Provincial and Local Government Conference
A summary of the Infrastructure Plan

Friday, 13 April 2012
Part 1: The Journey
Introduction

Government recently adopted an Infrastructure Plan that is intended to transform the economic landscape of South Africa, create a significant numbers of new jobs, strengthen the delivery of basic services to the people of South Africa and support the integration of African economies.

This document is a high-level summary of information contained in the Infrastructure Plan.

It sets out the challenges and enablers which South Africa needs to respond to in the building and developing of infrastructure.

It provides the background to Cabinet’s decision to establish a body to integrate and coordinate the long term infrastructure build, namely the Presidential Infrastructure Coordinating Commission (PICC) with its supporting management structures.

It reports on the PICC’s work to assess the infrastructure gaps through spatial mapping which analyses future population growth, projected economic growth and areas of the country which are not served with water, electricity, roads, sanitation and communication. Based on this work, seventeen Strategic Integrated Projects (SIPs) have been developed and approved to support economic development and address service delivery in the poorest provinces.

Each SIP comprise of a large number of specific infrastructure components and programmes.

This summary document notes the work done to date on creating an enabling environment and contains key elements of the Implementation Plan.
Background

Challenges

• The New Growth Path sets a goal of 5 million new jobs by 2020; identifies structural problems in the economy to be overcome and points to opportunities in specific sectors and markets (“jobs drivers”)
• The 1st jobs driver is infrastructure: laying the basis for higher growth, inclusivity and job creation
• However, the pace of infrastructure development and spending on infrastructure is projected to fall from 9,1% of GDP currently to 8,1% of GDP (2013)
• Blockages include weak implementation capacity in parts of the state (with unspent monies) and poor project development planning
• Projects are not always strategic, integrated or aligned with national priorities
• Poor co-ordination slows projects and limits their impact

Response by Government

• Establish a structure to address the challenges through coordination, integration and accelerated implementation: the Presidential Infrastructure Coordinating Commission (PICC)
• Develop a single common Infrastructure Plan that will be monitored and centrally driven
• Identify who is responsible and hold them to account
• Develop a twenty-year planning framework beyond one administration to avoid stop-start patterns
PICC Terms of reference

PICC’s mandate is to ensure systematic selection, planning and monitoring of large projects and its Terms Of Reference include the objectives outlined below

- Identify 5 year priorities
- Develop 20 year project pipeline
- Development Objectives: skills, localisation, empowerment, research & development
- Expand maintenance: new and existing infrastructure
- Improve infrastructure links: rural areas and poorest provinces
- Address capacity constraints and improve coordination and integration
- Scale up investment in infrastructure
- Address impact of prices
- Support African development and integration

Infrastructure is critical to:

- Promote balanced economic development
- Unlock economic opportunities
- Promote mineral extraction and beneficiation
- Address socio-economic needs
- Promote job creation
- Help integrate human settlements and economic development

Overall approach

- An Infrastructure Book has been compiled, which contains more than 645 infrastructure projects across the country
- An Infrastructure Plan with identified Strategic Integrated Projects (SIPs) has been developed and adopted by Cabinet and the PICC
Part 2: Spatial Mapping
PICC undertook a “mapping exercise” to identify infrastructure gaps, population movement and economic performance and placed these in a spatial framework in order to develop the required Strategic Integrated Projects.

The next section summarises 4 of the 20 mapping exercises performed and sets out the key ‘corridors’ of infrastructure development and provides an overview of the SIPs.
Analysis of population distribution & density, combined with limited access to basic services and transport resulting in the movement of people to economic hubs in the country.


- Population (2010)
- Combined Area with limited access to services

The picture for access to services could be similar for a province and a municipality.
Projected economic growth based on existing infrastructure which points to key opportunities to intervene in the location of future infrastructure to support balanced and strong economic development.

Relative Change GVA 2010 & 2020

- Provincial GVA (2010)
- Projected Provincial GVA (2020)

Forecasted relative % growth 2010 to 2020 if no changes are made:

- 1.007 - 1.462
- 1.463 - 1.490
- 1.490 - 1.506
- 1.508 - 1.541
- 1.541 - 1.766

(darker colors high relative growth)
Needs analysis of infrastructure to support economic development and trade whilst simultaneously addressing the needs of the poor

- **Needs analysis**
  - Indicated possible bulk infrastructure requirements – electricity, water, transport, town planning, ports etc.
Overview of the Strategic Integrated Projects

1. Catalytic
   - Unlocking Northern mineral belt
   - Durban-Free State-Gauteng Corridor Development
   - South Eastern Node & Corridor Development
   - Saldanha-Northern Cape Corridor Development

2. Enabling socio-economic
   - Greening the South African economy
   - Electricity Generation
   - Electricity Transmission and Distribution
   - Integrated Municipal Infrastructure
   - Integrated Urban Space and Public Transport
   - Agro-logistics and rural Infrastructure
   - Regional Integration

3. Crosscutting
   - Access to communication technology, SKA and MeerKat
   - National school build
   - Higher Education
   - Revitalisation of public hospitals
   - Unlocking the economic opportunities in North West Province
Part 3:  The 17 Strategic Integrated Projects (SIPs)
From the spatial analysis of the country needs, 17 Strategic Integrated Projects (SIPs) have been identified.

The SIPs cover a range of economic and social infrastructure.

All nine provinces are covered, with emphasis on poorer provinces.

The work is now being aligned with human settlement planning and with skills development, as key cross-cutting areas.

The following section summarises the key features of the Strategic Integrated Projects. More detailed information will be provided at the SIP-specific Inter-Governmental Forums.
**Geographic SIPS**

**SIP 1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst**

Investment in rail, water pipelines, energy generation and transmission infrastructure will catalyse unlocking of rich mineral resources in Limpopo resulting in thousands of direct jobs across the areas covered. Urban development in the Waterberg will be the first major post-apartheid new urban centre and will be a “green” development project.

Mining includes coal, platinum and other minerals for local use and export, hence the rail capacity is being extended to Mpumalanga power stations and for export principally via Richards Bay and in future Maputo (via Swaziland link). The additional rail capacity will shift coal from road to rail in Mpumalanga with positive environmental and social benefits. Supportive logistics corridors will help to strengthen Mpumalanga’s economic development.

**SIP 2: Durban- Free State– Gauteng Logistics and Industrial Corridor**

Strengthen the logistics and transport corridor between SA’s main industrial hubs; improve access to Durban’s export and import facilities, raise efficiency along the corridor and integrate the Free State Industrial Strategy activities into the corridor and integrate the currently disconnected industrial and logistics activities as well as marginalised rural production centres surrounding the corridor that are currently isolated from the main logistics system.
Geographic SIPS

SIP 3: South Eastern node & corridor development
Promote rural development through a new dam at Umzimvubu with irrigation systems and the N2- Wildcoast Highway which improves access into KZN and national supply chains; strengthen economic development in PE through a manganese rail capacity from N Cape, a manganese sinter (NC) and smelter (EC); possible Mthombo refinery (Coega) and transshipment hub at Ngqura and port and rail upgrades to improve industrial capacity and performance of the automotive sector.

SIP 4: Unlocking the economic opportunities in North West Province
The acceleration of identified investments in roads, rail, bulk water and water treatment and transmission infrastructure will result in reliable supply, meet basic social needs and facilitate the further development of mining, agricultural activities and tourism opportunities and open up beneficiation opportunities in the North West Province.

SIP 5: Saldanha-Northern Cape Development Corridor
Develop the Saldanha-Northern Cape linked region in an integrated manner through rail and port expansion, back-of-port industrial capacity (which may include an IDZ) and strengthening maritime support capacity to create economic opportunities from the gas and oil activities along the African West Coast. For the Northern Cape, expansion of iron ore mining production.
Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the IPR2010 and to support biofuel production facilities.

Accelerate the construction of new electricity generation capacity in accordance with the IRP2010 to meet the needs of the economy and address historical imbalances.

Expand the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development.

Align the 10-year transmission plan, the services backlog, the national broadband roll-out and the freight rail line development to leverage off regulatory approvals, supply chain and project development capacity.
SIP 6: Integrated Municipal Infrastructure Project

Develop a national capacity to assist the 23 least resourced districts (17 million people) to address all the maintenance backlogs and upgrades required in water, electricity and sanitation bulk infrastructure. The road maintenance programme will enhance the service delivery capacity thereby impact positively on the population.

SIP 7: Integrated Urban Space and Public Transport Programme

Coordinate planning and implementation of public transport, human settlement, economic and social infrastructure and location decisions into sustainable urban settlements connected by densified transport corridors.

SIP 11: Agri-logistics and rural infrastructure

Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural colleges), processing facilities (abattoirs, dairy infrastructure), aquaculture incubation schemes and rural tourism infrastructure.
Social Infrastructure  SIPS

SIP 12: Revitalisation of public hospitals and other health facilities

Build and refurbish hospitals, other public health facilities and revamp 122 nursing colleges. Extensive capital expenditure to prepare the public health care system to meet the further requirements of the National Health Insurance (NHI).

SIP 13: National school build programme

A national school build programme driven by uniformity in planning, procurement, contract management & provision of basic services. Replace inappropriate school structures and address basic service backlog & provision of basic services under the Accelerated School Infrastructure Delivery Initiative (ASIDI). In addition address national backlogs in classrooms, libraries, computer labs and admin buildings. Improving the learning environment will go a long way in improving outcomes especially in the rural schools as well as reduce overcrowding.

SIP 14: Higher Education Infrastructure

Infrastructure development for higher education focusing on lecture rooms, student accommodation, libraries and laboratories as well as ICT connectivity. Development of university towns with combination of facilities from residence, retail and recreation & transport. Potential to ensure shared infrastructure such as libraries by universities, FETs & other educational institutions.
SKA is a global mega science project, building an advanced radio-telescope facility linked to research infrastructure and high speed ICT capacity & provides an opportunity for Africa and South Africa to contribute towards advance science.

SIP 15: Expanding access to communication technology

Provide for 100% broadband coverage to all households by 2020 by establishing core Points of Presence (POP’s) in district municipalities, extend new Infraco fibre networks across provinces linking districts, establish POP’s and fibre connectivity at local level, and further penetrate the network into deep rural areas.

While the private sector will invest in ICT infrastructure for urban and corporate networks, government will co-invest for township and rural access as well as for e-government, school and health connectivity.

The school rollout focus initially on the 125 Dinaledii (science and math focussed) schools and 1525 district schools. Part of digital access to all South Africans includes TV migration nationally from analogue to digital broadcasting.
Regional SIPS

SIP 17: Regional Integration for African cooperation and development

Participate in mutually beneficial infrastructure projects to unlock long term socio-economic benefits by partnering with fast growing African economies with projected growth ranging between 3% and 10%.

The projects involving transport, water and energy also provide competitively priced diversified, short, medium to long term options for the South African economy where for example, electricity transmission in Mozambique (Cesul) could assist in provided cheap, clean hydro power in the short term whilst Grand Inga in the DRC is long term.

All these projects complement the Free Trade Area (FTA) to create a market of 600 million people in South, Central and East Africa.
Part 4: Creating and maintaining an enabling environment
Introduction

In order to implement the SIPs the PICC reviewed critical enablers for the infrastructure programme.

This included assessing the supply lines for construction inputs such as wood, cement, steel and bitumen as well as carefully reviewing issues which impact the cost of infrastructure such as port charges and water pricing. In the case of transport, the expansion of rail lines has now been accompanied by an increased number of trains to fully utilise the infrastructure. In the health sector the PICC supported the establishment of a pharmaceutical manufacturing plant to complement the expansion of clinic and hospital infrastructure.

In addition to assessing key constraints, issues such as delayed access to land, skills constraints in the country and the affordability of the cost of the SIPs were reviewed.

The PICC studied the positive and negative lessons learnt from past challenges and assessed how these would be mitigated.
## Enablers

<table>
<thead>
<tr>
<th>Enabler</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major existing strategic projects</td>
<td>Oversight to ensure development impact of existing mega-projects such as Eskom’s Kusile, Medupi and Ingula power-stations</td>
</tr>
<tr>
<td>Construction environment</td>
<td>Address supply and competition bottlenecks in steel manufacturing, including through new capacity</td>
</tr>
<tr>
<td>Transport sector</td>
<td>Purchase and upgrade rolling stock for freight and passenger rail. Reduce port charges by R1bn during 2012/13</td>
</tr>
<tr>
<td>Health sector</td>
<td>Ensure support for setting up of a SA pharmaceutical manufacturing plant</td>
</tr>
<tr>
<td>Water sector</td>
<td>Review water use rights, water allocation reform, water build programmes and address water pricing</td>
</tr>
<tr>
<td>Rural Access</td>
<td>Use the Post Office network to establish a Postbank with outreach in rural areas</td>
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Funding

Costing exercise

- Initial costing of all 17 SIPSs has been done – these are being review, stress-tested and refined

Known benefits to SA by investing in infrastructure and basic services backlog

- Jobs
- Significant increase in tax base and tax revenues
- Infrastructure projects and economic activity attracts foreign direct investment
- Increase in exports and trade
- Improved quality of life for all citizens
- Address the backlog in basic services

Considerations to be taken into account of in devising appropriate funding strategies

- Funding strategies will take account of off balance sheet mechanisms to attract private sector equity, debt and participation
- Assess the capacity of domestic and international financial markets to fund the amount required
- Assess the capacity of Government to provide the guarantees, loans or equity in support of infrastructure build where tariff income is insufficient to support the SOEs balance sheets
- Consider the ability of SA and SOEs to attract foreign debt and equity funding (country limits, return versus risk, country risk)
- Opportunities exist for innovative funding including accessing retirement funding as equity in infrastructure projects
- PPPs should transfer equitable risk to private sector appropriately
Employment

Jobs impact estimates done that include new jobs in

• Construction
• Operation
• Maintenance
• Multiplier effect of infrastructure spending
• Components and supplies to infrastructure build programmes
• Unlocking investment in other sectors which depend on reliable infrastructure (e.g. mining)

Key areas for youth inclusion

• Very high levels of youth unemployment require special and focussed measures to draw young people into employment in the infrastructure programme.
• Youth inclusion:
  • As trainees and apprentices, with an indicative ratio of trainees to qualified artisans and engineers
  • As employees in the SOEs and private contractors, with clear targets for each contract

This will be done through the following mechanisms:

• Government should amend existing shareholder compacts to require SOEs and public entities involved in infrastructure to give effect to this goal
• Terms should be set out in the tender specifications and project design for the private sector
Land - real example of the challenge experienced in gaining access to land for infrastructure build today

EIA, appeals and expropriation can take up to 6.5 years
Skills capacity: results from current survey in public sector

Engineers

- The main requirement will be for engineering professionals (engineers, technologists and technicians) and project managers.
- **22,953** engineers registered with ESCSA
- The most comprehensive database of civil engineers was completed in 2005 and showed there were approximately 15 000 civil engineers, technologists and technicians in SA, with the state accounting for about 20% of the total (and 15% of civil engineers)
- Initial results from a survey in the public sector is set out below

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number of Engineers</th>
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</thead>
<tbody>
<tr>
<td>Water Boards/TCTA</td>
<td>167</td>
</tr>
<tr>
<td>Ekurhuleni municipality</td>
<td>15</td>
</tr>
<tr>
<td>Tshwane Municipality</td>
<td>29</td>
</tr>
<tr>
<td>Ethekwini Municipality</td>
<td>120</td>
</tr>
<tr>
<td>Nelson Mandela</td>
<td>151</td>
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<tr>
<td>City of Joburg</td>
<td>211</td>
</tr>
<tr>
<td>City of Cape Town</td>
<td>348</td>
</tr>
<tr>
<td>DBSA</td>
<td>130</td>
</tr>
<tr>
<td>SAA</td>
<td>79</td>
</tr>
<tr>
<td>DWA</td>
<td>85</td>
</tr>
<tr>
<td>Transnet</td>
<td>408</td>
</tr>
<tr>
<td>Denel</td>
<td>424</td>
</tr>
<tr>
<td>Eskom</td>
<td>3,348</td>
</tr>
</tbody>
</table>

**Provisional list of engineers in the public sector excluding SANDF**

Total: 5,515
DATABASE FROM A SELECT NUMBER OF ENTITIES

• 7,173 artisans (3,468 Eskom, 1,900 Denel, 117 DWA, 200 Nelson Mandela, 551 City of Jo’burg, 472 City of Cape Town, 337 from Water Boards)
• 6,132 technicians (4,074 Eskom, 1,731 SAA, 235 DWA, 36 Tshwane, 56 Ekurhuleni)
• 1,359, project planners & managers (1,109, Eskom, 12 Nelson Mandela, 83 DBSA, 77, City of Jo’burg, 64, City of Cape Town, 14, Water Boards.)
• 713 Financial managers (642 City of Jo’burg, 54 City of Cape Town,16 Water Boards)
• 182 Procurement Specialists (15 DBSA, 119 City of Jo’burg, 45 Water Boards)
• 131 technologists (16 DWA, 89 Tshwane, 8 Ekurhuleni, 18 Water boards)
Improving performance on infrastructure projects

- Poor planning at institutional level
- Slow approval of projects
- Late start to projects
- Poor quality of execution
- High costs and monopoly pricing
- Poor industry reaction time
- Poor project controls (schedule, cost, quality, safety, health and environment)
- Tender abuses and corruption
- Unrealistic acceleration
- Unplanned and costly rework of designs or construction
- No political alignment with no champion
- Permitting (e.g. EIA) rework or delays
- Lead time delays
- Slow or non-payment of contractors

Improve by

- Programme to co-ordinate improvement in project related skills, with project management and engineering skills inside the state
- Align the National, Provincial and Local structures
- Align the investment plan with funding allocation
- Long term support for long term projects, especially Regional projects
- Predictable process for triggering of national projects including regulatory approvals
- Strong policy direction for incentivisation of supplier development, localisation and private sector participation
- Plan and build projects that promotes low life cycle costs
- Standardised designs and delivery
- Full life cycle costs recovered through user tariff or a committed funding strategy
- Strengthening project controls and monitoring in government departments and state owned enterprises
- Standardised and simple automated reporting to track project progress and performance
- Early warning to address bottlenecks
Planning and policy co-ordination and strengthening delivery towards project and economic success

**COUNTRY LEVEL CO-ORDINATION**

<table>
<thead>
<tr>
<th><strong>National Infrastructure Co-ordinating Office to service the PICC work</strong></th>
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<tbody>
<tr>
<td>1. Co-ordinates the maintenance of the country infrastructure book and aligning the investment plan with funding allocation</td>
</tr>
<tr>
<td>2. Co-ordinates the streamlining of regulatory approvals (including timeous triggering of national projects and embedding user tariff principle)</td>
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<tr>
<td>3. Co-ordinates and aligns efforts between national, provincial and local structures</td>
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<tr>
<td>4. Co-ordinates incentives and policies for supplier development and localisation</td>
</tr>
<tr>
<td>5. Capacitates NICO with the appropriate and affordable capacity (skills, funding, regulatory approvals)</td>
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<thead>
<tr>
<th><strong>National Infrastructure Co-ordinating Office</strong></th>
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<tbody>
<tr>
<td>1. Governs and prescribes project offices setup, processes, systems &amp; tools for project planning</td>
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<tr>
<td>2. Monitors and reports on project planning and implementation progress for all SIP’s to PICC</td>
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<tr>
<td>3. Standardises asset maintenance and management systems</td>
</tr>
<tr>
<td>4. Undertakes infrastructure delivery inspections to ensure compliance with national standards</td>
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<table>
<thead>
<tr>
<th><strong>National Infrastructure Co-ordinating Office</strong></th>
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<tbody>
<tr>
<td>1. Monitors adherence to performance compacts to ensure that assets are operated and maintained effectively over their life cycle</td>
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**Identify**

**Implement with controls**

**Monitor**
Part 5: Implementation Plan
Implementation Framework

Cabinet and the PICC reviewed and approved an extensive implementation framework.

It sets out a Plan for 2012/13 for each SIP, covering
- Construction that will take place in 2012/13, based on existing funding
- Regulatory processes to be completed
- Specific decisions required to enable the development of the projects or progress the construction of infrastructure in 2012/13
- A full 5-year implementation Plan is being developed

In order to drive the integration of projects and speed up implementation, the PICC agreed to:
- Integration of existing, approved Projects within the new PICC framework
- Strengthen the funding framework and mechanisms to ensure adequate resources and work towards the Infrastructure Investment Conference
- Social dialogue to obtain commitments from the private sector and organised labour
- Improved coordination and cutting red-tape, including through the Infrastructure Development Bill
- Development of an Infrastructure Skills Plan
Implementation Framework

In order to drive the integration of projects and speed up implementation, the PICC agreed to (cont.):

• Development of a Supply-side Plan (materials and equipment)
• Cost-containment and anti-corruption measures
• A single planning tool and dashboard across all SIPs
• Strengthened capacity in the PICC and in the state as a whole

The implementation steps in 2012 now include:

• Interim teams to be appointed in each SIP
• Project Offices to be set up at SIP level
• Inter-Governmental Forums to be convened in all 17 SIPs
• Delivery performance compacts to be signed by public entities to specify who will do what, by when, with what resources
• Development impact plans to be drafted for each SIP, covering greening of economy, localisation, skills development, empowerment and R&D
• Road-maps for the next 5 years is being developed for each SIP
• A standard template for all SIP and Project Business Plans is being developed, with a project life cycle model
• A database of existing teams (by skills level) working in each project to be completed
Empowering a Nation, Triggering Development

• The infrastructure plan is a bold effort to transform the economy, laying the basis for growth and jobs

• The Plan is an opportunity to mobilise the nation behind a common vision and requires partnerships with business and labour

• Aimed at promoting:
  • re-industrialisation through manufacturing of inputs, components and machinery
  • skills development aimed at critical categories
  • greening the economy
  • empowerment