

# Organisation of the Engineering Profession – South Africa

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# History 1

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- 1890 Bill introduced to protect engineers and architects – rejected as it would disadvantage colonial youth
- Mines and Works Act of 1911 recognised engineers who held certificates of competency.
- From 1906 to 1968 the Professional Institutions argued amongst one another and Government on the need for a Professional Engineers.

# History 2

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- Act that formed the SA Council of Professional Engineers passed in 1968
  - 40 Councilors and 1 committee for each of 7 disciplines as well as an Education Advisory committee
- Replaced by the Act that formed the Engineering Council of SA in 1991 and the Engineering Profession Act (EPA) in 2000
  - Professional Engineers (15 000),
  - Certificated Engineers (1 000),
  - Professional Technologists (4 000)
  - registered Technicians (4 000).

# Objectives

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- Protect the public by ensuring that engineers are properly qualified
- Protect the public in its dealings with the engineer by the administration of a Code of Professional Conduct
- Protect and control the profession and to safeguard the engineer against unfair competition by unqualified persons and undercutting of fees
- Improve the image and enhance the status of the profession by assuring the professional competence of the members



# Current Administration 1

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- Duties:
  - Registration and Maintenance thereof (CPD)
  - Regulation of Practice – Code of Conduct, Guideline Fees, Disciplinary Actions
  - Accreditation of Academic Institutions
- Patron Department – Initially Proposed Education, Arts and Science - finally - Public Works
- Council – 50 (30 Pr Eng, 10 Govt, 10 Public)
- Staff of 60 –
  - Funded by Registered Professionals

# Current Administration 2

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- 30 Committees and a Professional Advisory Committees (PAC) for each of 9 disciplines with assistance from 500 Volunteers
- Disciplinary Procedures – typically 50 investigations per year of which 20% result in disciplinary action
- Provides Guideline fees but generally procurement involves tendering that ignores these and prices depend on how hungry the seller is.
- Provides guideline hourly rates but very little work let on a time and cost basis nowadays.

# Consulting Engineering - CESA

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- Started as SAACE in 1960's
- Voluntary Membership
- Local consulting engineering firm providing technological services in the built or human environment with >50% of principles are PrEng or similar
- Properly registered subsidiary or branches of foreign firms with >50% of Local principals being PrEng or similar
- Independent judgement
- Adhere to code of conduct
- Not share fees with firms that could influence judgement or adherence to code of conduct



# Consulting Engineering - CESA

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- Advocacy – influence in Government – trying to improve
- Status of Profession – in decline due to poor procurement and lack of appreciation by clients of the value of good local engineering
- A fair amount of questioning the value of ECSA and CESA in light of the prevailing current view of engineering as a commodity or a Contractor and not as a valued supplier of technical

# Other Professional Engineering Institutions

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- Institutions (Voluntary Associations) for 9 disciplines
  - Aeronautical, Agriculture, Chemical, Civil, Electrical, Industrial, Mechanical, Metallurgical Mining
- Council for the Built Environment (CBE) – includes Architects, QS, Land Surveyors, Town Planners
- Construction Industry Development Board (CIDB) to regulate procurement and contracts – more involved with Contractors
- Engineering Association of SA (EASA) – slowly disappearing

# Challenges

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- Recognition of Engineers as professionals rather than as a commodity – improve procurement and related professionalism
- Declining pride on professionalism – primarily due to lack of client recognition
- Teaching and learning of maths and science a problem
- Some focus on supply side of Engineering but not much action on the demand side
- Some gains in ensuring that local firms or local branches that employ mostly local people get preference but still a long way to go
- Preferencing for Previously Disadvantaged is legislated but is starting to become counter-productive in terms of delivery and jobs.