins, rafters, roof truss materials and other construction materials. The other main output from small-scale sawmills is industrial (ungraded) timber, which is supplied to downstream manufacturers such as pallet producers, manufacturers of doors and doorframes and laminated products. The major constraints on the development of value-added products are insufficient raw material supply at appropriate quality levels, poor productivity levels and old equipment and technology.
- **Importation of structural and industrial lumber:** The industry faces a serious threat from large-scale importation of structural and industrial sawn lumber. The importation of this lumber has the potential to damage and restrict the long-term development of the local sawmilling sector.

Key opportunities

- Forward integration into the production of value-added products such as furniture components, low-cost housing components, doors, windows, window frames and similar building products.
- The possibility of entering into the export market. This, however, will only be successful if small-scale sawmills co-operate with the conscious aim of penetrating these markets.
- Small-scale sawmills have the opportunity of organising themselves into an association. This would increase their bargaining power with respect to securing log supplies, improve their marketing, and make a move into export markets a realistic prospect.
- A better-organised sawmilling sector would have the potential to create significant numbers of new jobs in rural communities.

Key Action Programme

1. Productivity improvement and sustainable supply of raw material

Nature of the intervention

This programme is intended to assist small- and medium-scale sawmills to improve their productivity through technology upgrading, market access, transfer of skills and securing long-term supply contracts.

Economic rationale

Small to medium sawmills use old technology and operate under short-term contracts which make their businesses uncompetitive and unsustainable.

Outcome

Improved recovery rate and competitiveness of the sawmilling industry.

Key milestones

2013/14 Q1-Q2: **the dti** to implement Action Plans to address the current levels of imports.

2013/14 Q2: **the dti** and DAFF to secure log supplies for small-scale sawmillers using the ongoing restructuring process of Category B and C plantations as an opportunity to address the raw material shortage.

2013/14 Q3: **the dti** to liaise with DAFF to review the current tender approach for allocating raw material to SMMEs.

2013/14 Q4: **the dti** to support the development of SAFCOL Multi-Year Contracts (MYC) Guidelines to address the issue of unequal distribution of raw material among small-scale sawmillers.

Lead departments/agencies: DAFF and SAFCOL

Supporting departments/agencies: the dti, **seda,** Fibre Processing and Manufacturing SETA

Furniture manufacturing

Sector profile

The furniture industry is one of the longest-established traditional sectors of the South African economy and accounts for a significant proportion of manufacturing jobs. Currently the industry employs approximately 29,000 people across some 2,200 registered establishments involved in furniture-making, bedding and upholstery. The industry is labour-intensive and contributes 0,95% to manufacturing GDP and 1,6% to manufacturing employment.

Sector opportunities

The furniture sector has the potential to create employment, particularly in rural areas where there is minimal economic activity. There is also a real opportunity to improve sector productivity and competitiveness by improving skills and enhancing innovation. This could best be done through the adoption of a cluster-development approach, which would reduce input costs, allow for better information and infrastructure sharing and reap significant economies of scale. There is also an opportunity to align furniture industry standards with public procurement and designations.

Sector constraints

The sector faces a set of constraints that are holding back its development and negatively affecting its competitiveness:

- Shortage of skills, especially in technical and high-level skills like design;
- Wood raw material supply problems, particularly for small enterprises;

- The influx of cheap imports and the challenge of getting retailers to buy locally produced products. The survival of the industry will largely depend on interventions to deal with the escalation of imports, while at the same time increasing procurement of locally manufactured products.
- Lack of research and development to support industry growth.
- Difficulties with respect to the enforcement of quality and standards measures to differentiate local products from cheap low-quality imports. Although some quality standards exist, they are currently not enforceable.

Key Action Programmes

1. Furniture Design Programme

Nature of the intervention

The programme seeks to support skills development in the sector, particularly high-level design skills, that will help address market failures, encourage specialisation and improve productivity. The programme consists of a furniture design course and a furniture design competition.

Economic rationale

South Africa currently lacks sufficient tuition resources specifically geared towards furniture design and thus lags behind the design capabilities of most of its major competitors. There is also a mismatch between the skills required by the industry and the number and quality of training courses on offer by accredited training providers.

Outcome

Improved sector competitiveness through higher-level design content.

Key milestones

2013/14 Q1: **the dti** and the FPM Seta to develop the furniture design course and qualifications framework.
2013/14 Q1: **the dti** to develop the framework for the Furniture Design Competition.
2013/14 Q2: **the dti**, FPM Seta and SABS to pilot the design course in two provinces.
2013/14 Q3: **the dti** and FPM Seta to roll out the design course in the industry.
2013/14 Q4: **the dti** and SABS to finalise the design competition.

Lead departments: the dti/ FPM SETA/ SABS Design Institute

2. Furniture Cluster Development

Nature of the intervention

Cluster development in the furniture sector: grouping together companies located in the same geographical area and setting up incubators to enhance design skills.

Economic rationale

SMMEs in the furniture industry typically struggle to achieve and maintain reliable market access. This is mainly due to their small size, which impacts on their ability to supply at the required levels of quantity and quality and weakens their competitiveness and long-term sustainability. The development of furniture clusters is seen as a viable solution to these problems.

Clusters can be defined as groups of small- and medium-sized enterprises located in a relatively limited geographic area and engaged in the production of the same kinds of product.

The establishment of clusters will begin to address the size constraints and general lack of infrastructure experienced by these SMMEs, allowing them to develop economies of scale based on shared infrastructure and equipment, co-operation, knowledge-sharing and specialisation, thereby strengthening their collective capacity to access existing and new markets.

Outcome

Sustainable furniture clusters with access to the markets.

Key milestones

2013/14 Q1: **the dti** to identify two clusters each in KwaZulu-Natal and the Eastern Cape and provide profile of manufacturers.

2013/14 Q2: **the dti** to determine resource requirements of each cluster such as skills and technology

2013/14 Q3: **the dti** to facilitate the establishment of cluster management structures and capacity building.

2013/14 Q4: **the dti** to facilitate acquisition of resources for the functioning of the cluster.

Lead departments/departments: the dti, industry, Furntech

Business Process Services

Sector profile

South Africa currently hosts a considerable number of global operations in this sector, supporting approximately 14,000 offshore jobs. Government's short- to medium-term objective is to grow this figure to 40,000 by 2015.

The package of services offered to international customers includes providing services for telecoms, online retailing, insurance and media. South Africa's BPS&O industry is estimated to be growing at approximately 8% per year and its size in 2012 stood at about $150 billion.

Perhaps not surprisingly – given existing historical/cultural links, available English-language skills and the favourable time difference – the United Kingdom (UK) has been and remains the largest offshore source market for South Africa, with at least 65% of the off-shore operations located in South Africa being either UK captive operations or third-party operations servicing UK clients from this country. More recently, Australia has emerged as a new market to be explored; a number of successful Australian contracts are already being implemented from South Africa.

South Africa is increasingly competing to be among the most preferred destinations for international operators and enterprises, wherever located, that are looking for cost-effective destinations in which to locate their operations. The potential global market is very large: an additional 2.1 million jobs are projected to be created globally in the offshore BPS space and more than 150 countries will be competing for this opportunity. But there are already signs that South Africa can make serious inroads into this expanded space.

Key opportunities

- **Capturing the English-speaking market**
  The value proposition for South Africa as a key offshoring destination is anchored in its ability to offer English-speaking talent at scale, a robust enabling environment, deep domain skills advantages, significant cost savings and a "First-World" experience for those who set up operations here. South Africa is among the top three global locations able to offer these advantages, and has a 370,000 BPS industry-addressable workforce at the disposal of potential international customers. The South African BPS&O sector can also access a relatively large number of professional, qualified personnel (e.g. actuaries, CAs) who are increasingly proving willing to join the sector because of the diverse openings it offers for high-level analytical skills in telecoms, online retailing, insurance and media.
- **Entering into the spaces formerly occupied by Tier-1 destinations that are now being vacated by investors due to low performance quality**
  The traditional destinations are losing value due to poor performance. This includes longer call resolution, poor quality turnaround times, and lack of language and cultural affinity. South Africa's affinities with Anglophone cultures give it a critical edge over competitors.
- **Shared Services for the African continent**
  South Africa is home to nearly half of the top 40 African-owned companies with established global operations in the finance and accounting, telecoms and procurement industries. Recently this has begun to include a number of South African-based banks. South Africa has also made strong inroads into the African continent, providing BPS services for South African companies expanding into Africa. This opens up the possibility of establishing a South African-based Shared Services Centre, with significant job-creation potential.

Key constraints

- An insufficient pool of middle managers (workforce managers, first-time managers, coaches, team leaders, quality controllers, operations managers, second-in-command personnel etc.)
- Limited availability of certain industry-specific skills.
- A fragmented approach to industry mobilisation by industry associations.
- An insufficiently integrated marketing strategy.
- Poor enforcement of existing industry standards.
- Lack of market access for local small businesses.
- Telecoms costs: while operators acknowledge that telecoms constitute approximately 5% of their operating costs – and while there has been a 90% reduction in telecom costs and a significant increase in capacity – the overall cost of telecommunications in South Africa is still higher than in most of the other competing offshore destinations.

Through the IPAP, **the dti** has become increasingly proactive in the BPS&O sector: to date; total investments to the value of approximately R4.1 billion have been facilitated, and concerted attention has begun to be given to appropriately supportive skills development initiatives. (One such initiative, the **Monyetla Programme**, is highlighted below.)

Key Action Programmes

1. Roll-out of Business Process Services (BPS) Incentive Programme

Nature of the intervention

Ongoing roll-out of the BPS incentive programme.

Economic rationale

For BPS investors, operational cost is one of the critical areas of consideration for an investment decision. The rationale behind this initiative is to substantially reduce operating costs, strengthening South Africa's positioning as a world-class BPS destination able to compete strongly with the offerings of key competitor countries. **the dti** has, therefore, revised its incentive programme from being capital expenditure-based to one that provides offsets to investors against operational expenditure costs. The new incentive started operating from 2011.

Outcomes

An investor-friendly, competitive environment facilitating accelerated entry of key competitor countries to scale up South Africa's value proposition as a BPS destination.

Key milestone

2013/14 Q1 onwards: Ongoing implementation and review of the BPS incentive programme.

Lead departments/agencies: the dti

2. Skills development for the BPS sector

Nature of the intervention

The Monyetla Work-Readiness Programme™ is a dedicated, sector-specific, investor-friendly work readiness programme that bridges the divide between unemployment and the opportunity for sustainable employment over an 80-day training period.

It provides the industry with requisite skills from entry level to supervisory levels. Since inception, the programme has been offered at NQF level 2. From 2013 onwards, it will be offered at NQF levels 3, 4 and above. With some adaptation, this programme could be replicated in other growth sectors with similar results. The programme also provides career paths across the industry and scope for increasing the proportion of local middle and senior managers.

Economic rationale

A major determinant for investors wishing to start BPS operations is the availability of sufficiently skilled labour in the location under consideration. In addition, developing a readily available pool of up-skilled labour will contribute strongly to the absorption of numbers of young unemployed South Africans into the world of work.

Impact

Since the inception of Monyetla in 2007, 4,500 youth have been trained to become eligible to work in the BPS sector and a minimum of 70% of those who have undergone training have been placed in employment.

A survey on the return on investment conducted in 2012 indicates that more than 50% of the learners who participated in the programme are employed at the moment; 44% in full-time employment earning monthly salaries ranging from an average of R4,577 to more than R7,000 a month.

The survey also showed that those learners who did not remain in the call centre industry were able to obtain and retain jobs in other sectors, confirming that the programme is succeeding in providing learners with a foundational skill-set that makes them employable across a diverse range of sectors, industries and roles. The positive impact of these employed learners on the economy is significant. It is estimated that their salaries will provide a total contribution in excess of R900 million to GDP over the next five years.

- By March 2014 an additional 6,000 will have been trained, bringing the total number of trained unemployed youth to 10,500.
- An additional 30,000 offshore jobs will be created by March 2015 through accelerated efforts in implementing the BPS Incentive Programme.

Outcomes

A readily available pool of labour for investors to draw from.

Key milestones

2013/14 Q1: Design of pilot phase of the language programme commences.
2013/14 Q1: Training at NQF Level 4 and above continues.
2013/14 Q2: Training of 3,000 unemployed youth at NQF Level 3 takes place; with a minimum of 9% targeted for provinces other than Gauteng, the Western Cape and KwaZulu-Natal.
2013/14 Q3: Middle-management training (training of 500 supervisors and team leaders) takes place.
2013/14 Q4: 50% of trained learners are contracted into employment for a minimum of a 12-month contract.
2013/14 Q4: Contracting of language and domain area trainers.

Lead departments/agencies: DoHE&T, DBSA

Supporting departments/agencies: **the dti**, training institutions, employers in the BPS sector.

THE MONYETLA STORY IN DEPTH

Success in industry demand-led training

The Monyetla Work Readiness Programme™ demonstrates how it is possible in today's environment of joblessness to bridge the gap between perennial unemployment and work by implementing a sector-specific skills programme that is contractually linked to employment in a growth sector.

- **4,700 learners have participated in the programme since 2008**
- **More than 85% were assessed as competent**
- **More than 86% of these learners were employed – i.e. 73% of the funded work seekers who participated in the programme found jobs**
- **The consortia also trained 21% more team leaders than they were required to**

The programme was designed and developed by the Business Trust, in partnership with **the dti**, the NSF and the industry body Business Process Enabling South Africa. It was piloted in 2008/09 with 1,300 work seekers and then successfully rolled out to a further 3,350 work seekers in 2010/11.

The programme

The word "Monyetla" means "opportunity" in SeSotho and that is precisely what the programme offers its participants, who must complete 67 credits towards a registered Call Centre Qualification, and engage in at least 160 hours of on-the-job training to make them eligible for employment.

Connecting the dots between skills development and employment is a consortium model in which an employer partners with an accredited training provider and recruitment specialist to recruit, train and place work seekers (learners). Consortia complement the learning content with additional business-specific training (product, systems, process, and other functional and soft skills training), thereby catering for the specific skill requirements driven by the industry in which they participate and the functions they perform.

Each consortium receives a grant for every person successfully trained (in 2010/11 this grant totalled R18,150 per learner), subject to ensuring that the learners are competent and that at least 70% of them are offered employment contracts for a minimum of six months. Each consortium must also train, at its own cost, one team leader for every six learners for whom they have been funded.

The results

To date, 46 consortia have participated successfully in the programme, including public and private sector BPS&O operators, local and international companies, in-house operators and third party outsourcers.

Work Readiness Programme vs. learnerships

The National Skills Development Strategy (III), places emphasis on making young people more employable and up-skilling people already working. The programme is unique in the way it successfully links these two goals by ensuring that the competent learners do in fact get jobs in which they can further their personal development (with their employers) by registering on learnership programmes (which can be funded by the Service SETA) to successfully complete their qualifications.

Creative industries: Craft, Music and Film

Craft

Sector profile

The lack of historical data on the craft sector makes it difficult to accurately estimate its overall contribution to the economy; assessing its contribution is also made somewhat difficult by the fact that it is not properly defined in terms of statistical classifications. A baseline research study done in 2010 estimated that the craft sector contributes R3.32 billion to GDP (0,14%) and provides income and employment to approximately 273,495 people – a small number of whom are employed permanently and a much larger number who are employed as seasonal workers. The sector is mainly characterised by the operations of about 31,800 micro and small enterprises distributed across the entire craft value chain. In aggregate terms, the South African craft industry contributes slightly less than 1% of the global trade in crafts, which is reckoned to be around US$35 billion.

The sector is divided into informal and formal or registered craft enterprises, and further sub-divided into businesses operating from home, emerging exporters, and export-ready enterprises fully equipped with production facilities, office and warehouse space.

Operations in the craft sector are typically small-scale, with hand-processing being the main contributor to the end-product. Production is classified in terms of material (textile, clay, glass etc.), product type (homeware, giftware etc.), technique (beading, weaving) and design style (traditional, contemporary etc.).

As its design and business skills improve, the South African craft sector has the potential to make an increasingly positive impact on both urban and rural local economies and grow significant numbers of new jobs.

Sector economic data (Craft and Music)

Variable	Contribution in 2010
Manufacturing value-add (% of GDP)	R3.32bn (0.14%)
Manufacturing employment	273.495

Source: Urban-Econ, based on the Craft Survey 2011

Key opportunities

Although the current economic climate remains unfavourable for many businesses, the global market for craft is on a steady upward curve. To help the local craft industry ride this curve**, the dti**'s Customised Sector Programme for Craft (CSP Craft) seeks to address a number of the key challenges facing the sector by providing both immediate and long-term support interventions. As part of these initiatives – and to increase market confidence and access opportunities for crafters – **the dti** developed the South African Handmade Collection brand (SAHC). In addition, given the fact that women already play a significant role in the craft industries, opportunities exist to develop programmes that create stronger linkages between informal and formal craft production, helping to mainstream women producers into more permanent and up-skilled work.

Constraints

Significant competition from imported goods, production and quality standards compliance.

Key Action Programme

1. Customised Craft Sector Programme

Nature of the intervention

The Customised Sector Programme aims to address a number of key challenges facing the craft sector: competition from imported goods, business and innovation and design skills deficits, quality control and intellectual property rights issues and, finally, access to markets.

Economic rationale

To build a commercially sustainable sector and scale up its contribution to GDP and employment creation.

Outcomes

Improving the overall competitiveness of craft enterprises (Craft Standard Policy Statement and Certification Mark); sustaining domestic market share; penetration of new exports markets.

Key Milestones

2013/14 Q1-Q4:	Ongoing roll-out of the SAHC.
2013/14 Q1-Q4:	Establishment of marketing, retail and distribution mechanisms and channels for emerging craft enterprises.
2013/14-2014/15:	Continuing work by **the dti**, SABS and PSA in leading the phased process towards the development of standards and a recognised Certification Mark.
2015/16 Q1:	Implementation of the Craft Standard Policy Statement and the Certification Mark.

Lead department: **the dti**, SABS and PSA

Supporting departments/agencies: DAC, PIPAs, provincial Departments (Economic Development, and Arts and Culture) as well as provincial Craft Hubs

Music

South Africa has a strong competitive capability in musical production and the music industry has the potential to make a significant contribution to economic growth and employment. The industry is labour-intensive, has many economic multipliers and the potential to generate considerably more employment than it already does. Despite the global recession, 2011 sales data demonstrate continued resilience and steady growth, with a total sector value of R2.091 billion, split between recorded music (at R 1.377 billion) and live music (at R714 million).

Key opportunities

The South African music industry is innovative, with numerous small and medium-sized entrepreneurs. There is plenty of potential both to increase the aggregate growth of the industry and the international popularity and exposure of local genres. Music is relatively easily distributed and is an export product that is not constrained by the high transport costs associated with the export of physical products. A substantial proportion of the music industry's revenue is derived from intellectual property rights.

That Freshly Ground Moment... SWC 2010

New digital and information and communication technologies have revolutionised the industry's production processes, distribution channels and consumption modes. Mass-production technologies have been replaced by niche production and mass customisation of ringtones, movies-on-demand, interactive media and social networking sites such as Facebook and YouTube, and the convergence of telecommunications and the Internet.

Constraints

Constraints include problems of intellectual property protection, shortcomings with respect to skills development and technical, recording and performing industry skills, and difficulties of financing. There is also significant competition from imported music products and services, especially from the US and the UK.

Key Action Programme

1. Approval of the Music Strategy and initiation of interventions

Nature of the intervention

Wide consultation on the music strategy with all stakeholders; final approval and initiation of identified interventions.

Economic rationale

The need for a national music strategy has been identified as a base for the exploration and enhancement of the music industry's economic potential.

Outcome

Endorsement of the music strategy by the industry and Government to ensure a collaborative effort towards growing its employment potential, technical capabilities and international reach.

Key milestones

2013/14 Q1: Consultations with all stakeholders and approval by **the dti** Executive Committee (Exco).

2013/14 Q2-Q4: Initiation of approved interventions

Lead departments/agencies: **the dti**

Supporting departments/agencies: DAC, DOC and IDC

Film and Television

The South African Film and Television industry has been doing fairly well considering the effects of the global financial crises. The film industry managed to grow by 3,1% during the 2008/09 crisis years, but paradoxically took a severe hit in 2010/11, with overall growth declining to only 1%. The total spending on film in 2011 – comprising both out-of-home and in-home productions – was R2.889 billion.

Meanwhile, the television industry performed strongly over the same (2011-12) period, growing by 13,4%, from R20.326 billion to R23.051 billion. The total value of the South African Film and Television industry for 2011 was R25.940 billion. (Statistics: Price Waterhouse Coopers 2012).

the dti has been supporting the film and television sector since 2004 through the South African Film and Television Production and Co-production Incentive and the Foreign Film and Television Production and Post-Production Incentive. The formats eligible for the incentives are feature films, telemovies, television drama series or mini-series, documentary or documentary mini-series, video gaming and animation; but the bulk of the incentives have gone to feature films (approximate 70/30 ratio). Taken together, the two incentive schemes have since 2004 approved 317 productions to a combined value of R1.768 billion.

Key opportunities

The roll out of digital terrestrial television is expected to drive demand for content in both television and feature film production – the latter, while probably initially targeted for cinema and DVD distribution, being likely to end up also being used at television content. Looking ahead to the years 2011-2016, the 2011 PWC Entertainment and Media Outlook is projecting a 4,2% increase in the film sector (from R 2.88 billion to R3.569 billion) and a 10,3% increase in the television sector (from R23.051 billion to R37.551 billion).

This is expected to contribute to significant growth in employment opportunities across the sector, particularly in television.

Constraints

There is significant competition from imported film and television content. Box office figures for 2011 show that South African-produced films only captured a 3% share of the total R1.206 billion market (PWC, 2011). Similarly, the NFVF Box Office Report for 2011 confirmed that of the 204 films shown in South African cinemas, only 22 were locally produced.

The current minimum budget production threshold for the film incentive may be a constraint in itself as few production companies are able to meet the high budget requirements, resulting in the incentive being accessed only by big-budget blockbuster films. The resultant effect is that fewer films are made at higher costs, and the demand for more content is then fulfilled by imports.

Incentives

The tables below show the value of the incentives paid for local, co-production and foreign based productions.

Date	Number of productions (South Africa, Co-Productions, Foreign)	Incentive (R million)
1 April 2009 to 31 March 2010	70	305
1 April 2010 to 31 March 2011	59	261
1 April 2011 to 31 March 2012	70	399
1 April 2012 to 31 December 2012	60	293

Source: **the dti**

Full-time equivalent jobs created data is available from 2011 onwards, as per table below.

Date	South African production	Co-production	Foreign production
1 April 2011 to 31 March 2012	23,986	13,371	8,067
1 April 2012 to 31 December 2012	36,856	8,294	6,369

Source: **the dti**

Given the focus on feature films, the majority of the job opportunities created tend to be short-term. Shifting the focus to the other genres – telemovies, television drama series or mini-series, documentary or documentary mini-series, video gaming and animation – may open up job opportunities that are more sustained.

There remain, however, many other opportunities in the film industry that are untapped by the current incentives. Opportunities across the full value chain of the audio-visual and new media sector have not yet been fully exploited and there is still a great deal of room for creative thinking around new avenues towards employment creation in the industry as a whole.

Key Action Programme

2. Film and Television Strategy

Nature of the intervention

- Upscale the roll-out of the South African Film and Television Production Incentive, with a special focus on telemovies, television drama series, mini-series, documentary or documentary mini-series, video gaming and animation, to further grow the employment and work opportunities afforded by these formats.
- Broaden participation by implementing B-BBEE and transformation interventions and revising the incentive budget threshold to include low-budget productions.
- Review and redevelop the Film Customised Sector Strategy to target the constraints within the industry in a more comprehensive way to create positive impacts on the total value chain, beyond the primary production process.

Economic rationale

The proposed upscaling of the incentive will have a direct impact on the real economy through employment creation and robust transformation within the industry. The review and redevelopment of the Film and Television Sector Strategy will create the space for stronger interventions to grow the industry.

Outcome

Broader participation within the industry and a Film and Television Sector Strategy deepening support for the industry, with key action plans to address market and institutional failures, including the provision of finance and concentrated efforts to grow decent and sustained employment.

Key milestone

2013/14 Q1-Q4: Up-scaling of the film and television incentive through a revision of the film and television incentive guidelines; researching and redrafting of the Film & Television Sector Strategy and design of Key Action Plans.

Lead departments/agencies: **the dti**

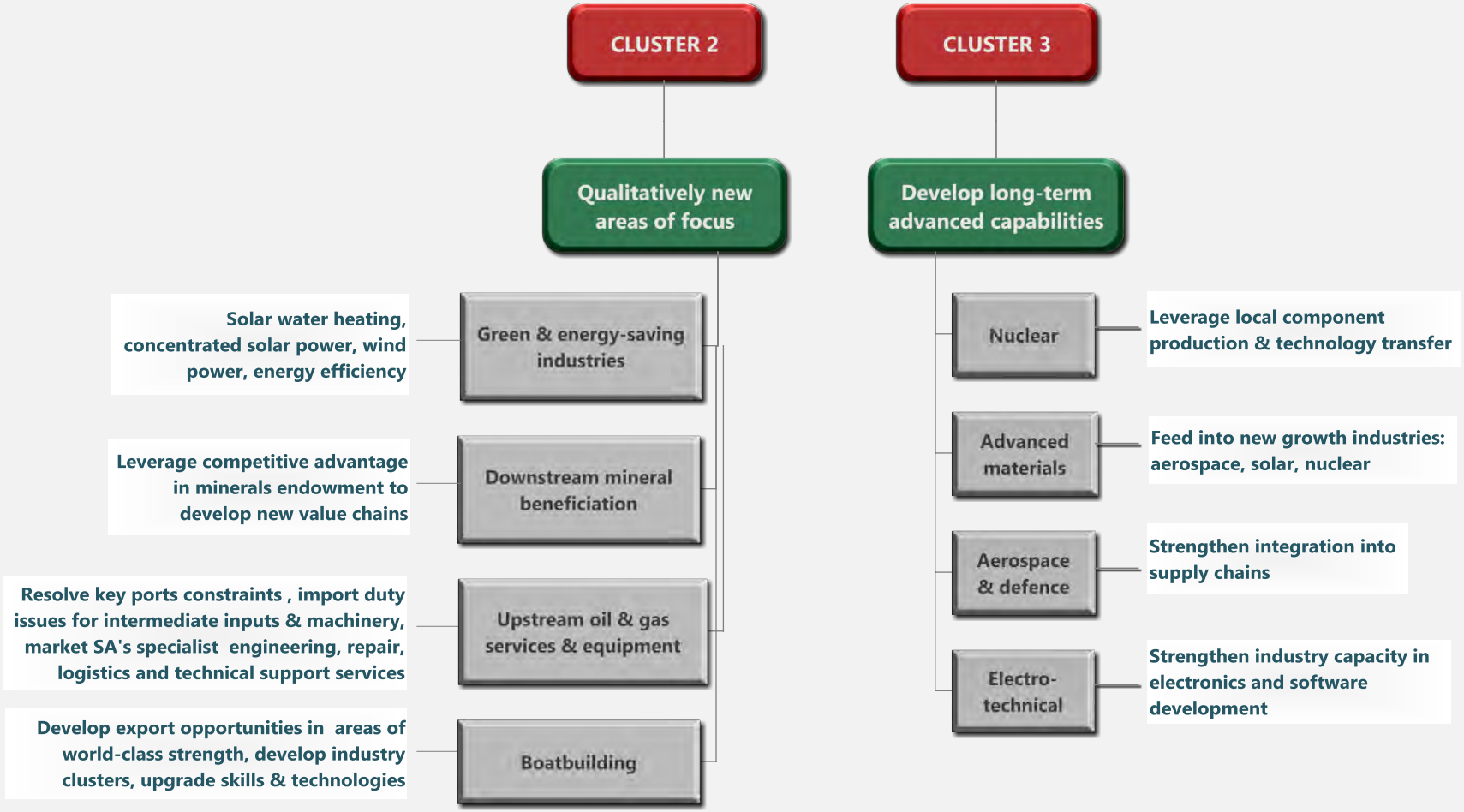
Supporting departments/agencies: DAC, NFVF, DoC

Adventures of Zambezia **– Prize-winning South African animated film 2012**

IPAP SECTORAL INTERVENTIONS 2 AND 3

2: Qualitatively new areas of intervention

3: Development of long term advanced capabilities



SECTORAL INTERVENTIONS 2

QUALITATIVELY NEW AREAS OF INTERVENTION

Green industries

In recent years, the world has given increasing attention to the "Green Revolution" or "going green". However, while "green is good" thinking is one important dimension of the Green Revolution, harder economics has become the more significant driver of change. The complex interaction between the rising cost of existing energy (mainly derived from fossil fuels), current and future global demand for energy, the need to find reliable supplies of energy and the decreasing costs of alternative cleaner energy can now be seen as the main drivers of the Renewables and Energy Efficiency sectors, globally and in South Africa. Technologies that were previously destined to remain on the drawing board now have the opportunity to be commercialised and achieve success in the marketplace.

There are several major factors leading the world in the direction of green transformation:

1) A push from society at large, incrementally pressuring Government action.
2) Development of green public policies: governments around the world are using financial, tax and legislative measures to shape business decisions in favour of certain industries and technologies and playing a decisive role in creating the conditions for green investments.
3) Venture capital flows: the 'big green capital boom' has arrived, crucially facilitated by a mix of legislation and government incentives and subsidies.

The trend in South Africa is similar to what is taking place in many other countries. The development of a green industrial sector has already begun to be supported by a number of government policies and action plans, which will shape the local industry, determine opportunities to localise goods and services, create jobs, improve export performance, support green growth in general and contribute to the international effort to mitigate climate change.

Climate Change

Climate change is already a measurable reality and, along with a number of other developing countries, South Africa is especially vulnerable to its impacts. The National Climate Change Response White Paper of 2011 presents the South African Government's vision for a climate change response and for the long-term transition to a climate-resilient and lower-carbon economy and society.

South Africa's response to climate change is organised around two major objectives:

- Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capabilities.
- Make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system – within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner.

Under the UNFCCC and its Kyoto Protocol, South Africa is committed to reduce its GHG emissions by 34% (by 2020) and 42% (by 2025) below its "Business As Usual" emissions growth trajectory. This commitment is contingent (in accordance with Article 4.7 of the UNFCCC) on the extent to which developed countries meet their own commitments to provide financial, capacity-building, technology development and transfer support to developing countries, including South Africa.

Accordingly, South Africa's National Climate Change Response Policy (NCCRP) defines as a strategic goal the need to "prioritise cost-effective and beneficial mitigation policies, measures and interventions" that lead to a reduction in emissions below the country's "business as usual trajectory" as measured against a benchmark "peak, plateau and decline" GHG emission trajectory – where GHG emissions peak between 2020 and 2025, plateau for approximately a decade and then begin declining in absolute terms (DEA, 2011a).

Adapting to climate change and making the transition to a much less carbon-intensive economy will require both massive technological shifts in the South African economy – dominated as it currently is by capital-intensive resource-based sectors – but also massive structural change. It will not happen automatically. Both the scale and types of change required for environmental and energy-security reasons are in synergy with core IPAP developmental propositions, in the sense that 'front-loaded' fiscal measures will become more important in promoting the establishment of higher value-adding, labour-intensive manufacturing industries with a significantly lower overall carbon footprint. Indications are that it will also require measures to manage the transition of our traditional resource-processing sectors so that they do not collapse under increasing electricity prices, mandated carbon taxes and costs associated with other environmental laws and regulations.

Addressing the required structural change effectively from an industrial perspective will broadly mean that:

- Electricity- and capital-intensive resource processing sectors will have to introduce cutting-edge mitigation technologies and processes and make additional investments into green technologies and sectors.
- The share of value-adding, labour-intensive and less energy-intensive sectors to GDP will have to increase in relative terms (e.g. clothing, footwear, textiles; agro-processing; plastics fabrication, metal fabrication; capital equipment; transport equipment; furniture).
- Rapid growth will have to be promoted and sustained in the green and energy efficiency sectors.

Key Action Programme

1. Adaptation of South Africa's GHG emission commitments

Nature of the intervention

Support the adaptation required in terms of our GHG emission commitments in a responsible manner by developing policies to enhance measures to minimise the impact on local industries and support the realisation of opportunities to develop both new green industries and value-adding, labour-intensive, less energy-intensive sectors.

Economic rationale

The challenge of climate change presents opportunities to develop new industrial sectors and grow sectors with a relatively lower GHG intensity. However a future local and global GHG mitigation regime also presents potential threats to the survival and competitiveness of existing industry; these must be carefully weighed and factored in.

Outcome

Low carbon Roadmap for the manufacturing sector

Key Milestones

2013/14 Q3: GHG mitigation analysis by DEA will set GHG mitigation objectives for industrial sectors.

2014/15 Q2: Preliminary Industrial Policy Roadmap to achieve these targets.

Lead departments/agencies: DEA, **the dti**

Supporting departments/agencies: DoE, EDD, DST, NT

Renewable Energy

Government has communicated a clear and unambiguous intention to unlock the country's potential for green growth by introducing renewable energy in a systematic way: as part of the Integrated Resource Plan for electricity generation and through energy sector reforms and policy developments.

The Integrated Resource Plan for electricity generation in South Africa was promulgated on 6 May 2011 and plans the creation of 8,400 mW of new wind power generation, 8,400 mW of new Photo-Voltaic generation and 1,000 mW of Concentrated Solar Power generation over the period 2010 to 2030.

The roll-out of this renewable energy commitment was initiated through the REIPPP, initiated in 2011, after the Renewable Energy Feed-In-Tariff was scrapped.

In December 2011, the Department of Energy announced the first 28 projects (1,400 mW) to be awarded Preferred Bidder status, with a period of six months stipulated to reach financial closure. As at November 2012, the 28 projects selected during Round 1 had reached financial closure, and the required Power Purchase Agreements had been signed. Construction was due to start within two months of signing.

The second round of preferred bidders (19 projects amounting to 1,044 mW) was announced in May 2012. The first two rounds resulted in a total investment of about R74 billion. Round 3 submissions are due to be made in May 2013.

One of the challenges that has always hampered localisation of renewable energy technologies has been uncertainty about the long-term dimensions of the renewables programme. However, the Department of Energy recently announced an additional 3,200 mW available for procurement by 2020. This commitment is expected to significantly boost investor confidence in the South African renewable energy industry.

A key focus here is on the manufacturing of componentry inputs into South Africa's 17,8 Gigawatts renewable energy-generation programme. This major initiative will be supplemented by solar water heating and other industrial opportunities arising from the urgent requirement for higher energy efficiency across the economy as a whole.

the dti has been working to develop a comprehensive Solar and Wind Sector Development Strategy. The strategy, which was approved in May 2012, identified seven Key Action Programmes: market facilitation, local manufacturing and industry upgrading incentives, local content requirements, technical and physical infrastructure, trade and investment support and facilitation, research demonstration and skills development.

Other associated progress markers are set out below:

- The Industrial Energy Efficiency Programme was launched in November 2011.
- By the end of 2012, the Solar PV Localisation Study had been completed.
- Solar water heating is now obligatory for most new buildings under the Energy Efficiency Building Regulations.

Key Action Programme

1. Revise the minimum local content requirements for the REIPPP and small-scale programmes

Nature of the intervention

In consultation with other relevant line departments, **the dti** is mandated to set local content targets for the REIPPP. The nature of the intervention is to revise the minimum and target levels of local content of renewable energy projects linked to the REIPPP. The aims of this revision are to increase the local content requirement – to incentivise and support local industrial development – and to align the requirements with the realistically anticipated state of local industrial capability.

It is, therefore, necessary to conduct studies to assess localisation potential for all renewable energy technologies, and determine the appropriate localisation roadmaps in consultation with the broader stakeholder community.

Economic rationale

The IRP 2010 explicitly spells out the need to support the development of a local industry for renewable technologies, in particular wind and solar. The plan is to maintain a stable roll-out programme that provides an opportunity for localisation, not only in the construction of the equipment, but in the development of skills to support the renewable programme. The sheer size and long term nature of the REIPPP provides an ideal vehicle to support the development of a competitive renewable energy manufacturing sector and related support industries that will also lead to the creation of decent jobs.

The IRP 2010 makes provision for 17,4 GW of renewable capacity by 2030, which makes up 42% of the new build capacity. The first round of bidding was announced on 1 August 2011 and the first 28 preferred bidders were announced in December 2011.

The second 19 projects were announced in May 2012. By November 2012, the first group of preferred providers had signed the required Power Purchase Agreements.

The third bidding round is due for submission in May 2013. The Department of Energy has announced an additional capacity of 3,200 MW to be procured by 2020, which represents a further significant opportunity for the development of the local renewable energy industry. The first two rounds resulted in a total investment of about R74 billion.

Outcome

Increased local content threshold for renewable energy projects in line with the development of a competitive local renewable energy manufacturing industry.

Key Milestones

2013/14-2014/15:	Annual research and stakeholder consultation on the state of the renewable energy manufacturing industry and a determination of the minimum and target levels of local content for the next bidding window.
	Publication of localisation Roadmaps for renewable energy technologies.
2013/14-2014/15:	Continuous monitoring and reporting on the development of local renewable energy industry.
2013/14-2014/15:	Ongoing review of local content targets on an annual basis.

Lead departments/agencies: **the dti**

Supporting departments/agencies: DoE, EDD, DST and National Treasury

Energy Efficiency

In many pieces of South African legislation energy efficiency – of which electricity efficiency is one component – features as an important overarching policy objective. It is specifically captured in the National Energy Efficiency Strategy.

Currently, most new energy-efficient machinery, equipment, software and control systems are imported into South Africa and employment creation potential is, therefore, largely restricted to the operation, maintenance and installation of equipment and the retro-fitting space.

Against this backdrop, the core question becomes: what is the extent and nature of the adjustments that have already been undertaken by firms (or which they are currently planning to implement) to save energy in the form of electricity?

Such interventions can take three forms:

1. The introduction of new electricity-efficient savings technologies;
2. Adjustments within existing technologies; and
3. Energy conservation approaches that reduce demand for electricity provided through the grid.

More research is required in South Africa to determine the full industrialisation potential of energy-efficient technologies and services; but a number of products have already been identified as having industrial potential, with solar water heaters probably being the best example.

Key Action Programme

1. Designation of energy-efficiency products, services & components

Nature of the intervention

To identify and quantify energy-efficiency products, services and components procured by central, provincial and local government and SOCs (such as public space lighting, street lighting, traffic lights and lights in Government buildings) and to designate these items for local production as appropriate.

Economic rationale

Government and SOCs spend large amounts per annum on products and services related to public lighting, traffic lights and the electrical equipment used in building for heating and cooling. This presents a major opportunity to localise the manufacture of some of the large-volume imported items that have up to now been fulfilling these needs. The overall objectives are to increase energy conservation and security and to develop sustainable domestic markets, to support a competitive local manufacturing industry.

Outcomes

Designated energy-efficiency products in support of the development of a competitive local manufacturing industry.

Key Milestones

2013/14-2014/15:	Energy-efficiency products and services identification.
2013/14-2014/15:	Research, stakeholder consultation and recommendations for designation

Lead departments/agencies: the dti

Supporting departments/agencies: DoE, EDD and DST

Downstream Mineral Beneficiation

Mineral Beneficiation is an area of work that presents untapped opportunity, but has lagged in policy development and implementation. Although South Africa is endowed with exceptional mineral resources, further downstream and upstream beneficiation has not fully reached its economic potential, mainly due to structural conditions within key value-chains.

the dti has, therefore, launched a comprehensive research project that will develop a strategy and action plan to advance backward and forward beneficiation in key value-chains of the following selected groups of minerals:

1) Ferrous (iron ore, ferro-alloys, steel and specialty steels);
2) The Platinum Group Metals (PGMs);
3) Titanium and pigments;
4) Polymers (from coal, gas and oil);
5) Mining inputs: the research will also assess strategies to realise upstream beneficiation manufacturing opportunities, comprising the inputs into the extraction and processing of the above minerals.

Key Action Programmes

1. The Mineral Value-Chains Strategy (MVS)

The MVS will significantly strengthen and be aligned with the range of sector-specific and transversal interventions currently deployed, and with the employment creation and industrial financing packages available from the Development Finance Institutions (DFIs). It is envisaged that the outcomes of this work will constitute one of the central pillars of industrial policy in the years to come.

Nature of the intervention

The research project will develop proposals on the following:

1) Strategies to increase the forward value-addition of the four mineral groups for the supply of critical feedstocks into manufacturing, including the development of concrete action plans for the four value-chains.
1) Strategies to increase the backward value-addition (local content) of the minerals sector (from exploration, through mining, concentration, smelting and refining to beneficiation).
2) Identifying the key sub-sectors/products of South Africa's minerals capital goods (plant, equipment and after-market) that can be grown/developed to take advantage of the mining and processing sectors' procurements – i.e. high-level sectoral mapping.
3) Identifying the ways in which offset provisions could be incorporated into the Minerals and Petroleum Resources Development Act (MPRDA) and Mining Charter to promote access to raw materials (including competitive pricing) to unlock downstream industrial projects and facilitate greater local content in mining/processing (input industries).
4) Determining how to productively use producer power, if applicable, to facilitate the industrial linkages.

For each of the four value-chains, the project will study:

1) The current South African situation;
2) The international context;
3) Downstream mapping, including challenges, obstacles and constraints;
4) Downstream Opportunities for South Africa, and
5) Downstream Strategies (Options).

This project will be undertaken in close liaison with the DMR (on their mineral beneficiation strategy) and the DST (on technology development strategies). It will also cover the potential for the productive use of producer power to facilitate industrial linkages. In addition, the project will identify industrial infrastructure constraints to the realisation of the value-chains and develop strategies to overcome them.

Economic rationale

While South Africa is exceptionally rich in minerals it has not been able to (a) fully take advantage of the global boom in demand (it has lost market share for several minerals); and (b) fully realise crucial mineral-economic linkages. Critical mineral feedstocks into the economy (such as steel from iron ore or polymers from coal/gas/oil) are supplied into the South African economy at monopoly prices (EPP[3]), severely curtailing downstream job creation. In addition, mining has been severely affected by infrastructure constraints (rail, power).

The MVS will primarily develop strategies/options to develop the back- and forward linkage industries and deal with the infrastructure constraints. In this regard, requisite amendments to the MPRDA will be assessed, to allow for mineral license minimum performance conditions on linkages: backward (local content), forward (beneficiation), knowledge (HRD & R&D) and spatial (LED and infrastructure provision). In addition, the study will assess the proposal for a category of 'strategic minerals' (critical feedstocks) that could have licence extraction and local pricing conditions.

[3] EPP: Export Parity Price (competitive price)

Outcomes

Higher levels of up- and downstream mineral beneficiation (greater local content and value-addition), particularly in job creating manufacturing industries.

It will also be necessary to formulate proposals to deal with the current infrastructure constraints (power and transport), to maximise job creation. All possible levers, including mining licences, producer power and incentives, will be assessed.

Key milestones

2013/14 Q1: *Mineral Beneficiation Concept Report* (overview of the MVS);
Ferrous Report, focusing on the current South African situation, the international context, downstream mapping (including challenges, obstacles and constraints), downstream opportunities for South Africa and downstream strategies (options).

2013/14 Q2: *Polymers Report*, focusing on the current South African situation, the international context, downstream mapping (including challenges, obstacles and constraints), downstream opportunities for South Africa and downstream strategies (options).

2013/14 Q3: *Titanium Report*, focusing on the current South African situation, the international context, downstream mapping (including challenges, obstacles and constraints), downstream opportunities for South Africa and downstream strategies (options). Finalisation of the Impact Indicators and Monitoring Plan for the roll-out of the MCEP.
PGM Report, focusing on the current South African situation, the international context, downstream mapping (including challenges, obstacles and constraints), downstream opportunities for South Africa and downstream strategies (options).

2013/14 Q1: *Mining Inputs Industries Report*, focusing on the current South African situation, the international context, upstream mapping (including challenges, obstacles and constraints), upstream opportunities for South Africa and upstream strategies (options).
Final Report (summary of proposals/options from the four value-chains reports)

Lead departments/agencies: **the dti** and the IDC

Supporting departments/agencies: **the dti**, the DMR, DST, National Treasury and IDC

2. The Iron and Steel Value Chain

A second area of interlocking shorter-term interventions arises from the work of the Inter-Departmental Task Team on Iron Ore and Steel (IDTT) whose recommendations have been endorsed by Cabinet. The IDTT was established to give effect to government's efforts to secure a developmental iron ore and steel price in support of downstream industries.

Nature of the Intervention

- A set of inter-related policy instruments to ensure the long term viability of the iron ore and steel value chain in support of increased levels of value addition to create a competitive advantage for manufacturing in South Africa.
- The amendment of the Minerals and Petroleum Resources Development Act (MPRDA) which will enable the Minister of Mineral Resources to invoke the relevant provisions of the mining legislation to secure supply and developmental pricing by determining the percentage and the price in respect of such a percentage as maybe required for local beneficiation; and to provide for every producer to offer local beneficiaries a certain percentage as prescribed. In the case of the steel value chain this action will be a function of the national steel production targets.
- An IDC-led process to establish a new steel production facility, involving an international investor(s) - with strong conditionalities to ensure that a developmental iron ore price is passed on as a developmental steel price.
- The strengthening of the Competition Act so as to provide for improved price monitoring, regulation and action against collusive and anti-competitive behaviour in the sector.
- Finally, the introduction of a price preference system (in terms of section 6 of the International Trade Administration Act) to strengthen current export control measures and safeguard the supply of affordable scrap metal to domestic mini-mills.

Economic rationale

Steel is the single most important input into the manufacturing sector. Notwithstanding South Africa's huge iron ore reserves and the relatively low cost of reductants, steel prices have remained in the highest global quartile. The cost plus 3% agreement between Kumba Iron Ore and Arcellor Mittal reached at the time of the unbundling of Iscor has not translated into a developmental steel price being passed on to the manufacturing sector. High international prices have fuelled a massive expansion of scrap metal exports, which has negatively impacted upon supply to domestic mills and is associated with cable and metal theft and the masking of illegal exports of precious metals.

Key milestones

2013/14 Q1: Amendment of the MPRDA to enable the deployment of its provisions. **the dti** to finalise the steel production targets and developmental pricing modalities for both iron ore and steel to support the national industrialisation programme.

2013/14 Q2: The Minister of Economic Development to gazette the necessary Regulations and establish the appropriate processes under the terms and conditions of the International Trade Administration Act.

The Minister of Police to introduce the necessary Regulations in terms of the Second Hand Goods Act and the Department of Police to issue the necessary certificates and carry out inspections of intended scrap metal exports.

2013/14 Q3: To finalise amendments to the Competition Act to ensure that iron ore price concessions accruing to the primary steel industry are passed on to downstream steel users. This will include appropriate powers to determine pricing methodologies, monitor compliance and sanction non-compliance.

2013/14 Q3: An IDC-led Task Team will finalise proposals for a new steel investment, including a suitable operating partner and the co-ordination of a fast-track process to complete all the relevant regulatory requirements, including fast-track EIA processes and water, land use and minerals licence conditions.

Lead departments: DMR, EDD and **the dti**.

Supporting Agencies: SAPS, ITAC and IDC

Upstream Oil and Gas

Sector profile

Sub-Saharan Africa is one of the fastest-growing and highest potential oil and gas exploration and production locations in the world, estimated to constitute 10% of global reserves. There is significant oil and gas activity on both the West and East coasts of Sub-Saharan Africa – with the East coast in particular coming to be seen as a game-changer for the global gas industry.

It has been estimated that an average of 120 drilling rigs pass Cape Point annually, with a further 80 to 100 drilling rigs located up the West Coast. It is expected that there will soon be a rapid increase in the number of rigs appearing on the East Coast. This presents an exciting opportunity for South Africa, given its strategically located ports and services, offering world-class port and back-of-ports industrial capabilities, including a host of specialised logistics services.

It is important to recognise and grasp the enormous opportunities that exist in upstream oil and gas as a specific sub-sector of the wider oil and gas industry and its associated downstream industries – both in South Africa and the sub-Saharan region. Presently, potential investor attention has been focused on considerably upscaling South Africa's capacities in upstream oil and gas maritime and rig repair, maintenance and, eventually, rig manufacturing capacity.

The recently declared upstream oil and gas IDZ at the port of Saldanha Bay serves as the logical starting point in this regard, aimed at establishing a dedicated oil and gas services hub for the African continent.

South Africa already boasts industrial capacity associated with maritime and rig repair, in addition to capacity associated with mining-related industrial technology, and can thus be seen as strategically and technically well-positioned in the Sub-Saharan African region to capitalise on the growing regional commerce in oil and gas.

The upstream oil and gas sector in South Africa is built on the legacy of gas developments in Mossel Bay – and more recently the Orange River Basin off South Africa's Northwest Coast – and includes the possible exploitation of on-shore shale gas in the Karoo.

From a regional perspective, the South African upstream oil and gas sector has expanded activities in the sub-Saharan region to target big opportunities. For example, the discoveries of natural gas fields off the Mozambique coastline are said to be the most significant global discoveries in the past 10 years. These new developments across the region – including the already noteworthy oil and gas activity on the West Coast – will further expand and extend the envelope of opportunities. In short, there will be sustained growth, across a wide geographic area, of on- and offshore oil and gas activity, at all stages of the upstream value chain.

The critical issue for South Africa is to ensure that its product offering – infrastructure, operational capacity, incentives, tariff and customs regulations – are optimised at its ports and elsewhere. This will require concerted efforts to overcome the serious regulatory and operational constraints that are currently impeding South Africa's development into a major oil and gas hub.

Notwithstanding these constraints, South Africa has nevertheless developed particular expertise and critical mass in several sub-sectors, including fabrication and construction, ship and rig repair, distribution and logistics. These capabilities are very important and the economic benefits associated with servicing the upstream oil and gas sector are potentially very significant.

The oil and gas sector has the potential to support and generate the following economic activity within three sub-sectors of the economy:

1. **Repair and upgrade of drilling rigs and other industry-related vessels**: Conservative projections suggest that eight rigs could be serviced in Saldanha, 12 in Cape Town, four in Coega and four in Durban. This would support 7,000 direct and 21,000 indirect jobs. Total foreign revenue potential at this scale could be up to R10 billion.
2. **Construction and fabrication related to upstream field development**: Fabrication projects can have significant lead times but can be extremely large. Contractors at Saldanha are currently in negotiations to construct the processing modules for a large facility in West Africa. The first of the four phases in this project will require an investment of US$1.6 billion and a total peak labour content of 8,600 direct jobs. It is estimated that the multipliers in the industry are as high as six, which would create total indirect labour opportunities of 51,600.
3. **Oil and gas logistics and distribution**: Cape Town is already a major logistics and distribution point for supplies into West African fields, and global logistics companies have already made significant infrastructure investments. There is considerable interest in Saldanha as a storage facility with huge potential for expansion into maintenance and servicing of equipment. Similar possibilities exist for Durban/Richards Bay and the East African Coast.

Key opportunities

The main opportunities lie in the following broad categories:

- **Upstream Ship Repair Hub**: The repair, maintenance and upgrade of various kinds of oil and gas marine vessels such as drilling rigs, pipe laying vessels and various kinds of work barges. A R6 billion shipbuilding and repair facility is to be built at Richards Bay, involving Chinese investors and operators in a joint venture with domestic companies, and with substantial public sector support. The project will create approximately 8,000 jobs, with significant employment and economic multipliers. This investment represents a strong vote of confidence in South Africa's capability in boat and shipbuilding.
- **Oil and gas logistics and distribution**: South Africa has the potential to build major logistics points to service the burgeoning growth of the oil and gas sector across the Sub-Saharan region.
- **Engineering services** that design, fabricate or construct specialised modules or facilities for the oilfields e.g. storage tanks, processing modules for offshore platform or onshore facilities, docking facilities, tugs/barges, civil structures and platforms etc.
- **Equipment and materials suppliers** providing a wide range of pumps, valves, pipes, motors, instrumentation and process equipment for the specialised needs of the upstream industry.
- **General and technical support services** for the upstream industry. General services include legal, financial, IT, medical, hospitality, recruitment and many other services that can be competitively supplied from South Africa. More technical services include a significant cluster of firms doing inspection and maintenance, training, diving services, remotely operated undersea vehicle operation and repair, and health and safety services etc.

Constraints

the dti, together with the DPE, NPA and other strategic players, is committed to establishing oil and gas logistics supply, maintenance and manufacturing hubs at South African ports, including at the port of Saldanha Bay, with all the potential for associated industry expansion that could follow from such developments. The DPE and Transnet are the key stakeholders in this sector, and through their recent commitment to port and rail infrastructure upgrading and expansion, they have explicitly stated their commitment to the development of a South African oil and gas sector of international significance.

Notwithstanding this commitment, however, significant challenges and impediments remain. Unlocking the enormous potential of the oil and gas sector is dependent on a host of factors coming into effect in a synchronised manner.

The process begins with putting in place, as speedily as possible, the necessary policy and regulatory framework, institutional architecture and programme management to secure the take-off and growth of the sector.

This in turn is linked to the need to urgently find solutions to the existing infrastructural and operational problems at South Africa's ports; a task requiring a close working relationship between Government and the private sector.

In summary, the constraints that need to be overcome can be divided into two sub-groupings:

1. **Regulatory and cost constraints** on project approval and implementation. These constraints include:
    - Limited administrative capacity in dealing with strategic and operational challengers; and
    - High port charges.

2. **Technical constraints:** these relate to the current state of port infrastructure and include:
   - Limited dry and wet docking space for rig and ship maintenance and repair; and
   - Inadequate supply of dedicated cranes, quay and land space for refitting of oil and gas rigs and supply ships.

Key Action Programmes

1. Maritime industrial capacity and ports offering

Nature of the intervention

Leverage the close working relationship developed between **the dti,** DPE and the National Ports Authority (TNPA) to position South Africa's ports in a manner that facilitates industrial development in general and the development of an upstream oil and gas servicing hub in particular.

Economic Rationale

Ports perform many and sometimes competing functions. The problem of how best to mix and match these, including the provision and allocation of infrastructure, is common to many ports around the world. TNPA, however, takes the position that ports in South Africa play a complementary role to one another.

On this basis, there are significant plans for the upgrading of port and back-of-port infrastructure as part of Government's overall plans to significantly upscale investment in infrastructure under the guidance of the PICC. This will enable the various ports in South Africa to specialise and dedicate their operations, thereby creating hub ports aligned with particular types of economic activity. The port of Saldanha Bay has been identified by TNPA to house the oil and gas hub for South Africa, with other ports such as Coega, Durban and Richards Bay playing a supportive role.

Outcomes

The establishment of a world-class oil and gas servicing hub that would facilitate industrial development, sustainable employment and social upliftment.

Key milestones

2013/14: DPE/**the dti**/TNPA joint task team will address short-term constraints and solutions, and put in place a framework to enhance the economic role played by South African ports in furthering industrial development; and, in particular, for the longer-term development of the upstream oil and gas sector.

2013/14 Q4: The development and initiation of the National Marketing Initiative for the South African upstream oil and gas sector, informed by the joint task team's report and findings on South African ports' industrial product offering.

Lead departments/agencies: DPE and **the dti**

Supporting departments/agencies: Transnet/TNPA, EDD, SAOGA, provincial governments and local councils.

2. Integrating South African suppliers into the oil and gas services supply chain

Nature of the intervention

Develop a closer working relationship with PetroSA to foster industrial development through forward and backward linkages.

Economic rationale

PetroSA procures significant amounts of material and services to facilitate its upstream operations off the coast of Southern Africa. Through carefully designed procurement policies, PetroSA has the ability to up-skill and integrate domestic suppliers into its supply chain, thereby stimulating economic activity and employment.

Outcomes

The integration of more South African companies into the upstream oil and gas services value chain. This would drive industrial development and competitiveness and result in sustained employment and skills development through a "learning by doing" process.

Key milestone

2013/2014: Develop a localisation programme in conjunction with PetroSA.

Lead departments/agencies: DoE and **the dti**

Supporting agencies: PetroSA

Boatbuilding and Associated Services Industry

Sector Profile

South Africa's boatbuilding sector, as well as the broader supply chain, is characterised by a relatively large number of small or medium-sized, owner-managed enterprises.

The South African boatbuilding industry specialises in the manufacture of multihull catamarans and is the world's second-largest producer of vessels in this category. A number of local companies have been acknowledged for the excellence of their work and are considered to be global leaders.

To begin with definitions: ships are generally distinguished from boats based on their size and passenger or cargo capacity. There is no universally accepted distinction between boats and ships. The International Maritime Organisation (IMO) uses the dividing line of 24m in length to distinguish small vessels from large vessels. Yachts and commercial working boats exceeding 24m are bound by the maritime codes applicable to large vessels. Large vessels, including submarines, river freighters and ferries are classified as boats.

Waterborne vessels are classified by criteria that include:

- **Number of hulls:** monohull, catamaran, trimaran;
- **Primary hull material:** wood, steel, aluminium, fibreglass (glass-reinforced plastic or GRP), composite (plastics reinforced with fibres other than, or in addition to, glass) or steel-reinforced cement (ferro-cement);
- **Propulsion system:** human-propelled, sails; mechanical;

- **Manufacturer, class or series**;
- **Function:** fishing, patrol vessels, rescue craft etc.; and
- **Offshore, inshore or for use on inland waters**.

Employment figures are variable, due to the highly cyclical nature of the industry. When large-scale projects are awarded, companies will generally increase their permanent workforce with temporary contract workers or outsource processes to sub-contractors. Research indicates that there are an estimated 2,600 permanent employees in the core boatbuilding sector, with more than 200 companies in the broader value chain providing a further estimated 3,000 jobs.

In 2011, almost 10,000 boats of all types were manufactured in South Africa. Exports grew by 49% in 2011, increasing from R733 million in 2010 to the current level of R1.1 billion. Imports in the sector fell from R710 million in 2010 to R217 million in 2011, representing a contraction of 69%.

Sector economic data

Variable	Contribution in 2011
Manufacturing employment	5,600
Trade balance	R876 million

Based on current capabilities and performance, the South African boatbuilding industry faces the following opportunities and constraints:

Key opportunities

- Opportunities to expand exports into non-traditional markets driven by industrial development and tourism development in emerging markets, including sub-Saharan Africa and the Middle East.
- Substantial growth opportunities in the commercial boat market, particularly in sub-Saharan Africa, with an emphasis on high-speed offshore craft, ferries, water ambulances and working boats.
- Opportunities to develop training, repair and maintenance operations in sub-Saharan Africa.
- Opportunities to increase innovation through collaboration between industry and research organisations to improve the competitiveness of the industry in terms of international standards.
- The development of sector-specific training and skills improvement programmes.

Constraints

- Inadequate berthing and mooring infrastructure.
- Shortage of skilled labour and scarcity of highly specialised skills.
- Limited availability and access to working capital.
- Inadequate price competitiveness, given the sector's dependence on a high proportion of imported components.
- Lack of transformation in the industry, mainly because of high production costs and the high cost of business start-up.

Key Action Programmes

1. Boatbuilding Skills Development Programme

Nature of the intervention

The Boatbuilding Skills Development Programme seeks to establish a centralised, centrally funded, industry-driven training initiative, comprising a boatbuilding apprenticeship system and an effective industry support mechanism, to facilitate the participation of businesses in various training opportunities. The intervention proposes the implementation of a National Boatbuilding Training Programme to address the following concerns:

- Sectoral skills deficit;
- Lack of information on skills development and training;
- Mismatch between industry needs and the forms of training currently available;
- In-house training – which is generally informal, inconsistently applied and production-dependent; and
- Deficiency of specialist trainers.

Economic rationale

Research indicates that the specialised skills the sector needs are generally in scarce supply throughout South Africa, particularly in the smaller towns. Boatyards in small towns have implemented in-house skills training programmes to begin to address this challenge. In the core boatbuilding industry and in the wider value chain, there is, however, a technical knowledge deficit at both shop-floor and middle management level. High-level composite training and project management skills are also lacking.

In short, the development of a specialised skills training programme is aimed at addressing skills deficits across the entire value chain nationwide.

Outcomes

Reduction of the skills deficit in the core boatbuilding industry and wider value chain; improved competitiveness of the sector.

Key milestones

2013/14 Q1 - Q2:	Mapping of skills critical to the boatbuilding sector.
2013/14 Q3 - Q4:	Identification of institutions that will undertake the training for boatbuilding-specific skills development and development of the institutional arrangements that will govern the implementation of the skills plan.
2014/15 Q1 - Q2:	Development of the demand-driven skills programme and funding model in conjunction with industry.
2014/15 Q3 - Q4:	Signed MOA with relevant parties.
2015/16 Q1- Q2:	Implementation of the skills development programme.

Lead department/agencies: the dti

Supporting department/agencies: NT, SETA, DHET, DOT, industry

2. Industrial Financing

Nature of the intervention

Broadening of the sector-specific incentive to cater for the wider boatbuilding industry – innovation and technology, new designs, raw material and engines.

Economic rationale

Fluctuations in the cost of raw materials, particularly steel and aluminium, coupled with high operating costs and the rising cost of fuel and electricity, undermine the profitability of the boatbuilding sector.

The volatility of the exchange rate affects the cost of imported core materials and inputs, such as engines (50% of the cost of a boat), electronics, generators and air-conditioning systems. To be internationally competitive, it is important for the boat builders to keep up with current design trends and new product development. Although financing for product development is difficult to obtain locally, it is possible for developers to secure international funding, but at the cost of forfeiting their intellectual property rights.

Outcomes

Directly reduce the burden of high input and product development costs and increase the international competitiveness of the industry.

Key milestones

2013/14 Q1 - Q4: Develop and design a set of proposals for broadening the scope of existing sector-specific incentives to include commercial boats.

2014/15 Q1: Conduct a roadshow to industry on the modification of the sector-specific incentive.

2014/15 Q2: Commence implementation of the support measures for the boatbuilding industry.

Lead department/agencies: the dti

Supporting department/agencies: IDC, DOT

3. Designation of working boats for public procurement

Nature of the intervention

To assess the feasibility of designating working boats for public procurement. While the high quality of South African boats has been acknowledged in the international arena, local procurement levels remain low, with less than 20% of locally made boats remaining within the country's borders or territorial waters.

Economic rationale

Since 1994, the South African Government has spent approximately R19 billion on working vessels, with only R900 million of this spend going to local procurement. The commercial boatbuilding sub-sector performed well in 2011 and demand for working boats in Africa increased exponentially, fuelled by the need for maritime patrol vessels to combat piracy on the East and West Coasts of the continent. The requirements of the burgeoning offshore oil and gas industry have also contributed to the industry's upward trajectory.

In the wake of recent widespread flooding – national, continental and global – attention has focused on the level of preparedness of organs of state to conduct effective disaster management operations. One result of this situation has been that interest in waterborne rescue craft has soared; and it is evident that this opens up new opportunities to drive local procurement and grow sustainable employment in the sector.

Outcomes

This intervention is expected to improve the domestic performance of the boatbuilding industry, which is viewed as a strategic industry and an economic multiplier that will generate employment and positive spin-offs across the sector.

Key milestones

2013/14 Q1 – Q2: Finalise research on feasibility of designating working boats.

2013/14 Q3 – Q4: Complete the designation proposal.

Lead department/agencies: the dti, National Treasury

Supporting department/agencies: SANDF, MIASA, SAMSA, eThekwini Maritime Cluster, industry

SECTORAL INTERVENTIONS 3

DEVELOPING LONG-TERM ADVANCED CAPABILITIES

Nuclear Energy

In terms of the Policy-Adjusted Integrated Resource Plan for Electricity (IRP 2010- 2030), South Africa plans to build additional electricity generation capacity of 9,6 GW from nuclear power, as part of a balanced energy mix that will ensure supply security and mitigation of CO_2 emissions. The strict regulatory environment and very high safety and quality standards that are required for the design and operation of nuclear power plants are key characteristics of the nuclear industry.

South Africa already has a significant level of nuclear expertise that can be leveraged and serve as a catalyst in meeting the country's desired localisation levels.

the dti, in collaboration with other industry players, is continuing to play a key role in supporting the development of the local nuclear industry. In 2012, **the dti** hosted several international investment missions involving South African local companies either hosting or being hosted by other countries; notably France, Japan, South Korea and Russia. Interaction with other international players helps develop a better understanding of international markets, identification of possible country-to-country trade opportunities and partnerships, as well as new potential spaces for local investment.

From a national perspective, both our Nuclear Energy Policy and the NIPF are firm on the need to grow the local nuclear industry. In November 2011, Cabinet approved the establishment of an inter-ministerial committee, the National Nuclear Energy Executive Co-ordination Committee (NNEECC), as the highest decision-making body, responsible for making recommendations to Cabinet on the implementation of the nuclear energy programme.

Within this framework – and on the recommendation of the NNEECC – Cabinet took the decision in 2012 to endorse a Phased Decision-Making Approach, while at the same time endorsing Eskom as the owner-operator of the planned fleet of nuclear power plants.

A number of other structures fall under the NNEECC; one of which, the Nuclear Energy Sub-working Group (NESWG) on Skills, Localisation and Industrialisation is of particular importance for **the dti,** which serves as its Chair. The NESWG reports directly to the Nuclear Energy Working Group (NEWG), which is in turn responsible for co-ordinating the sub-working group recommendations to the NNEECC for key decision-making on localisation issues.

Key opportunities

The DoE has indicated that, based on the IRP 2010-2030, the following assumptions can be made: a future nuclear programme in South Africa will have an overnight cost in excess of R400 billion; a fleet approach will be adopted for the purchasing of nuclear plants; and the first unit is planned to start commercial operation in 2023. This presents a significant opportunity to create a local nuclear manufacturing industry in South Africa.

Constraints

- Meeting nuclear quality accreditation and regulatory standards;
- Improving technology and skills transfer from one of the main nuclear vendors and the many global component suppliers;
- Developing an appropriate combination of global partnerships and access to global supply chains, funding and skills development; and
- Careful phasing-in of investments into the programme and into appropriate Government-led programmes to ensure that local procurement is boosted and localisation enforced.

Key Action Programme

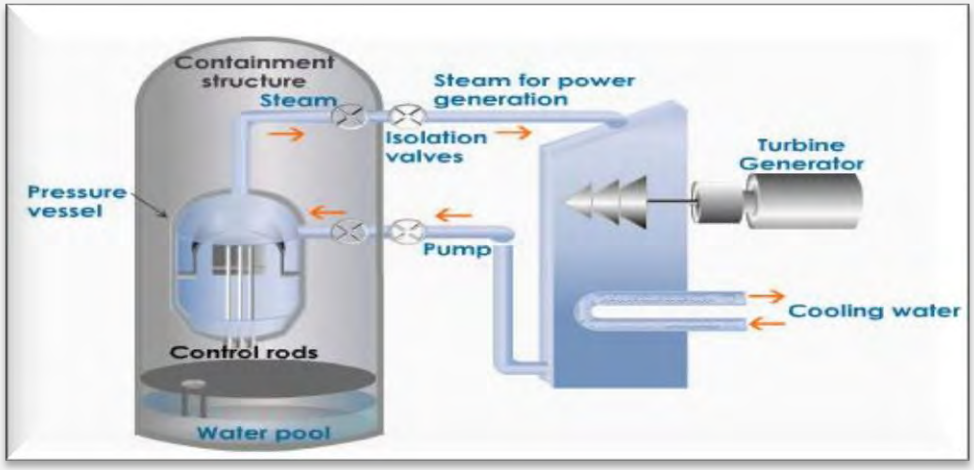
1. Localisation of Nuclear Components and Services

Nature of the intervention

- Developing minimum localisation requirements for procurement for the nuclear build programme to boost local production and stronger participation in global nuclear value chains.
- Initiating and carrying out special projects to profile the local industry and systematically assess its realistic levels of capacity for localisation.

Economic rationale

Localisation will ensure increased industrial capacity; promotion of technology and skills transfer from main nuclear vendors and suppliers of nuclear-grade components to the South African industry; promotion of joint ventures, consortia and partnerships; enhancement of exports into the global nuclear supply chain; creation of high-level direct jobs, intellectual property; and the significant contribution to GDP growth that a local nuclear manufacturing industry can make.



Outcomes

The development of industrial support policy and measures, which will subsequently lead to the development of localisation strategies and plans to support local industry development.

Key milestones

2013/14 Q2: **the dti** and the localisation and skills development sub-working group will conclude a joint nuclear localisation strategy document.

2013/14 Q3: **the dti** and the localisation and skills development sub-working group will conclude a joint nuclear skills development strategy document.

2013/14 Q3: **the dti** will identify and recommend further initiatives to support local supply chain development and investment.

2014/15 Q1: Recommendation of an incentive packages for the nuclear industry.

2014/15 Q3: **the dti** will develop baseline industrial sector policy and measures to support localisation, based on the capability of the local industry.

Lead department: the dti

Supporting departments/agencies: SANAS, DoE, DMR, DST, DPE, NT, NNR, NECSA, Eskom

Advanced Manufacturing

Advanced manufacturing is a collection of high value-adding manufacturing processes, management techniques, technologies and knowledge capital that occupy the top tier of manufacturing industries and drive competitiveness in local and global economies.

High-value goods and services require as a minimum advanced manufacturing technologies, the development and exploitation of intellectual property (IP), a sufficient IP protection regime and globally competitive financial and support instruments. It is associated with mastering highly regulated safety and/or quality requirements and the exploitation of intellectual property to deliver world-class processes, products and services. South Africa has specialist capabilities in the Advanced Materials, Nuclear, Chemicals, Mining and Minerals, Automotive and Aerospace and Defence industries.

Advanced manufacturing is also an integrator of other advanced technologies such as:

- High-performance computing;
- Automation and control systems;
- High-precision manufacturing linked to intelligent production systems;
- Sustainable and environmentally friendly processes and technologies; and
- The ability to manufacture to custom requirements in high or low volumes.

Developing the local advanced manufacturing industry is, therefore, very important, as it stimulates innovation and creates skills and technologies that spill over into adjacent industries, while at the same time helping to create direct and indirect jobs. In this regard, a number of companies in the milling and animal/pet food industry, including major players SASKO and Feedpro, have been assisted with product development through extrusion; and have been able to order their customer-specified extruders from North West University's Advanced Manufacturing Centre. These innovative interventions have created about 70 jobs and introduced a number of new products that were not previously available in the market.

Advanced Materials

Advanced materials are those with superior properties such as toughness, hardness, light weight, durability and elasticity; and they can often lead to the design of completely new products. The four major growth areas in the South African advanced-materials industry include titanium, nanotechnology, advanced composites and bio-ceramic applications.

Advanced materials contribute to emerging economies, global competitiveness and innovative productivity. Global competition has led to increased innovation and the use of technologies to produce higher-quality goods and services at lower prices. The ability of companies to remain competitive in this changing global environment requires the integration of new technologies as well as the ability to respond rapidly to economic, social and environmental changes.

Key opportunities

South Africa's advanced materials industry has pockets of excellence in research situated in universities, science centres and manufacturing industry clusters that are internationally competitive. Commercialisation of advanced materials is important, particularly in the following areas: nano-materials; high-performance materials based on advanced bio-composites; other composites: intelligent textiles used in the medical, building and construction industries and continuous fibre-reinforced thermoform composites.

Constraints

- Insufficient engineers working on already developed technologies;
- A small domestic market for the utilisation of advanced materials;
- Slow commercialisation of innovation;
- The vast bulk of R&D and commercialisation work is undertaken by state research institutions and universities, with few industry players participating. This means that they do not benefit from the variety of funding instruments that currently exist, which poses a serious developmental challenge.

Commercialisation entails a range of risks and most industry participants have proven to be rather risk averse, generally opting to work on already commercialised technologies. Strong Government intervention in the area is thus required to offset the significant market failure that has been exposed.

Key Action Programmes

1. Commercialisation of Natural Fibre Reinforced Composites

Nature of the intervention

Advanced materials require equipment to get tested, prototyped and accredited for commercial applications. These composites will be used for aerospace and automotive interiors and building products as well as for bio-degradable packaging material for the export of fruit and other foodstuffs.

Economic rationale

To take advantage of escalating international interest in natural fibre-reinforced composites, driven both by economic and technical considerations and increasing environmental sensitivity. The advantages of bio-composites include: cost and weight reduction potential; reduced environmental footprint and energy required in production; health, safety and cosmetic benefits; and new enterprise development, with job-creation potential for rural communities.

Outcomes

Increased availability of advanced bio-composite prototypes for commercial applications; small-scale production of economical, light, flexible and heat-resistant materials, with competitive environmental and safety applications.

Progress and update

- A Centre of Bio-Competence has been established at the CSIR facility.
- A Bio-composites Inter-departmental Task Team has been established to drive and co-ordinate a bio-composites-related Action Plan.
- A baseline document on advanced materials has been developed, identifying the country's gaps, capabilities and opportunities.
- Funding of R34.8 million from the DST for commercialisation of bio-composites was allocated towards the required R44.1 million in its 2012/13-2014/15 Annual Performance Plan.
- Crop trials will be undertaken by the CSIR as the implementing agency through an agreement with the Agricultural Research Council, focusing initially on the local cultivation of kenaf. Kenaf has been planted in five locations across the country (Rustenburg, Winterton, Bethlehem, Cedara and Makathini).
- A prototype panel for aircraft interiors has passed fire, smoke and toxicity (FST) tests by Airbus. A Phase I panel (natural fibre reinforced) is being subjected to weathering. Further development work is under way to address deformity and moisture absorption issues.

Key milestones

2013/14 Q3:	Identify and evaluate key constraints in funding, interventions and general materialisation of commercialisation and mitigating factors.
2013/14 Q4:	Commission the first phase of an integrated manufacturing demonstration plant to produce prototypes to fast-track the commercialisation of new products.
2013/14 Q4:	Fibre crop cultivation trials and fibre extraction trials towards the establishment of a natural fibre production industry.
2013/14 Q4:	OEM-level testing and/or technology transfer of at least two prototypes (automotive parcel trays and panels for aircraft interior applications) for the construction, aerospace or automotive sectors.

2013/14-2014/15: Undertake two techno-economic studies to assess the viability of new bio-composite products.

Lead departments/agencies: DST and CSIR

Supporting departments/agencies: **the dti**, AISI and TIA, NRF, IDC, DHE and DAFF

Aerospace and Defence

Sector profile

The South African aerospace and defence industry has followed a development path primarily aimed at developing indigenous products and technologies. This has resulted in the creation of a wide scope of capabilities and associated infrastructure required for complete vertical product integration. Entry into the global market and global supply chains has necessitated increased competitiveness and new technologies.

Significant progress has been made by South African firms, which have developed a track record of innovative technical solutions, strong capabilities at the systems and sub-systems-integration level and on-time delivery schedules to global OEMs such as Airbus and Boeing.

The DST is responsible for technology development and **the dti** is responsible for assisting in the commercialisation of technology.

The defence industry covers aerospace, maritime and landward technologies and their associated service and support systems. It comprises more than 100 companies, with an annual turnover estimated to be in excess of R12.5 billion and exports worth more than R6 billion.

It invests roughly R1 billion in technology/R&D annually, and has consistently provided employment for about 15,000 highly skilled engineers, technicians and artisans – many of them contributing to key national projects in space, transportation (including rail safety), mining, construction, power generation and telecommunications.

It has retained and/or developed most of the strong industrial competencies built up during the pre-1990 era, with the following niche technologies to the forefront:

- Electronics systems including: command and control; situational awareness; guidance systems; secure communications; electronic, radar and ICT countermeasures; active and passive self-protection systems; and advanced radar technology.
- Weapon and protection systems for aircraft, ships and landward platforms – of which guided weapons and artillery systems are the most important.
- Military and paramilitary mobility systems for use by defence and police forces, as well as other security sector organisations, including concomitant protection systems.
- Research and Development Institutions and Test Ranges such as Defence, Peace, Safety and Security (DPSS) in the CSIR, the Overberg Flight Test Ranges and the Alkantpan artillery test range – all which are globally competitive institutions.

Key opportunities

The establishment in 2102/13 of the Joint Aerospace Steering Committee (JASC) has provided a first-of-its-kind body for strategic industry interventions in South Africa. The JASC includes representatives of key government departments (**the dti**, DST, DOD, DPE, DoT and NT), industry (AMD and CAASA), and research and development institutions (University representatives and the CSIR).

One of JASC's first initiatives was the approval of an Unmanned Aerial Vehicles/Systems (UAV) flagship project. This will help to significantly close technology gaps in the area and integrate the implementation efforts of the key stakeholders: Government, CSIR, Denel and the wider industry.

Another important intervention, the UAS project, is a five-year project aimed at developing a new generation hand-launched airframe, which will position South Africa more prominently in the global civil and commercial UAS market.

Government or SOCs' acquisition of aircraft and related equipment provides leveraging opportunities to enable local industry and R&D entities to participate in the offset programmes and the revised PPPFA requirements for localisation. These offset opportunities needs to be integrated with the national emphasis on increased localisation mechanisms.

Key constraints

The primary and most significant constraint is the pervasive and persistent insufficiency in the pipeline of skilled personnel to absorb current knowledge and experience.

Other notable constraints in the defence sector are as follows:

- Lack of large development programmes to build technology and skills pipelines and enable knowledge transfer from overseas to local firms, and between the knowledge-generating entities (science councils, universities) and industry. This is also related to a reduction in R&D spend (including technology demonstrators and decreasing capability development and retention.
- Lack of recognition of the defence industry as a sector and its exclusion from Government's developmental projects, incentives and technical support.
- Increased foreign ownership in key strategic technological areas.
- Lack of a comprehensive aerospace and defence industry support programme, including export support, compliance skills, and a 'South Africa First' philosophy, which includes a strong emphasis on localisation of technology.
- Lack of diversification into export markets, increased foreign ownership, reduction in the size of the industry, product diversification (civil and commercial), etc.

The two aerospace interventions – the Aerospace Industry Support Initiative (AISI) and the National Aerospace Centre for Skills Development – have been reviewed and integrated into a single intervention, the Integrated **the dti** Aerospace Programme, designed to optimise current support mechanisms, enhance competitiveness and drive commercialisation initiatives.

Key Action Programme

1. Strengthened co-ordination for the advancement of the aerospace and defence sectors through integrated flagship projects

Nature of the intervention

- Addressing industry-wide constraints as identified via JASC structures.
- Improving co-ordination among the relevant government departments and institutions to maximise efforts in funding flagship projects and support structures, through engagement at national and international levels.

Economic rationale

- To enable the development of new technologies and required skills, strengthen manufacturing capability, increase exports and spill-over effects into related activities and adjacent industries.
- To take advantage of available localisation levers available under the revised Preferential Public Procurement Act and the revised NIPP.

Outcomes

Strengthened co-ordination and maximisation of efforts among relevant government departments and institutions; strengthened position of the aerospace industry as a global player, with a more strongly developed technology and skills pipeline.

Key milestones

2013/14 – 2014/15: Empowering JASC to provide strategic leadership for the Aerospace and Defence sectors through implementation of the identified interventions such as flagship projects, forums and technology stream workgroups.

2013/14 Q3: Identification of constraints and positive interventions for the development of the South African Defence Industry (e.g. removal of non-qualifying guidelines of SADI and possible inclusion in existing incentive programmes).

2013/14 Q4: Update of industry statistics for the aerospace and defence sectors and development of the Defence Industry Strategy.

Lead department/agencies: the dti, DST

Supporting departments/agencies: DOD, DPE, DoT and NT

The Electro-Technical Sector

Electricity Prepayment Meter Manufacturing (EPPMM)

Sector profile

Concerns and opportunities with respect to efficient delivery of universal services in utilities have motivated both firms and regulators to identify technological and regulatory options that can improve access and make it easier for consumers to pay for their services.

Over the past few years, prepayment meters – either in electricity, water or piped gas – have been proposed as an innovative solution aimed at facilitating access and affordability and reducing the cost of utilities. This mechanism essentially requires that users pay for the delivery of goods or services before their consumption – holding credit and then using the service until that credit is exhausted.

The manufacturing of EPPM's consists of assembling electronics components, with other peripherals such as enclosures, display units, keypads and cabling integrated with the engineering design. A possibly unique aspect of the EPPM sector in South Africa is that, unlike most contract manufacturing in the electronics sector, where the IP, design and software development is owned by a multinational, South African EPPM companies do local design, both from a systems and applications point of view.

South Africa is now considered as one of the leaders in this sector, with a global footprint that extends to more than 60 countries.

Size of the Market

The growth of this sector will remain largely dependent on its ability to export into other countries; as things stand, South Africa is a net exporter in this sector and continues to record a large trade surplus.

Between 2008 and 2009, the sector experienced a decline in exports and an increase in its imports, mainly due to the global economic recession. An improvement has been recorded as economies started to recover from the recession, and the sector continues to grow its exports. Employment in the sector also experienced a decline within the period 2008-2010, but has slowly begun to pick up since then.

Gross domestic fixed investment and real output also declined over the same period, picking up again in 2011. Imports have also been increasing – though with a slight decrease in 2011-12.

Companies involved in the manufacturing of electronic devices and components can be categorised as either internal manufacturers or contract manufacturers. Internal manufacturers perform the majority of the manufacturing tasks within their corporate structure. Many small manufacturers in South Africa fall into the category of internal manufacturers, with certain sectors such as battery manufacture exhibiting very high levels of vertical integration. Overall, the country's electronics manufacturing sector is fairly well represented by industry players at each stage of the value chain.

A typical prepayment meter comprises the plastic enclosure, keypads, cabling electronics, electronic circuitry, PCB's (multi-layer or double sided boards, depending on complexity of circuitry) and LCD display.

Opportunities

The best opportunities lie in the upcoming projects of the DOE aiming at ensuring the installation of mass household smart metering and the procurement of EPPMs by public sector institutions. The EPPM industry can respond to these openings by using its strong base across a value chain that spreads from engineering design to IP, manufacture, system interoperability and software development. Increased local investment into the sector will strengthen the existing EPPM manufacturing base and has the potential to create significant numbers of new, sustainable jobs.

Constraints

- EPPMs are regulated through procurement requirements set out by utilities and other SOCs. Typical considerations will include, among other things, the SABS mark and price being used as the defining factor. At the moment the need for locally produced products is not explicit – sometimes not even a requirement – thus allowing for cheap imported (and often non-compliant) products to be specified and eventually used by consumers.
- SABS lacks capacity to test fully up to the requirements of the latest specification for EPPMs. Upgrading or procurement of new testing equipment by SABS to keep up with technological advances within the sector has been minimal; in order to achieve 100% compliance with the current technical specification, tests are having to be undertaken using overseas testing facilities.
- The above situation increases the cost of the end-product and compromises local manufacturers, thus directly affecting job creation and retention in the sector, and across electronics manufacturing as a whole.
- The threat to local companies posed by imported EPPMs gaining traction in the South African market.

Key Action Programmes

1. Localisation of manufacturing of EPPMs through Designation within the Preferential Procurement Policy Framework (PPPFA)

Nature of the intervention

The objective is to leverage public procurement through the designation of PPMs. This will be key to ensuring the sustainability of existing infrastructure, creating an environment that attracts new manufacturers into the sector and retaining local IP within the borders of the country.

The following activities in particular show good potential for local development:

a) Technical and engineering design governing the functioning of the EPPM;
b) Enclosures;
c) Power points and connection cables;
d) Software development for display units and token/credit calculations; and
e) General meter management systems.

Economic Rationale

- To increase South Africa's excellence in software engineering, design, EPPM manufacturing and technical skills;
- To stay cost-competitive against imported products;
- To remain and become increasingly competitive globally.

Outcome

A designated EPPM industry, as part of an increasingly world-class electronics industry

Key milestones

2013/14 Q3: Designation of the EPPM industry in line with the revised PPPFA.

Lead and supporting departments/agencies: the dti, IDC, DOC, DST

2. Restructuring of Trade Interventions

Nature of the Intervention

Currently, EPPMs compete directly with imported products and are permitted into the country duty-free – while at the same time many of the electronic components used in the local manufacture of EPPMs attract duties. For this and other reasons, imported EPPMs are often much cheaper and, though inferior in terms of quality, safety and reliability, undermine the competitiveness and long-term viability of the local industry. This is an anomaly that needs to addressed with some urgency.

Economic rationale

The primary aim of the imposition of duties is to provide a reasonable level of protection for local manufacturers and create greater equity in the market. The secondary aim is to provide encouragement for the establishment of new facilities locally that would ordinarily import products. Taken together, these measures will greatly help to deter the importation of cheap, sub-standard EPPMs, particularly by SOCs and other public entities.

Opportunities exist for job creation and retention in different parts of the supply chain and more jobs will be created as EPPM distribution volumes rise, as well as in the after-sales service of maintenance and repair. There is also the added benefit of potentially attracting more companies to setup new manufacturing plants in South Africa.

Outcomes

- Growth of the local industry and strengthened local manufacturing; and
- Improved competitiveness of local products.

Key milestones

2013/14 Q1: Agreement between **the dti**, ITAC, SARS and the industry on the proposal to impose duties at an appropriate rate.

2013/14: Decision to institute duties on all imported EPPMs taken by the ITAC.

2014/15 Q1: Reduction of duties on imported electronic components used in the local manufacturing of EPPMs.

Lead and supporting departments/agencies: the dti, Advanced Manufacturing (Electro-technical), ITAC and SARS

The South African Software Industry

South Africa's software development industry is relatively young and fragile. Its future viability has not been helped by decisions taken by sectors such as banking, insurance and telecommunications to outsource their software development projects and services to destinations such as India and China. This has the potential to destroy thousands of existing jobs and to negatively impact on South Africa's future ability to develop software locally.

Key opportunities

South Africa's ability to produce computer software is an important strategic priority. If software developers in South Africa are able to successfully compete globally, there is a significant potential to service the local market and grow exports of software products and services to destinations such as Europe, North America, Asia and Sub-Saharan Africa.

While price and other factors may be important, the primary reason for a customer to select a specific supplier is the ability of that supplier to deliver, on time and within budget, a high-quality software product that meets all the functional requirements. Competition in the global software development industry is largely focused on these issues. If they are comprehensively addressed, it will go a long way towards meeting local demand for software products and creating employment opportunities.

Key constraints

- The high cost of funding for certification and the time taken to complete the certification process.
- Limited awareness in the domestic market of the importance of certification and low levels of technical know-how on certification.
- Limited availability of information on software development companies and their capabilities in both local and international markets.
- Many software developers are not export-ready.
- Scepticism in the industry towards the effectiveness of the role that Government can play in supporting and developing the industry.

Key Action Programme

1. Software Development Process Improvement Programme

Nature of the intervention

To improve the quality of South African software through process improvement training – using Capability Maturity Model Integration (CMMI) and Team Software Process (TSP) methods – and through better alignment of product development with domestic and global requirements. Ensure participation of unemployed graduates as part of skills development and capacity-building for improved performance.

Economic rationale

Raise awareness of the importance of quality systems certification, improve the quality of South African software companies, support the take-up of internationally recognised quality system certification for software developers in South Africa. A Memorandum of Agreement has been signed with the appointed implementing agency and funds have been secured through the Employment Creation Fund. Agreement has been reached on the selection criteria for participating entities within regional IT clusters and an Operations Manual and curriculum have been developed for use in the initial pilot project.

Outcomes

This initiative will enhance the competitiveness of local South African software companies and create a significant breakthrough in market access for local software developers. It will result in large-scale absorption of high-skilled employees.

Milestones

2013/14 Q1: Agreement on the selection criteria for participating entities within Regional IT clusters. Operations Manual and curriculum ready for use for the pilot project. Two Software Development entities (one in Gauteng and one in Western Cape) identified and participating in the process improvement programme.

2013/2014 Q2: Two additional software development entities participating in the process improvement programme (one in KwaZulu-Natal, one additional unit in Gauteng). Baseline performance measurements conducted at all four units.

2013/2014 Q3: Agreement on alignment of the South African Electro-technical Export Council mandate, EMIA and the Joint Action Group for the Software Industry to support export-ready companies. Performance of the first four software development entities reviewed and refinements made to the Operations Manual and training curriculum.

2013/2014 Q4: Four additional software development entities identified and participating in the process improvement programme.

2014/2015 Q1: Establish an Advisory Council, comprising Government and private sector, to oversee the roll-out.

2014/2015 Q3: Further review of performance of all software development entities and further refinements to the Operations Manual and training curriculum. Add four more software development entities in 2015/2016 as part of the roll-out.

Lead departments: the dti and JCSE

ABBREVIATIONS AND ACRONYMS

ABC	Aerial Bundled Conductor
AECMSA	Association of Electric Cable Manufacturers of South Africa
AIDC	Automotive Industry Development Centre
AIDS	Acquired Immune Deficiency Syndrome
AIS	Automotive Investment Scheme
APDP	Automotive Production and Development Programme
API	Active Pharmaceutical Ingredients
ART	Antiretroviral Treatment
ARV	Anti retrovirals
AsgiSA	Accelerated and Shared Growth Initiative for South Africa
ATF	Aluminium Trifluoride
B-BBEE	Broad Based Black Economic Empowerment
BNDES	Brazil's Banco Nacional de Desenvolvimento Econômico e Social
BPS	Business Process Services
BTX	Benzene, Toluene and Xylene
CAV	Centurion Aerospace Village
CDM	Clean Development Mechanism
CEF	Central Energy Fund
CIACM	Competitiveness Improvement of Automotive Component Manufactures
CIPRO	Companies and Intellectual Property Registration Office
CKD	Completely Knock Down
CMMI	Capability Maturity Model Integration
CMT	Cut, Make and Trim
COC	Centre of Competence
CSA	Corrugated Seamless Aluminium
CRM	Customer Relations Management
CSDP	Competitive Supplier Development Programme
CSID	Corporate Strategies and Industrial Development
CSIR	Council for Scientific and Industrial Research
CSP	Customised Sector Programme
CTS	Concentrated Thermal Solar
CTCP	Clothing and Textiles Competitiveness Programme
CTFL	Clothing Textiles, Leather and Footwear
DAC	Department of Arts and Culture
DAFF	Department of Agriculture, Forestry and Fisheries
DBSA	Development Bank of Southern Africa
DFIs	Development Finance Institutions
DG	Director General
DIRCO	Department of International Relations and Cooperation
DMR	Department of Mineral Resources
DoC	Department of Communications
DOD	Department of Defence
DoE	Department of Energy
DoH	Department of Health
DHET	Department of Higher Education and Training
DoJ	Department of Justice
DoL	Department of Labour
DoT	Department of Transport
DPE	Department of Public Enterprises
DPW	Department of Public Works
DST	Department of Science and Technology
the dti	The Department of Trade and Industry
DTT	Digital Terrestrial Television
DWEA	Department of Water and Environmental Affairs
EC	Eastern Cape

EE	Energy Efficiency
EDD	Economic Development Department
EIA	Environment Impact Assessment
EIP	Enterprise Investment Programme
EMIA	Export Marketing and Investment Assistance
EPI	Extended Programme of Immunisation
ERA	Enterprise Reference Architecture
ESKOM	Electricity Supply Commission
EU	European Union
EV	Electric Vehicle
FET	Further Education and Training
FIETA	Forest Industries Education and Training Authority
FPM	Fibre Processing and Manufacturing
FRIDGE	Fund for Research into Industrial Development Growth and Equity
FSA	Food Safety Agency
FSA	Forestry South Africa
FTPP	Forestry, Timber, Pulp and Paper
GDP	Gross Domestic Product
GHS	Globally Harmonised System
GFCF	Gross Fixed Capital Formation
GW	Gigawatt
GWH	Gigawatt Hour
ha	hectares
HF	Hydrogen Fluoride
HIV	Human Immune Virus
HRD	Human Resource Development
HS	Harmonised System
ICT	Information Communication Technologies
IDC	Industrial Development Corporation
IDZ	Industrial Development Zone
IEE	Industrial Energy Efficiency
IFPI	International Federation of the Phonographic Industry
IPAP	Industrial Policy Action Plan
IRP	Integrated Resource Plan
ITAC	International Trade Administration Commission
ITED	International Trade and Economic Development
JASC	Joint Aerospace Steering Committee
JV	Joint Venture
KAP	Key Action Programme
KDB	Korean Development Bank
KZN	KwaZulu-Natal
LSOH	Low Smoke Zero Halogen
m	metres
MACC	Mobilisation, Alignment, Capacity Building and Cooperation
MCEP	Manufacturing Competitiveness Enhancement Programme
MerSETA	Manufacturing, Engineering and Related Services SETA
MHCV	Medium and Heavy Commercial Vehicles
MIDP	Motor Industry Development Programme
MNC	Multi-National Corporations
MOA	Memorandum of Agreement
MoU	Memorandum of Understanding
MTBPS	Medium Term Budget Policy Statement
MTBS	Medium Term Budget Statement
MTIDC	Malawi-Tanzania Industrial Development Cluster
MW	Megawatt
NAAMSA	National Association of Automobile Manufacturers of South Africa
NADP	National Artisan Development Programme
NAMC	National Agricultural Marketing Council

NQF	National Qualification Framework
NCSDP	National Craft Sector Development Programme
NCPC	National Cleaner Production Centre
NDT	National Department of Tourism
NECSA	South African Nuclear Energy Corporation
NEDLAC	National Economic Development and Labour Council
NEF	National Empowerment Fund
NERSA	National Energy Regulator of South Africa
NFVF	National Film and Video Foundation
NGP	New Growth Path
NIPF	National Industrial Policy Framework
NIPP	National Industrial Participation Programme
NLA	National Laboratory Association
NMISA	National Metrology Institute of South Africa
NNR	National Nuclear Regulator
NPA	National Prosecuting Authority
NRCS	National Regulator for Compulsory Specification
NSDS	National Skills Development Strategy
NSF	National Skills Fund
NSSS	Nuclear Steam Supply System
NT	National Treasury
NTB	Non-Tariff Barriers
NFTN	National Foundry Technology Network
NTI	National Tooling Initiative
NTP	Nuclear Technology Products
ODA	Official Development Assistance
OEMs	Original Equipment Manufactures
PBMR	Pebble Bed Modular Reactor
PFMA	Public Finance Management Act
PGM	Platinum Group Minerals
PGWC	Provincial Government of the Western Cape
PI	Production Incentive
PILC	Paper Insulated Lead Covered
PPA	Power Purchase Agreement
PPP	Public Private Partnership
PPPFA	Preferential Procurement Policy Framework Act
PRASA	Passenger Rail Agency of South Africa
PSA	Proudly South African
PV	Photovoltaic
REFIT	Renewable Energy Feed in Tariff
REIPP	Renewable Energy Independent Power Producers
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
RFP	Request for Proposals
RIBS	Rigid Inflatable Boats
ROV	Remotely Operated Undersea Vehicles
RPL	Recognition of Learning
RPO	Radiation Protection Officers
R&D	Research and Development
RSDIP	Regional Spatial Development Initiatives Programme
QCTO	Quality Council for Trades and Occupations
SA	South Africa
SaaS	Software as a Service
SAA	South African Airways
SABC	South African Broadcasting Corporation
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SAFVCA	South African Fruit and Vegetable Canning Association

SAHC	South African Handmade Collection
SANs	South African National Standards
SANAS	South African National Accreditation System
SAOGA	South African Oil and Gas Alliance
SAOSO	South African Organics Sector Organisation
SAPS	South African Police Services
SARS	South African Revenue Services
SARi	South African Renewables Initiative
SAT	South African Tourism
SATS	South African Technical Standard
SDI	Spatial Development Initiatives
SDP	Supplier Development Plans
SANAS	South African National Accreditation System
SEDA	Small Enterprise Development Agency
SETA	Skills Education and Training Authorities
SEZ	Special Economic Zones
SKD	Semi Knock Down
SME	Small and Medium Enterprises
SMME	Small Medium and Micro Enterprises
SOC	State-Owned Company
SOC-ATD-TT	State-Owned Companies' Artisan Development Task Team
SPS	Sanitary and Phyto-sanitary Standards
SPX	Sequenced Packet Exchange
SQAM	Standards, Quality Assurance and Metrology
SSAS	Sector Specific Assistant Scheme
SSP	Sector Skills Plans
STB	Set Top Box
SWH	Solar Water Heaters
SWOT	Strength, Weakness, Opportunity and Threats
TBT	Technical Barriers to Trade
TEO	The Enterprise Organisation
T/G	Turbine Generator
TISA	Trade and Investment South Africa
TPA	Tonnes Per Annum
TNPA	The National Ports Authority
TSP	Team Software Process
TV	Television
TVC	Technology Venture Capital
UNIDO	United Nations Industrial Development Organisation
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
VAT	Value Added Tax
WC	Western Cape
WTO	World Trade Organisation