



CESA

Consulting Engineers South Africa

The Voice of Consulting Engineering

Best Interest of the Public

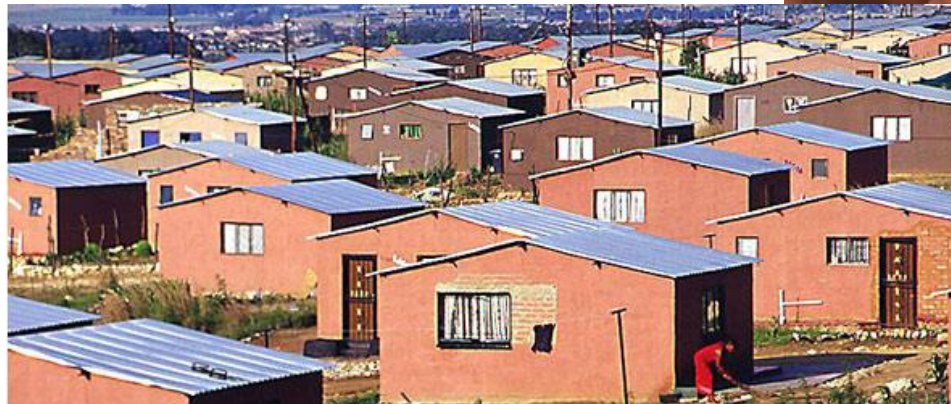
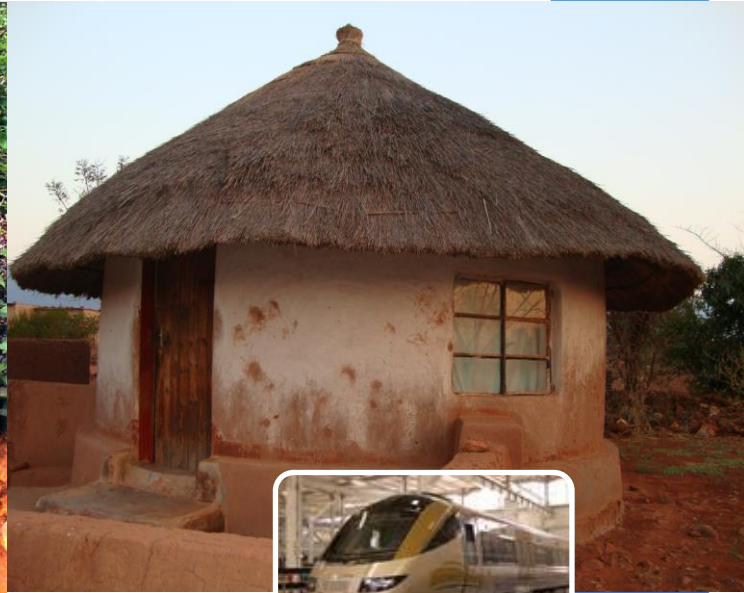
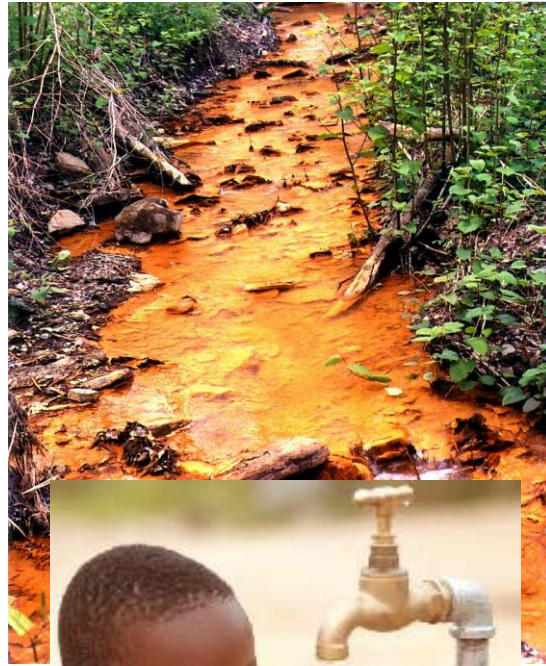
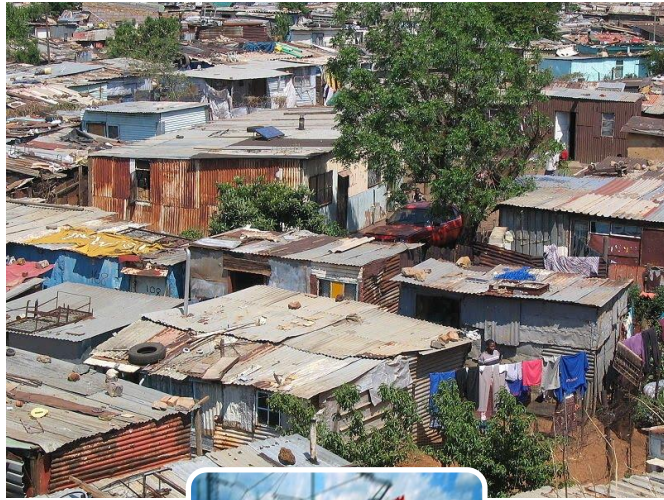
Sustainable Infrastructure



60

1952
2012

Sustainable Infrastructure – meeting people's needs

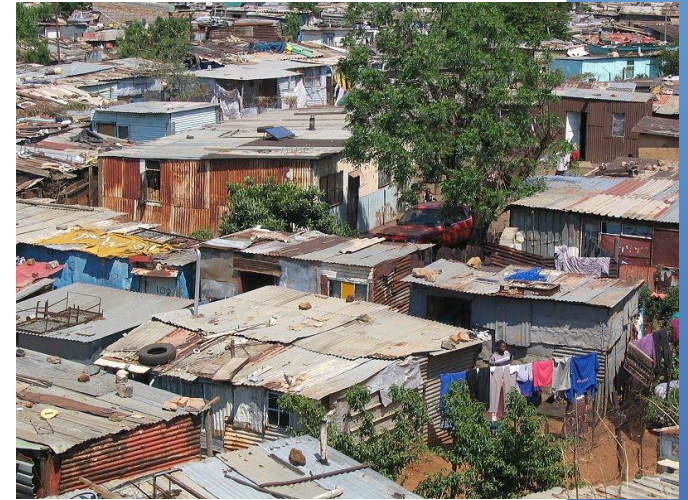


Sustainable Infrastructure – engineers, change lives

Engineering has played a critical role in increasing the health and quality of life. better water supplies, municipal sewer systems, wastewater treatment plants, buildings, improved agriculture, transportation systems.

Engineers have developed the basic infrastructure on which modern society depends.

Engineers continue to be dedicated to technology development for the common good and the general public.



Sustainable Infrastructure - Decline

Issues – Construction Industry Decline

10 - Root Cause of Construction Industry Decline

- | | |
|---|--|
| 1. Inadequate project briefs | 6. Inexperienced client project coordinators |
| 2. Lack of integration | 7. Poor appreciation of optimised design |
| 3. Devalued professional ethics and standards | 8. Lack of skilled and experienced people |
| 4. Lowest bid selection strategy | 9. Poor use of technology |
| 5. Poor management processes | 10. Lack of open communication |

By Engineers Australia, 2004

Sustainable Infrastructure – Barriers to Construction Quality

Design

- Inadequate details and specification
- Poor design coordination

Procurement

- Emphasis on time and budget
- Shortened project periods
- Lack of prequalification
- Competitive tendering
- Awards of contracts primarily on price

Construction

- Skills shortage
- Insufficient workforce training
- Lack of management commitment
- Lack of strict quality control

Corruption

- Corruption
- Corruption
- Corruption
- Corruption
- Greed ?
- Power ?

CONSTRUCTION QUALITY IN SOUTH AFRICA: A CLIENT PERSPECTIVE by cidb

Our Shared Vision – Sustainable Procurement

Create a conducive transparent procurement environment in order to enhance Maintenance and Infrastructure delivery, in terms of speed, time and cost (quality outcome).



Ensure that *the right firm(s) are appointed for the right job*



Appointment at a fair and reasonable level of compensation



Ensure continued existence and development of consulting engineering firm(s) and industry



Serve the best interests of the General Public

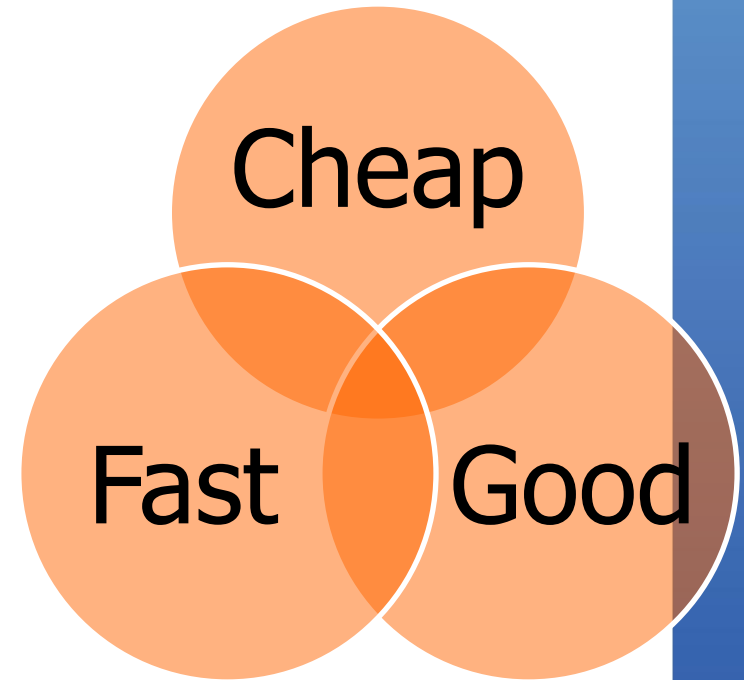
Sustainable Infrastructure – Impossible Triangle

Quality, Speed and Price cannot all be combined into an offer. One MUST be sacrificed.

Either the product will be delivered fast and in good quality, but it will cost more.

Either it will be in good quality, cheap, but it will be delivered in ordinary time.

Or maybe it will be fast , cheap but the quality will be sacrificed.



Sustainable Infrastructure: Cheap design is expensive



Cheap design is expensive. Your investment in quality design will enable the most qualified consultant to apply technical knowledge and relevant project experience to develop a functional and cost-effective facility designed to meet your needs.

If you deal with the lowest bidder, it is well to add something for the risk you run. And if you do that, you'll have enough to pay for something better

(John Ruskin, 1860)



Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skilful execution; it represents the wise choice of many alternatives.

William A. Foster

Sustainable Infrastructure - Best Interest of the General Public



Fair and Reasonable priced services / infrastructure



Cost effective - Money spent on projects once, no rebuilding



Safe, User friendly and Reliable Infrastructure



Appropriate / Accessible Infrastructure

Sustainable Infrastructure – Best Interest of the General Public

We have to stop engaging in corrupt practices.

Do Right...! *Sometimes you gotta do right to be happy...The Brand New Heavies*

**Or at least say something against...greed,
corruption & power**

Lest, Africa will become ‘A Hill of Fools’



CESA

Consulting Engineers South Africa

The Voice of Consulting Engineering

THANK YOU

Godfrey Ramalisa
godfreyr@cesa.co.za



60

1952
2012