



THE VOICE OF CONSULTING ENGINEERS

## CESA MESSAGE

Sustaining Consulting  
Engineering is Key to  
Growing the Economy

**Abe Thela**  
**07 August 2014**

- ✓ 2013 theme “Sustainability is Everyone’s Business”
- ✓ **Sustainability Indicators:** education, economic and political certainty, job creation, eradication of corruption, and responsible development
- ✓ CESA Sustainability Guideline Document and Reporting Process Checklist
- ✓ CESA Code of Conduct
  - Quality Management System (QMS)
  - Business Integrity Management System (BIMS)

## **“Sustaining Consulting Engineering is Key to Growing the Economy”**

Creation of an environment for implementation of NDP and practice of consulting engineering

- ✓ SA Socio – Economic Context
- ✓ National Development Plan
- ✓ Role of Consulting Engineering in the NDP
- ✓ What should Government be doing differently?
- ✓ Conclusion

- ✓ SA is a Democratic Developmental State
  - Previous Initiatives: RDP, ASGISA, GEAR, NGP, etc.
- ✓ Achievements:
  - Economic growth (without creating jobs)
  - Growth in infrastructure investment:
    - Access to services
    - Mega infrastructure projects
  - **Growth of the CE sector:**

	2004	2013
Employment	12,600	24,360
Turnover	R4.6 billion	24.5 billion

## ✓ Overarching triple challenges

- unemployment – over 25%
- poverty 48% below poverty line
- inequality
  - Richest 20% earning 70% of national income
  - Poorest 20% earning 2,3% of national income

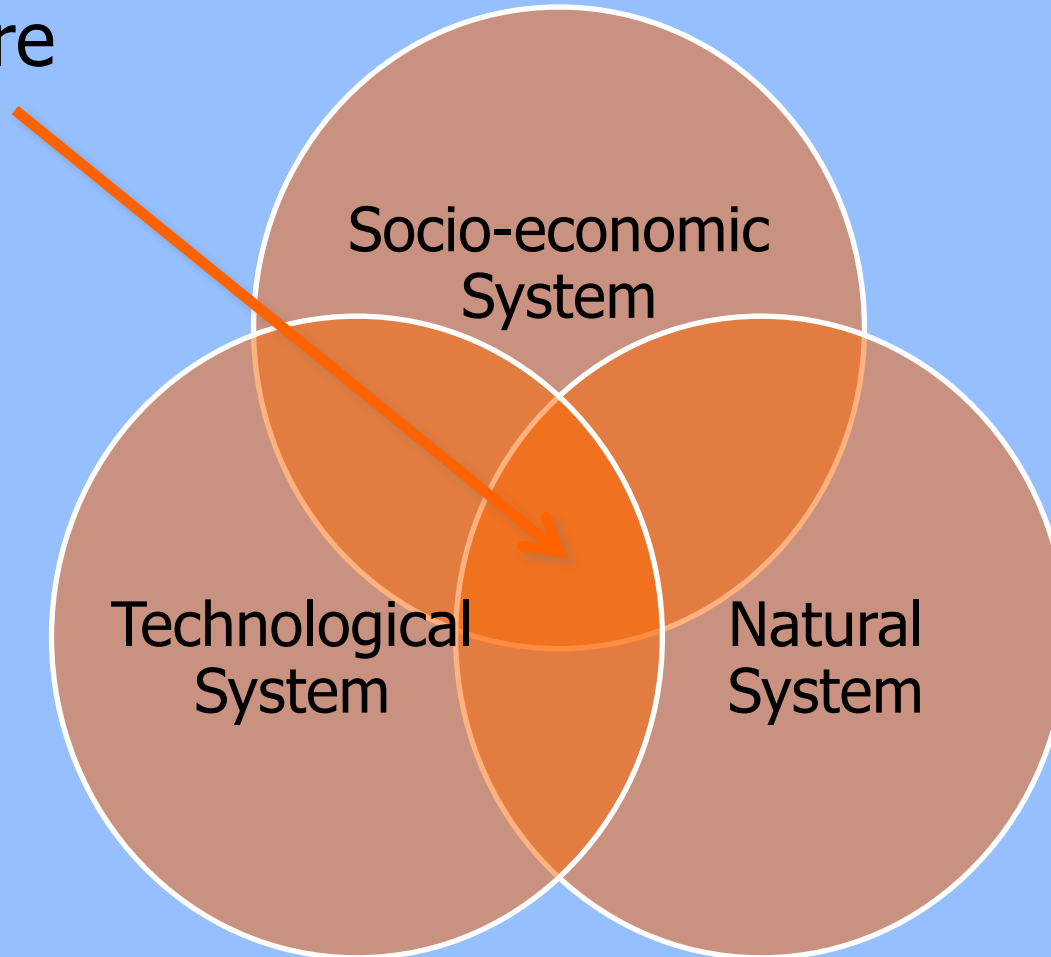
## ✓ Lower economic growth

- ✓ Policy instrument to Develop SA Economy
  - Decrease unemployment from 25% to 6%
  - Eliminate inequity
  - Triple economy by 2030
- ✓ Infrastructure Development – Key to socio – economic development
  - Social Infrastructure
  - Economic Infrastructure
- ✓ National Infrastructure Plan (NIP) – 18 Strategic Integrated Projects (SIPs)
- ✓ Supported by:
  - Presidential Infrastructure Commission (PICC)
  - Infrastructure Bill
  - Committed government spending

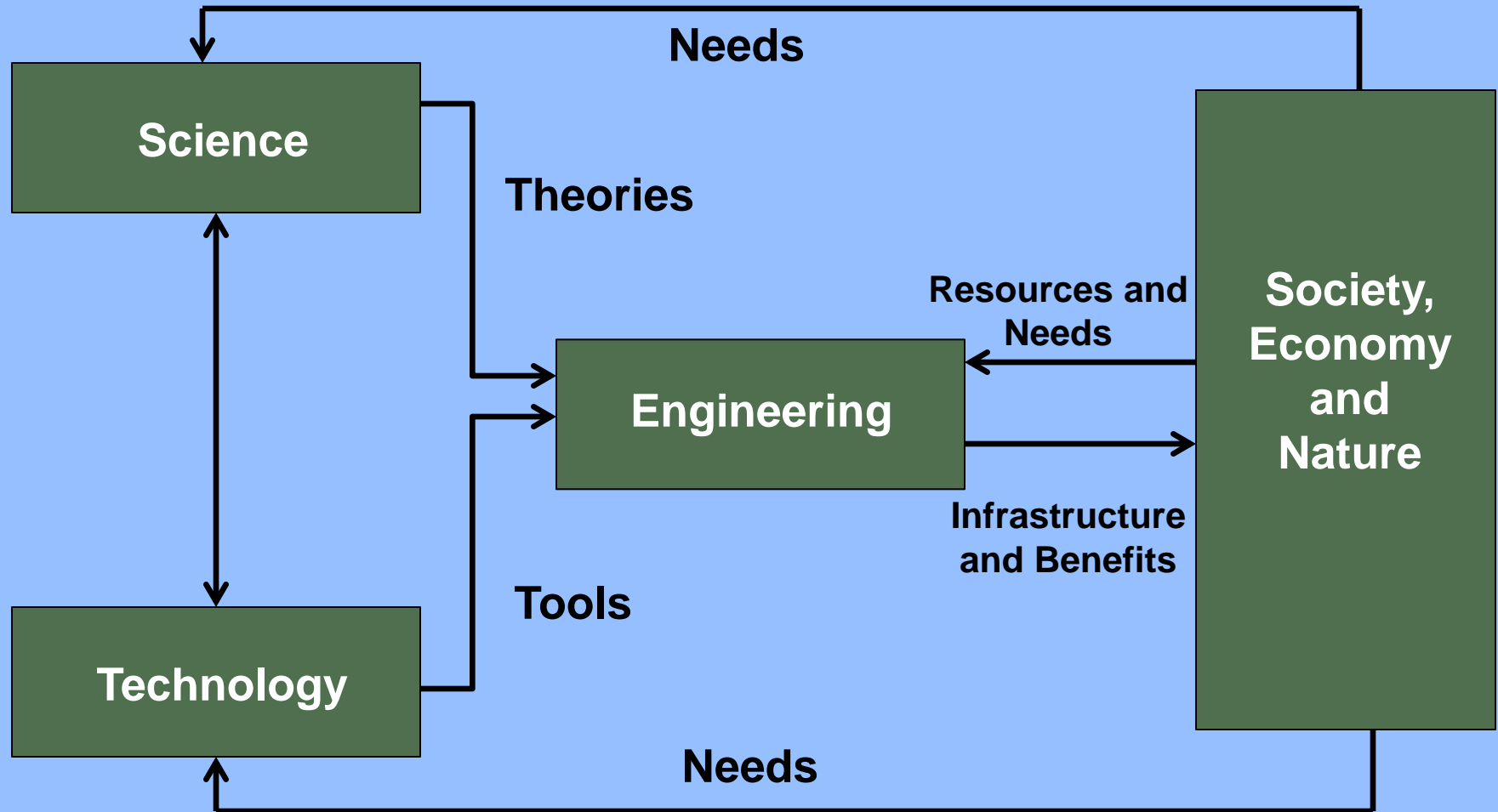
- ✓ Government Budgeted Infrastructure spending
  - R847 billion in next 3 years
  - Expected growth of 4% per year < construction cost
  - Existing and new projects
  - Implementing agents: SOE's and government departments
  - < NDP expenditure target: R1.1 trillion



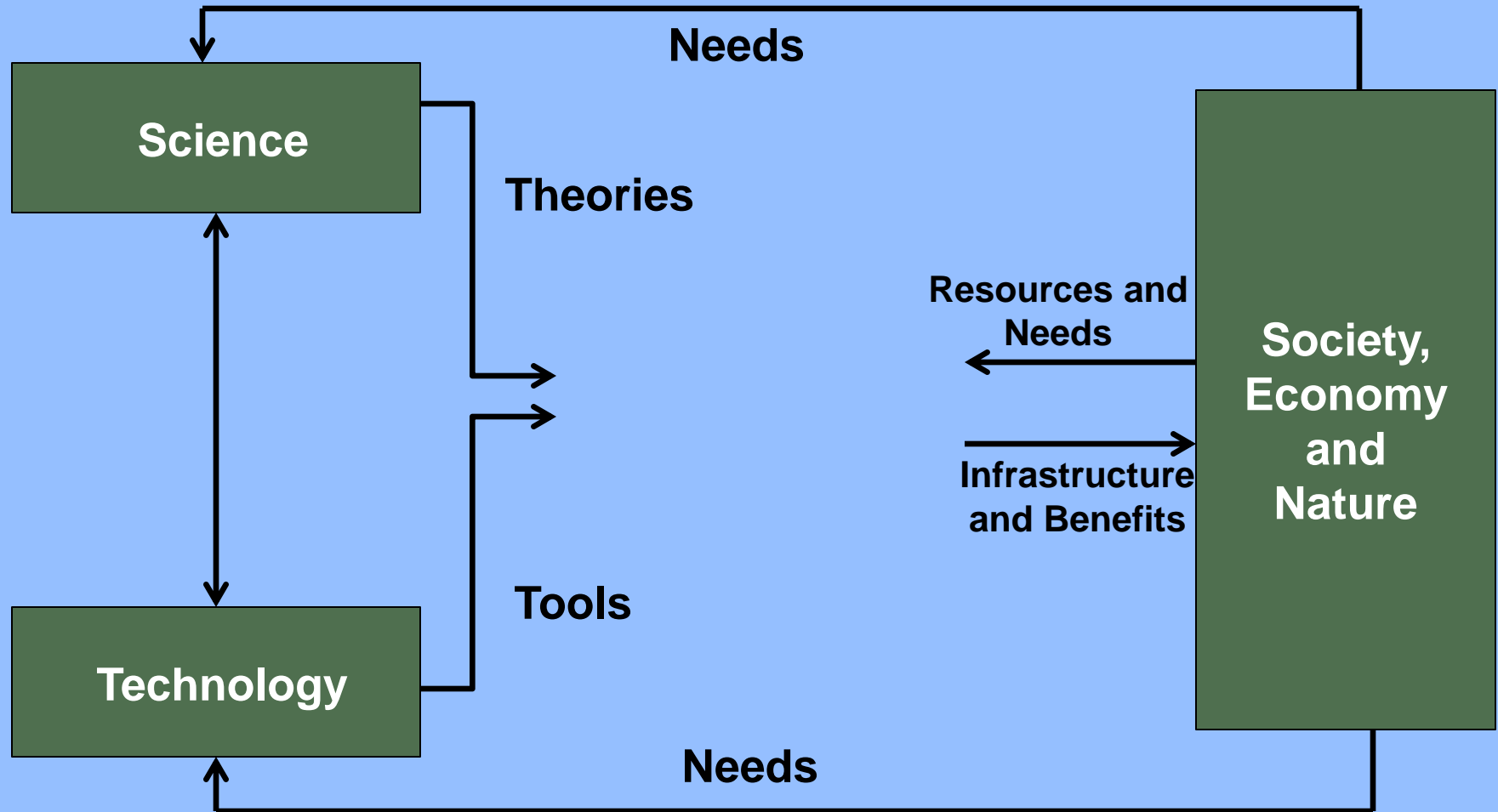
Infrastructure  
Systems



# Role of Consulting Engineering



# Role of Consulting Engineering



- ✓ Consulting Engineers:
  - Provide independent advice to clients
  - Technical advise in the procurement of contractors
  - Design and supervision of construction work
  - Facilities management services
  - Services for the safe decommissioning of old infrastructure
  - Transfer of skills and knowledge to clients
- ✓ The role of “**Trusted Advisor**” or “**Trusted Partner**”
- ✓ **Are we?**

- ✓ Contribution to NDP objectives:
  - Generates employment opportunities for millions of unskilled, semi-skilled and skilled workers

Potential employment impact						
Number of people that could be employed for one year	Direct	Indirect	Induced	Total	Annual average	Job opportunity cost (Annual average)
Infrastructure spending based on NDP objectives	961 602	1 224 861	1 236 045	3 422 508	1 140 836	-
Budgeted MTEF infrastructure spending	697 363	888 281	896 391	2 482 034	827 345	313 491
Infrastructure spending if only 70% of MTEF budget is spent	488 154	621 796	627 474	1 737 424	579 141	Additional 248 203

❖ table courtesy of KPMG

- ✓ Contribution to NDP objectives (cont.):
  - Improves the quality of life of citizens - impacts positively on inequity
  - Contributes to economic growth:
    - Stimulates the development of other economic sectors
    - Attracts foreign investment

- ✓ Is this role adequately recognised by clients who employ consulting engineering services?
- ✓ **No**
- ✓ Persistent Challenges:
  - Regulatory
  - Institutional

# Regulatory challenges?

- Procurement practices
- Access to work opportunities by small and emerging CE firms
- International competition
- Consolidated / joint BBBEE scorecard requirement
- Scope versus fixed term appointments



## Procurement Practices

- ✓ Current Procurement –
  - Price and BBBEE
  - Functionality and Quality – only minimum pre-qualification threshold

**“Is price the appropriate basis for competing for consulting engineering services?”**
- ✓ Reduces consulting engineering to a commodity which is demand driven
- ✓ Compromises the ability of the profession to:
  - innovate,
  - train staff and
  - attract young engineers to the profession.

- ✓ Relegates relationship from “**Trusted Advisor**” status to “**contracting**”
- ✓ Associated problems common in contracting:
  - Scope creep,
  - Variation orders, etc.
- ✓ Reduced quality of service
- ✓ Results in client dissatisfactions

**Extract from recent CESA interaction with the City of Tshwane:**

**“..... Fees on completion of services have also been deviating from original tendered pricing by multiples of up to 2 or 3 which is unacceptably higher than the best practice limit of 20% variance from budget.”**

## **What should be the basis for Procuring Consulting Engineering Services?**

- ✓ Constitutional Imperative – equitable, transparent, fair, competitive and cost effective
- ✓ Aim: to procure on best possible terms
- ✓ Optimise the total project life cycle costs
- ✓ Consulting engineering:
  - dictates how infrastructure is constructed and maintained
  - impacts on construction and maintenance costs.

- ✓ International Best Practice – Qualifications Based Selection (QBS)
  - Quality and Competence
  - Project scope developed jointly
  - Services required to develop scope mutually agreed
  - Negotiate equitable fee
- ✓ Advantage:
  - Reinforces “**Trusted Advisor**” status of consulting engineer
  - Deployment of adequate resources
  - Innovate and add value
  - Savings for taxpayer and community

- Interim: Reintroduce quality as part of the total procurement points calculation alongside price and BBBEE – cidb Method 4
- Separation of procurement of BEPs from the procurement of general goods and services
- Conduct a comprehensive review of the existing procurement system:
  - Impact on infrastructure provision
  - Sustainability of the consulting engineering sector
  - Develop QBS procurement system incorporating B-BBEE requirements

## Access to work opportunities by emerging and small firms

- ✓ Outcry over lack of access to large projects
- ✓ Significant portion of membership of CESA – 80%
- ✓ Vehicle for empowerment in the sector
- ✓ Lack of resources, expertise and experience
- ✓ Proposal: Targeted procurement procedures for participation in large projects
- ✓ **Set goals:** fair, equitable and cost effective
- ✓ **Process:** streamlined and monitored

## International competition

- ✓ **Proposal: To have built environment professional services designated as local**
- ✓ **Advantages:**
  - Preferencing of local companies over international companies without a presence in South Africa
  - Contributes to the growth & development of the sector
  - Contributes to local employment
- ✓ **Process:**
  - Application rejected by DTI
  - SA signatory to WTO services agreement



- ✓ Requirement for a consolidated/joint BBBEE scorecard for unincorporated Joint Ventures / consortium / trusts:
  - Discourage formation of JVs
  - JVs crucial for skills transfer
  - Add a cost burden to the sector

- ✓ Proposed formula / calculator for consolidated JV B-BBEE scorecard:

$$JV_{B-BBEE \text{ level}} = M_{\text{points(a)}} \times M_{\text{interest(b)}} + M_{\text{points(b)}} \times M_{\text{interest(b)}} + \text{etc.}$$

Where:

$JV_{B-BBEE \text{ level}}$  is the joint venture consolidated B-BBEE scorecard

$M_{\text{points (a, b, c, etc.)}}$  is the B-BBEE points of each member

$M_{\text{interest (a, b, c, etc.)}}$  is the percentage (%) interest of the members in the joint venture

- ✓ Calculated at bid evaluation stage

## **Scope versus fixed term appointments for consulting engineering services**

- ✓ **Municipal Finance Management Act:**
  - Fixed 3 year term appointments
  - Increase costs
  - Delays infrastructure implementation
- ✓ **Proposal:**
  - Consulting Engineers be appointed based on scope of work their services are required for; and
  - The Municipal Finance Management Act is revised accordingly.

# Institutional Challenges?

- Lack of Capacity
- Corruption
- Erratic Infrastructure Investment
- Education

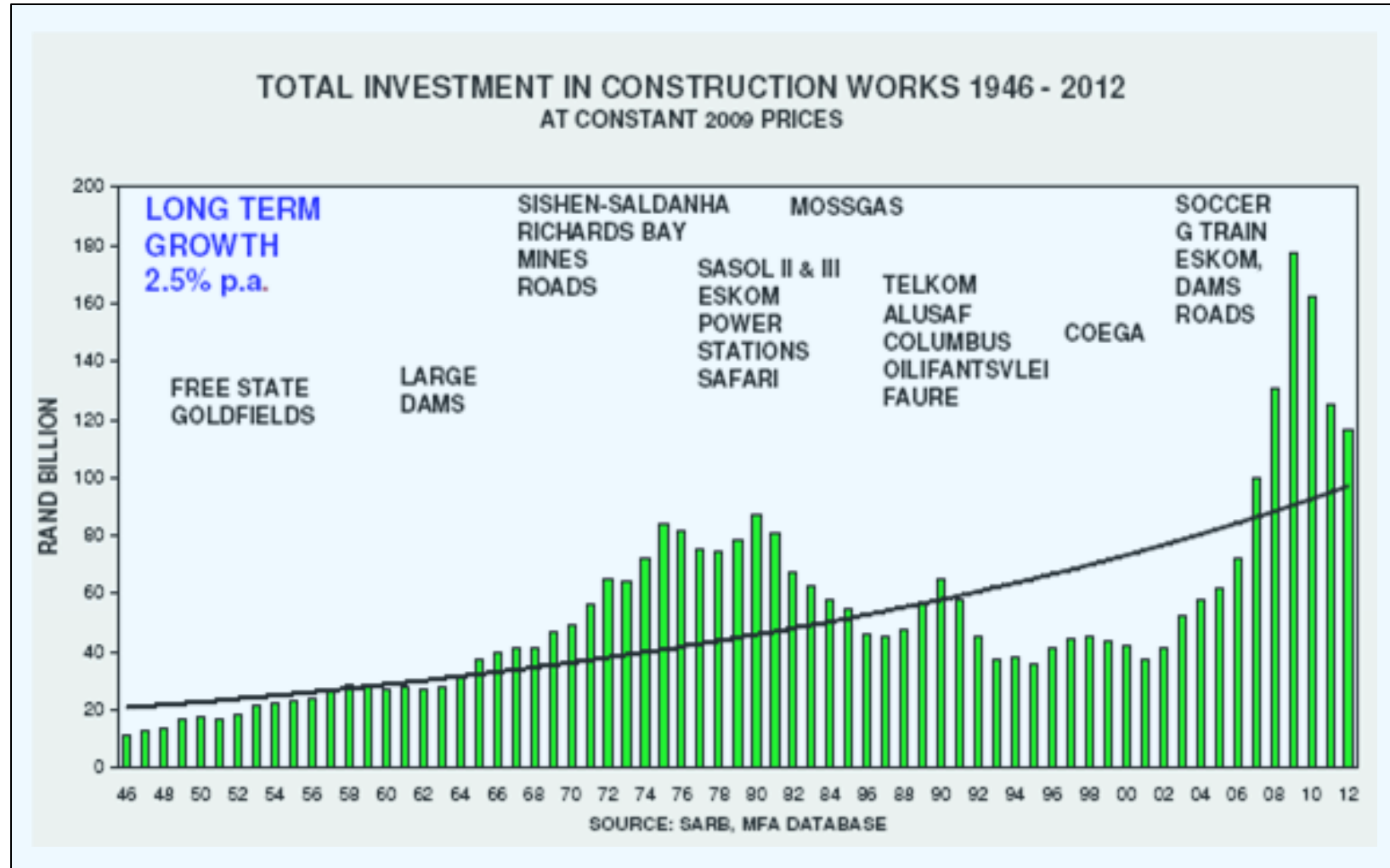
## Lack of Capacity

- ✓ Inability to:
  - create consistent project pipeline
  - Adequately define project scope
  - appropriately procure
  - Manage & monitor contracts
- ✓ Persistent infrastructure budget underspending
- ✓ What is needed is **political will**:
  - Employ appropriately qualified people
  - Improve working environment
- ✓ Interim:
  - Secondment & PMO
  - Use retired engineers

## Corruption

- ✓ Still rampant – 2012/13 financial year:
  - R2bn – wasteful expenditure
  - R26,4bn – irregular spending
  - R2,3bn – unauthorised spending
- ✓ Hinders development, depletes of public purse, distorts markets and hinders investment
- ✓ Welcome - Public Administration Management Bill
- ✓ CESA committed to fight corruption through litigation fund and partnerships

# Erratic Infrastructure Investment



## Cyclical Nature of Infrastructure Investment

- ✓ Creates uncertainty:
  - Skills development
  - Resources planning & development
  - Business investment
- Consulting Engineering Sector's Plea:  
**“Uninterrupted and growing infrastructure spending  
for the NDP period”**



## Education

- ✓ Schools infrastructure programme.
- ✓ Must be complemented by improved quality of classroom teaching and overall school management.
- ✓ Low success rate at universities
- ✓ Public education crisis:
  - poor teacher supply and provisioning norms
  - poor quality of teaching and its impact on learning.

## Education

Jonathan Jansen:

**Fact #4** “The education system works for about 20% of our schools; the remaining 80% are marked by low pass rates, few universities – level passes and small number passing in gateway subjects of Mathematics and Physical Sciences”

**Fact #5** “Even though about 20% of high school graduates qualify for university entry, about 50% of first-year university students drop out, in part because of poor school preparation for university disciplines”

## Education (Cont.)

- ✓ Current initiatives:
  - Implemented - compulsory grade R learning (long term)
- ✓ Competency tests for matric markers.
- ✓ Assessment teachers' performance in the classroom.
- ✓ Performance related pay.
- ✓ Teaching – 'career of choice' – pay salaries to attract top achievers

- Government engagements in progress:
  - Relevant Government Departments
  - Treasury
  - State Owned Companies
  - Presidential Infrastructure Task Team – Combined business and government

**NDP will never materialise without the expertise of the Consulting Engineering sector – this industry needs to be supported and developed by:**

- ✓ Implementing NDP by increasing infrastructure spend to 10% of GDP to 2030
- ✓ Creating a conducive environment for private sector infrastructure investment
- ✓ Improving procurement and regulatory environment
- ✓ Creating technical capacity and capability within Government to procure services
- ✓ Improving quality of education in particular maths and science



THE VOICE OF CONSULTING ENGINEERS

Questions Welcome

Thank you for  
attending

**Abe Thela**  
**07 August 2014**