

Presentation to the ECSA's Thought Leadership Forum

“Co-constructing a Thought Leadership Agenda for the Engineering Profession in South Africa”



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Premier Hotel OR Tambo
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Presentation Outline

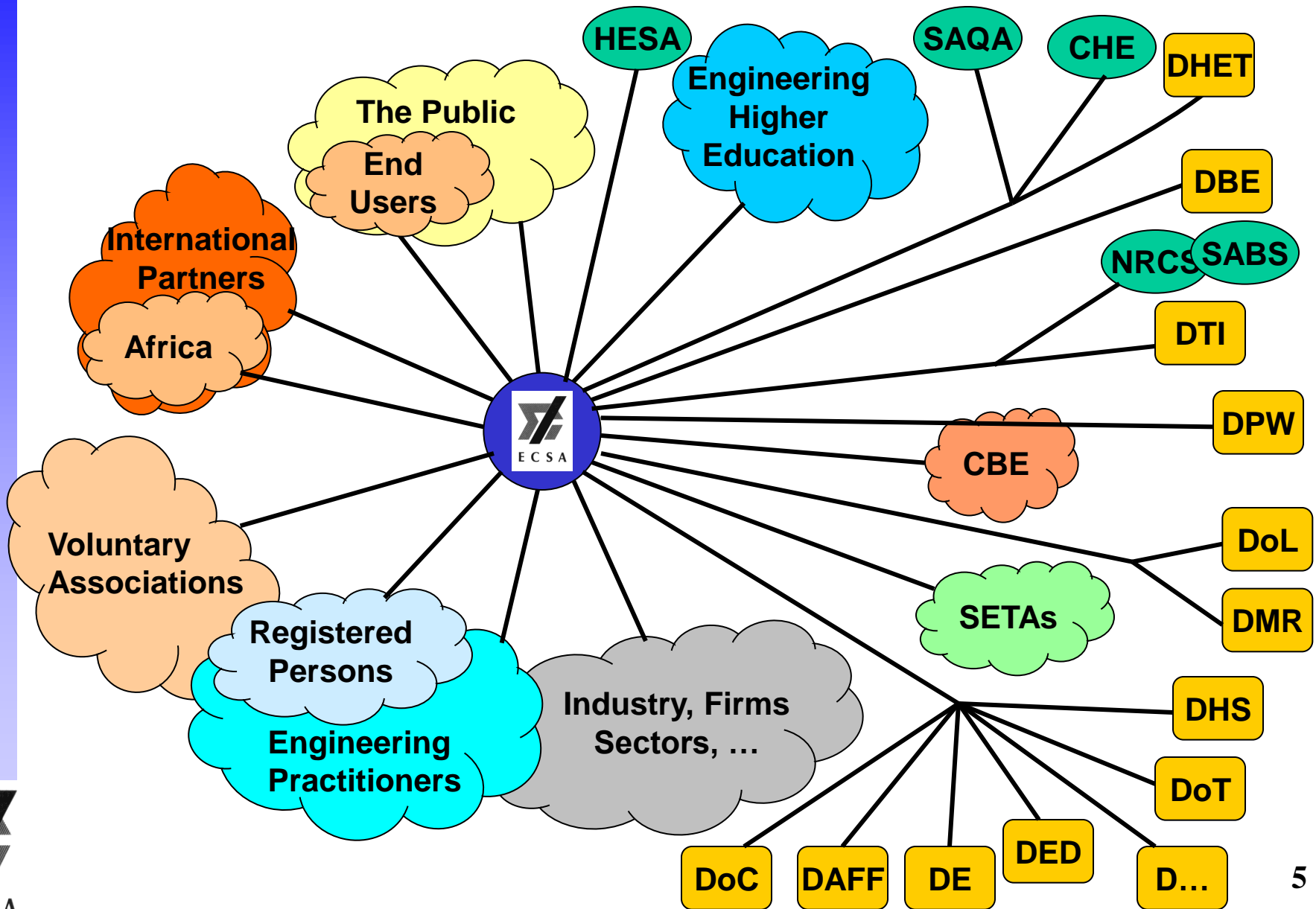
- i. Structure of Engineering Profession
- ii. What purpose does ECSA fulfil?
- iii. ECSA's Functions: Mandatory & Discretionary
- iv. Engineering Profession's Thought Leadership Forum and its contribution to the national development agenda.



The Structure of the Engineering Profession in South Africa

Component	Role Player(s)
Statutory	Engineering Council of South Africa (ECSA)
Voluntary	The South African Institution of Civil Engineers (SAICE) The South African Institute of Electrical Engineers (SAIEE) ...
Commercial / Business	Consulting Engineers Contractors Manufacturers

ECSA Stakeholder Relations



What purpose does ECSCA fulfil ?

- *The purpose of the ECSCA is to.....
promote the health, and safety interests of citizens &
the environment.....
in relation to work by the engineering professionals.*
- **Engineering Professions Act (No. 46 of 2000)**



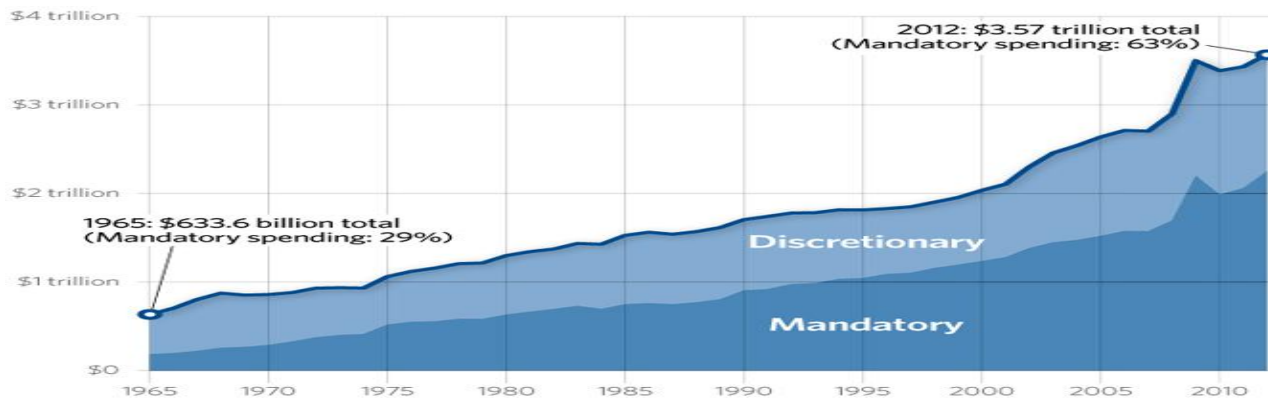
ECSA's Mandatory functions

- (a) Set standards for engineering education;
- (b) Accreditation of engineering programmes;
- (c) Registration of professionals and candidates.
- (d) Regulation of engineering practice
 - *Managing a Code of Conduct;*
 - *Managing complaints & discipline;*
 - *Managing continual professional development;*



ECSA's Discretionary functions

- (a) Take measures to protect public health and safety;
- (b) Conduct research related to the Engineering Profession;
- (c) Undertake activities which promote the engineering profession and which are in the national interest;
- (d) Uphold the integrity and dignity of the profession;



An Engineering Profession relevant to the national imperatives

- **Introspection of the Engineering Profession**
 - Shape (gender , race), size, age profile
 - Increased diversity and numbers
- **National Development Plan**
 - Building a capable State
 - Active citizenry
 - Developing the human resource skills base
- **National Infrastructure Programme**
 - Skills shortage
 - Procurement Policy, Systems, and Practices

National high priority infrastructure challenges

- Development of standardised and modular **school buildings** (~200 schools in 2013)
- Design and development of affordable university **student accommodation** (backlog ~ 200k)
- Increased rate of **electrification of households** to over 300k households pa from around 200k
- **Water leakages**
- Role out of broad band **internet connectivity** to rural areas
- Provision of **health care facilities**

Some discretionary activities initiated by ECSA



- Engenius programme
Career advising for potential engineering students
- Funding for Candidate Phase Training of Engineering graduates
- Engineering Education Trust
- Facilitation of support for Government's National Infrastructure Programme

Africa – Key Infrastructure Statistics



\$604 billion
Annual spending needed for the next five years to upgrade, rehabilitate and expand Africa's infrastructure

\$440 billion
Is the current spending on infrastructure development in Sub-Saharan Africa

31%
% of investment in Sub-Saharan Africa on transport infrastructure

21%
% of investment in Sub-Saharan Africa on energy and power infrastructure



30
Is the number of countries in Africa which have regular power outages

\$145 billion
South Africa is currently investing \$145 billion in infrastructure

50 years
It will take 50 years for most countries in Africa to reach universal access to modern infrastructure



50%
Infrastructure development has been responsible for more than half of Africa's improved economic performance

70%
In land-locked countries, transport accounts for 70% of the value of exported goods



Source: World Bank and Frost and Sullivan analysis
*based on active projects in 2011

Thought Leadership defined

Thought leader..... is management terminology for a person or an entity that is recognized by peers for having progressive and innovative ideas.

Typically thought leaders have **proven themselves** in the business, academic or political sphere through successful implementation of their ideas.

Thought leaders often..... publish articles and blog posts on trends and topics influencing an industry or organizations.

Through effective communication and clarity of purpose, they effect change and are considered exemplary leaders.



Engineering's Thought Leadership Forum

Is a Structure for the Engineering Profession to:

- **Contribute to the national debate on a range of critical issue**
- **Influence public policy**
- **Avail its expertise and knowledge in the national interest**
- **Be relevant stakeholder**

Position the Engineering Profession as an advisor choice



Structure of the Proceedings

Discipline specific discussions

- **What are the relevant issue ? (discipline specific and cross cutting)**
- **What are the messages and target audience?**
- **Is there research needed to inform a position on the issue?**
- **What mechanisms will be used in getting the message out?**
- **What resources will be required ?**
- **Who will lead each issue and serve as champion/spokes person?**
- **????**



*Dankie - Enkosi - Ha khensa - Re a leboga - Ro livhuwa - Siyabonga -
Siyathokoza - Thank you !*

