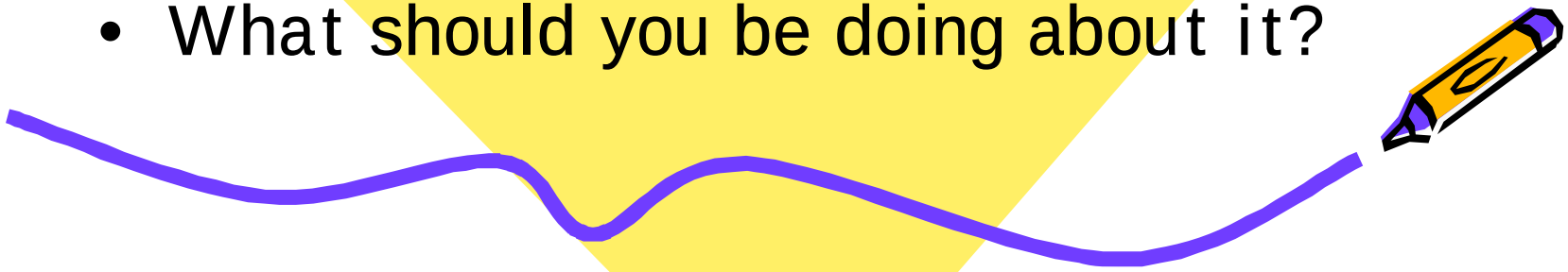
- Understand the position in which our Associations and profession finds it's self given the changes in legislation, and your role as a member of SACEA

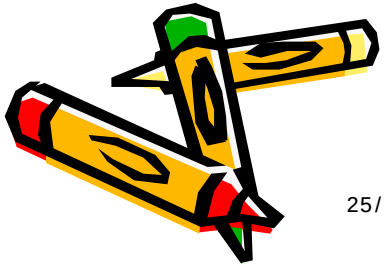
- What should you be doing about it?



Richard Jennings

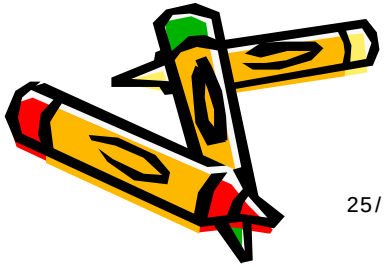
BUILT ENVIRONMENT PROFESSIONS BILL

- Need to regulate the Engineering Profession.
- Standards and Quality Assurance of the Profession.
- Structure of the councils/boards.
- Transitional arrangements.
- Education and Training.
- Barriers to entry to the profession.



Why is it necessary to regulate the industry?

- So that the general public can be assured that any engineering related work and the design of equipment and structures are safe to use, as they have been signed off by a competent person.
- Competent Persons are internationally recognised.

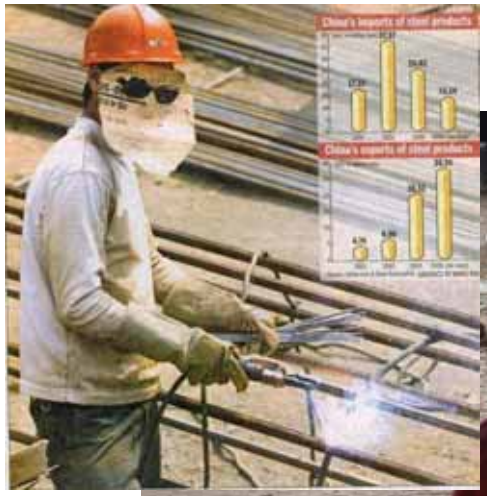


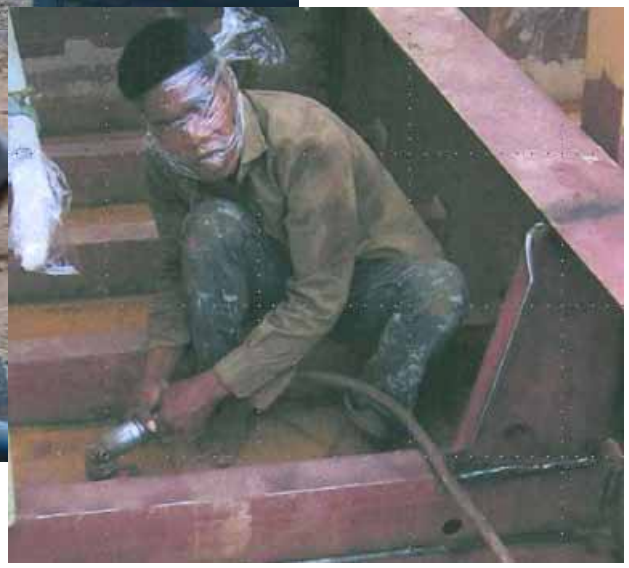
Sometimes workplace safety is questionable?

Some times we get it wrong?

We do not understand the limitations!

Some times our standards are different?





Sometimes public safety has different meanings?

Our understanding of the problem is not always the same!

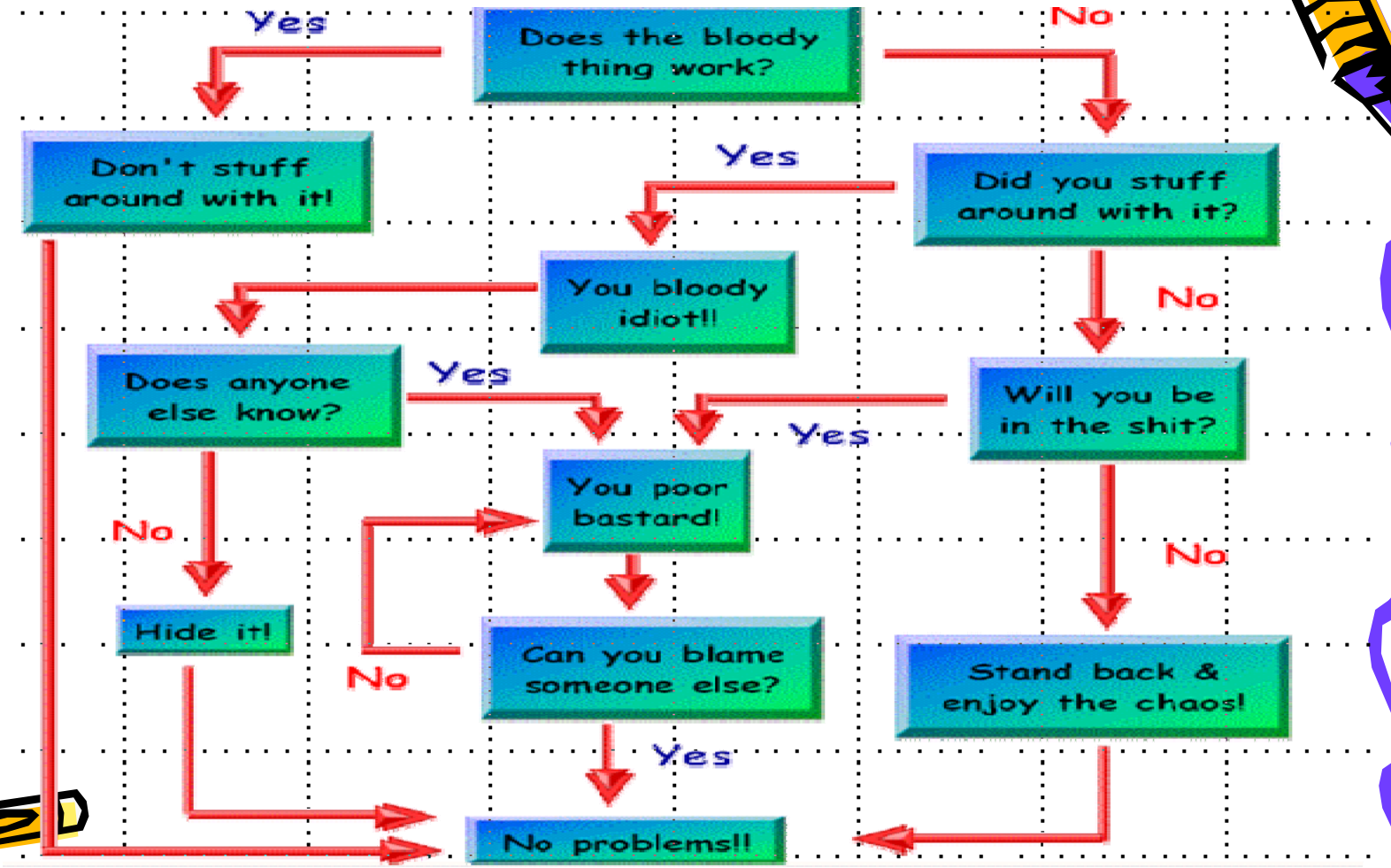
Design becomes un-realistic!

Over design?

Engineering Improvements - Unrealistic expectations!

Great opposability!

Non professional behaviour needs to be regulated?



Working around a constraint presents different solutions?

We have installed Handrails?

Our design capabilities leave some areas for concern!

ECSA

The Influence of the Council for the Built Environment Act on the Mining Sector

- 3 areas were identified by the MQA as being within the Built Environment
  - Engineering design and synthesis of materials etc (subject to the nature and type of design being specified)
  - Education, training and development of engineering personnel
  - Consultancy for financial gain

ECSA'S AREA OF INFLUENCE

NINE MAIN DISCIPLINES

- Aeronautical Engineering
- Agricultural Engineering
- Chemical Engineering
- Civil Engineering
- **Electrical/Electronic Engineering**
- Industrial Engineering
- **Mechanical Engineering**
- Metallurgical Engineering
- Mining Engineering

REGISTRATION
as an
ELECTIVE OPTION IN THE SA M&MS

(MQA Board Circ. No 89/2004)

MINING QUALIFICATIONS AUTHORITY

STANDARDS SETTING

Competent Person in the SA M&MS

"means a person who:

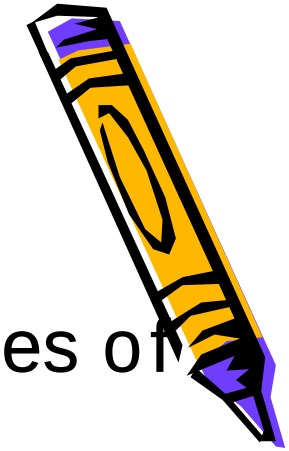
- demonstrates the ability, specified in terms of knowledge, specific skills or an integrated cluster of skills, capabilities and values,
- executed within an indicated range or context and the specific standards".

Practising Person in the SA M&MS

"is a person, whether self-employed or otherwise:

- recruited, selected and employed from a pool of competent persons, and
- exposed to an orientation ("induction") process based on sectoral, company or mine (site) specific requirements such as legislation, standards, codes of practice, policies and procedures".

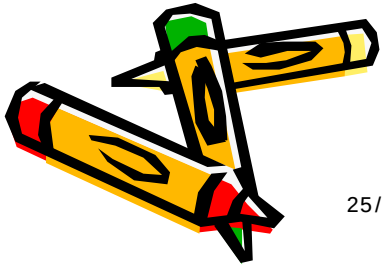
ECSA



The person must work within the boundaries of his/her competency;

- The person is required to maintain and extend his/her competency in order to maintain his or her registration;
- The person is committed to ethical practice and is subject to a code of conduct;
- The person is subject to the sanction of the Council for misconduct, and

Unregistered persons **may not** carry out identified engineering work.



ECSA

Engineering work is characterised by the following:

It encompasses initiatives, services and the solution of problems that are of **importance to the economy and society.**

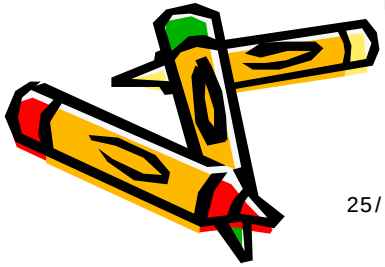
It has one or more of the following characteristics and, in consequence, has associated **benefits and risks**:

- exploitation of natural resources;
- harnessing of energy for useful purposes;
- use of materials and substances with useful physical or chemical properties;
- use of machinery and equipment;
- transfer, storage and processing of information;
- construction, maintenance, refurbishment and deconstruction of buildings and engineering infrastructure; and organization and control of systems or processes.

ECSA

It requires **distinctive competencies** to perform work associated with a category that include:

- investigate and solve problems, design solutions;
- use knowledge and technology based on mathematics, basic sciences and engineering sciences, information technology as well as specialist and contextual knowledge;
- manage engineering activities and communicate effectively;
- address the impacts of engineering work, meeting legal and regulatory requirements; and
- act ethically, exercise judgement and take responsibility.
- Engineering knowledge and practice expands and changes continually. Professionals must therefore continually maintain and extend their own competency.



ECSA

IDENTIFIED ENGINEERING WORK TO BE RESERVED

- Designs of materials, components, systems, plant or processes;
- Planning the capacity and location of infrastructure;
- Investigating, advising and reporting on engineering problems;
- Improvement of materials, components, systems, plant, equipment or processes;
- Managing, maintaining or operating plant, equipment and processes;
- Managing implementation or construction projects;
- Implementing designs or solutions;

ECSA

IDENTIFIED ENGINEERING WORK TO BE RESERVED

- Research, development and commercialization of products;
- Management of Engineering Projects;
- Education, training and development of Engineering Personnel for Registration as Professionals;
- Persons who are responsible for the planning and delivery of ECSA accredited engineering programmes and academic staff who are responsible for teaching and assessing engineering and professional exit level outcomes in ECSA accredited engineering programmes;
- Mentors for Engineering Candidates and other applicants requiring registration;

ECSA

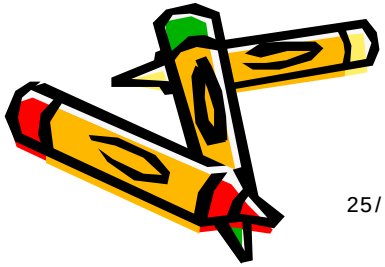
IDENTIFIED ENGINEERING WORK TO BE RESERVED

- Work reserved for Engineering Persons by other Acts. See **Appendix 7;**
- Drafting and Approval of Mandatory Codes of Practice;
- Drafting and Approval of Engineering Standards;
- Management of the Risks associated with engineering systems, plant, equipment, processes infrastructure and fire;
- Assessment and Moderation in respect of Engineering Competencies, and
- The work of the Specified Categories who are required to be registered by legislation. (e.g. Lift Inspectors).

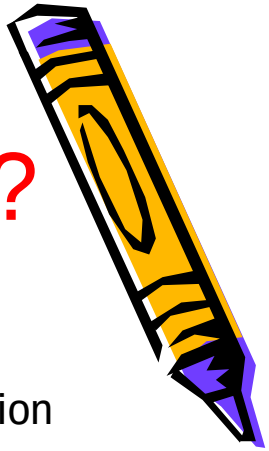
Continued Professional Development

The ECSA Council has approved and issued its ***"Policy on Continuing Professional Development (CPD)"*** on 26 May 2005. Section 1 states:

- *"ECSA will therefore institute a system of* CPD, starting in 2006, *which will be linked to the renewal of registration from 01 January 2007 for all registered persons according to the policy set out in the said document".*

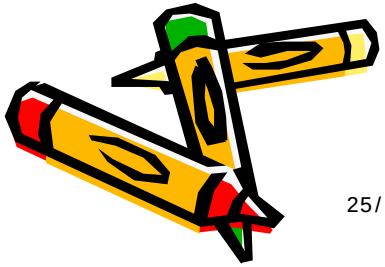


What should you be doing now?



- Promote our professionalism by registering
  - SACEA Mission and the need to qualify as a Voluntary Association
- Registering now, only a competent person can register!
  - Be acknowledged by your peers as a competent person, Pr Cert Eng
- Companies will be obliged to appoint a Competent Practicing Persons to operate their mines
  - Get ahead of the pack, now
- Start recording your CPD
  - Continued Professional Development

Support your association SACEA, in maintaining their voluntary association position to be able to have a say in the design of your future.



The changes are coming and cannot be stopped! Will you be ready?