Introduction to the IEC South African National Committee

Françoise Rauser
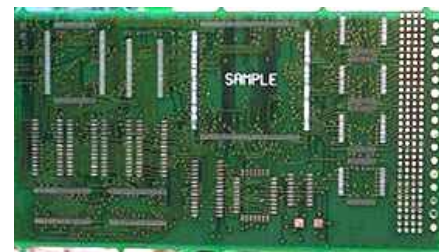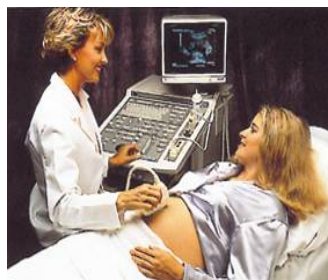
Jo-Anne Byng

UPDEA May 2007

IEC – 100 years of existence

▸ Founded in 1906 to promote international co-operation on all questions of standardization and related matters in the field of electrotechnology

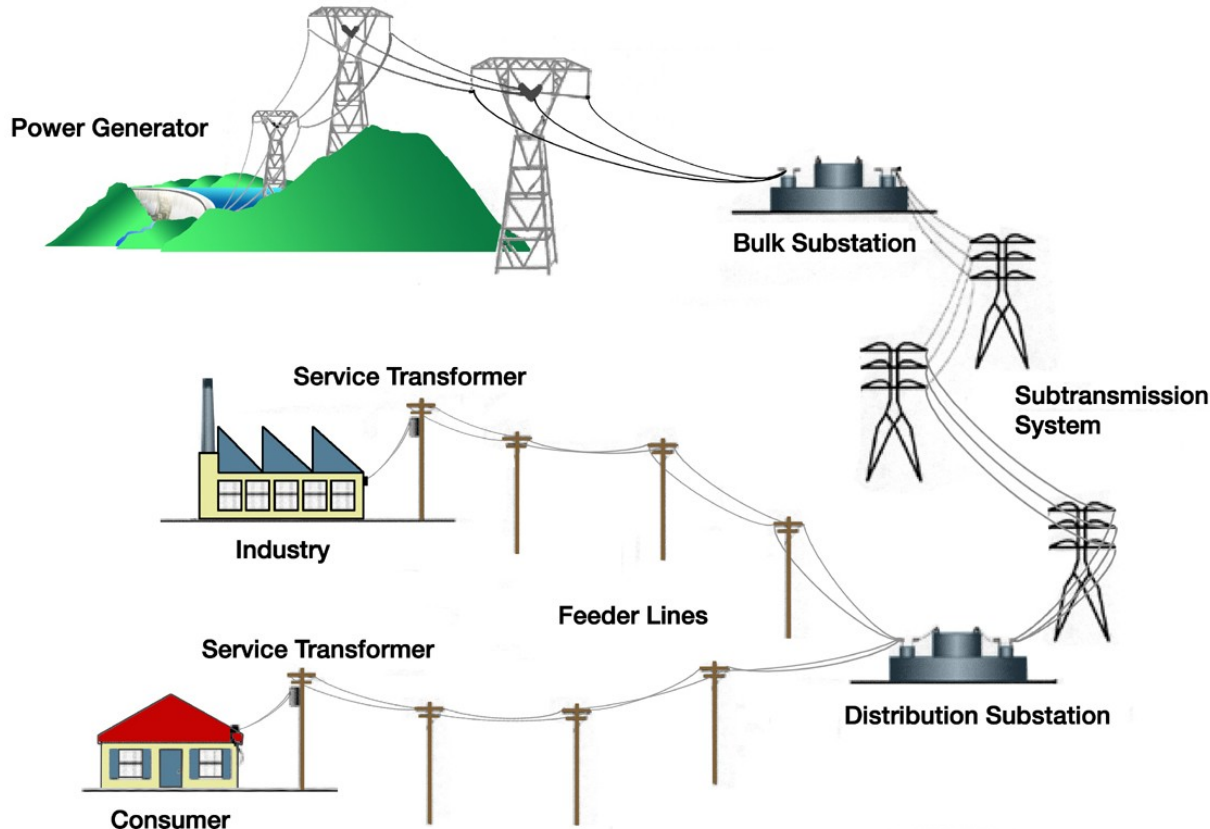▸ Encourage at national level use of IEC IS and Conformity Assessment Schemes

How you might "see" the IEC

Rotating machinery (TC 2)

Hydraulic turbines (TC 4)

Overhead lines (TC 11)

Overhead electrical conductors (TC 7)

Systems aspects for electrical energy supply (TC 8)

Switchgear and controlgear (TC 17)

Electric cables (TC 20)

Insulators (TC 36)

Surge arresters (TC 37)

Power Generator

Bulk Substation

Service Transformer

Industry

Subtransmission System

Feeder Lines

Service Transformer

Distribution Substation

Consumer

But if you look further, at home
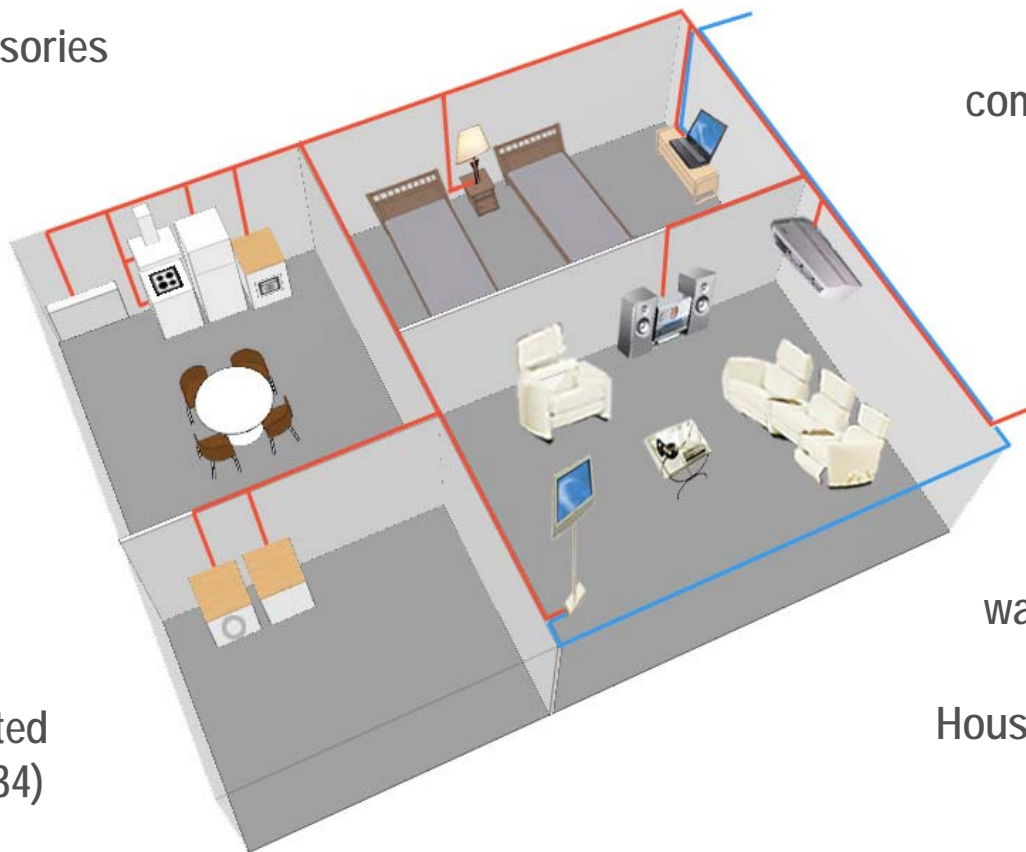
Electrical accessories (TC 23)

Fuses (TC 32)

Winding wires (TC 55)

Electric cables (TC 20)

Lamps and related equipment (TC 34)

Electrical installations and protection against electric shock (TC 64)

Electromagnetic compatibility (TC 77)

Multimedia (TC 100)

Fibre optics (TC 86)

Cables, wires, waveguides (TC 46)

Household appliances (TCs 59 & 61)

Safety of information technology equipment (TC 108)

IEC covers a broad range of industry categories

- Construction
- Consumer goods
- Electricity generation, transmission and distribution
- Electronics
- Environment
- Health

- Heavy industry
- Information technology
- Manufacturing
- Telecommunication
- Testing and certification
- Transportation

How to achieve its mission?

▸ Through its National Committees

▸ Through its Programme for developing nations

▸ Through cooperative agreements

Types of Participation

▸ IEC Members are National Committees

  ▸ Membership: one member per country

  ▸ Total members: 68, of which 17 are Associate members

▸ To increase participation of developing nations: IEC Affiliate Country Programme (75 countries).

Membership and Affiliation

Full Members	Associate Members	Affiliates
May submit votes on _all_ TC/SC and Council documents via electronic voting system	May submit votes/ comments on documents of _4_ selected TC/SCs via electronic voting system	May not vote
May submit comments on all TC/SC and Council documents	May submit comments only on TC/SC documents but not on Council documents	May submit comments on the documents of _10_ selected TC/SCs by e-mail
Fully participate in international standardization activities	Limited participation of countries with limited resources	A type of participation, but _not_ membership
Full access to IS for adoption and for commercial exploitation	Full access to IS for adoption and for commercial exploitation	Selection of 200 IS to start basic electronic library. Facilitated adoption procedure

What are National Committees?

▸ National Committees or NCs – one per country

▸ NCs represent in IEC each nation's electrotechnical interests:

　　▸ Manufacturers, suppliers, distributors, vendors

　　▸ Governmental agencies (all levels)

　　▸ Consumers, users

　　▸ Professional societies, trade associations

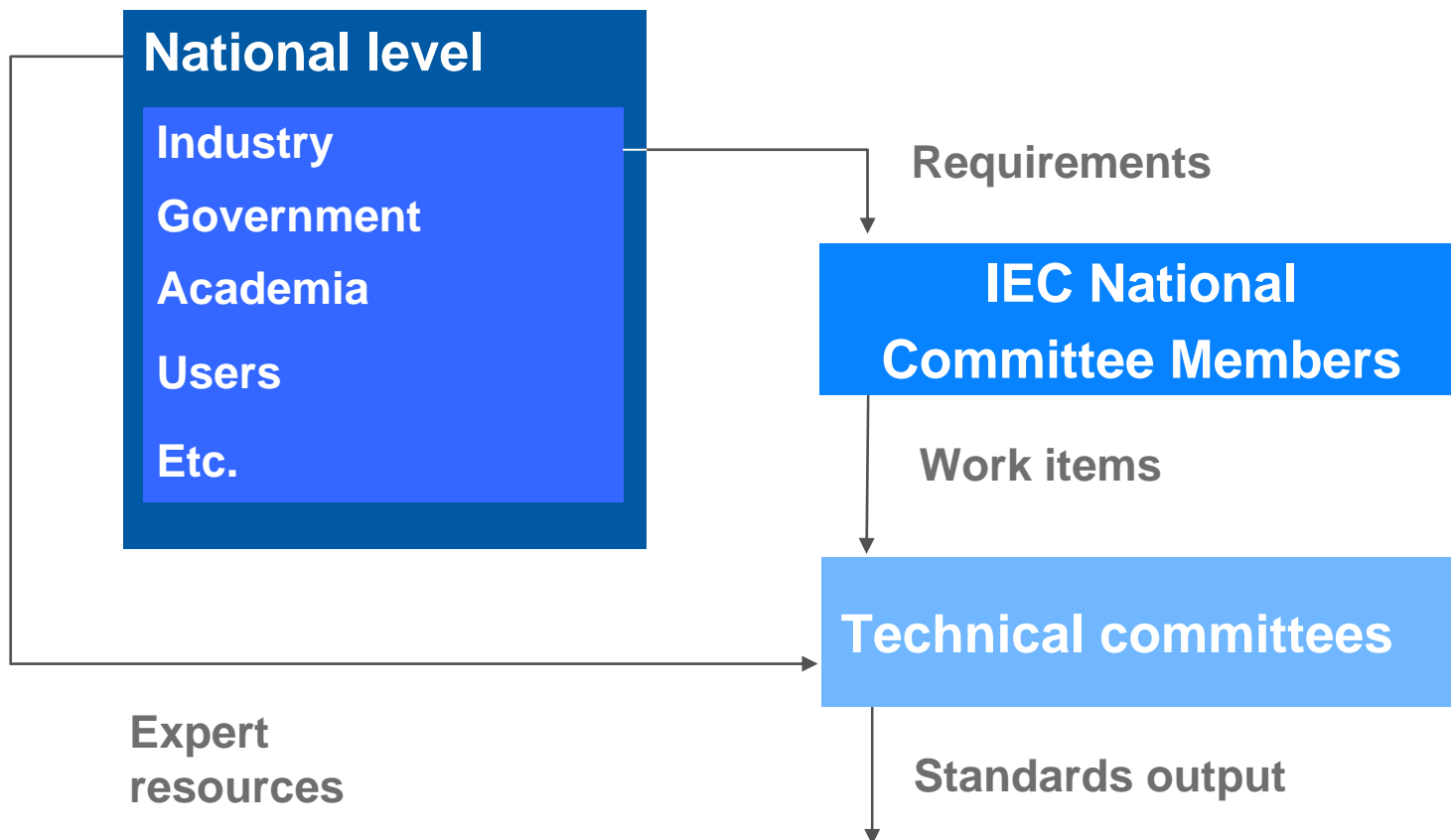　　▸ Standards developers.

IEC Member National Committees

ARGENTINA

AUSTRALIA

AUSTRIA

BELARUS

BELGIUM

BOSNIA-HERZEGOVINA (AM)

BRAZIL

BULGARIA

CANADA

CHINA

COLOMBIA (AM)

CROATIA

CUBA (AM)

CYPRUS (AM)

CZECH REP.

DENMARK

EGYPT

ESTONIA (AM)

FINLAND

FRANCE

GERMANY

GREECE

HUNGARY

ICELAND (AM)

INDIA

INDONESIA

IRAN

IRELAND

ISRAEL

ITALY

JAPAN

KAZAKHSTAN (AM)

KENYA (AM)

KOREA, DPR (AM)

KOREA, REP. OF

LATVIA (AM)

LITHUANIA (AM)

LUXEMBURG

MACEDONIA (AM)

MALAYSIA

MALTA (AM)

MEXICO

NETHERLANDS

NEW ZEALAND

NIGERIA (AM)

NORWAY

PAKISTAN

POLAND

PORTUGAL

ROMANIA

RUSSIAN FEDERATION

SAUDI ARABIA

SERBIA & MONTENEGRO

SINGAPORE

SLOVAKIA

SLOVENIA

SOUTH AFRICA

SPAIN

SRI LANKA (AM)

SWEDEN

SWITZERLAND

THAILAND

TUNISIA (AM)

TURKEY

UKRAINE

UK

USA

VIETNAM (AM)

Objectives of National Committees

▶ Coordinate each nation's consensus viewpoint and present in IEC via participation in meetings:

  ▶ International consensus standards development,

  ▶ Conformity assessment scheme operations, and

  ▶ IEC governance (Full Members only)

▶ Implement relevant IEC Standards

▶ Use and participate in Conformity Assessment Schemes (IECEE, IECEx and IECQ).

▶ Full Members may vote on all policy issues and technical matters: one country, one vote.

Functioning

National level

Industry

Government

Academia

Users

Etc.

Requirements

IEC National Committee Members

Work items

Technical committees

Expert resources

Standards output

TCs: how they work

▸ Technical committees and subcommittees are made up of:

  ▸ A secretariat

  ▸ A chairman

  ▸ Members, which are NCs

  ▸ Working Groups with experts

▸ All NCs are free to take part in the work of any TC, either

  ▸ actively (P-members), carrying the obligation to vote on drafts and to attend meetings; or

  ▸ as observers (O-members), with a right to vote on FDIS

IEC Regional Centres

▶ IEC Asia-Pacific Regional Centre (IEC-APRC) – Located in Singapore

▶ IEC Latin America Regional Centre (IEC-LARC) – Located in São Paulo, Brazil

▶ IEC Regional Centre for North America (IEC-ReCNA) – Located in Boston, USA

From left: Tim Rotti, Beth Vautour, Marlene Maillet and Peter Lanctot

The IEC Schemes

CONFORMITY ASSESSMENT BOARD

IECEE
IEC system of conformity assessment schemes for electrotechnical equipment and components

IECEx
Scheme for explosive environments

IECQ
Quality assessment system for electronic components

CB Scheme
Mutual recognition of test certificates

CB FCS
Mutual recognition of conformity assessment certificates

IEC's one-stop shop: definitions

▸ **IEC produces International Standards and operates 3 Global Conformity Assessment Schemes**

▸ **Conformity Assessment:** Checking that a product conforms to a standard, including whether future samples/versions are likely also to conform. *In other words:* process of evaluation and approval of a product and/or a production process, usually making use of a testing laboratory.

▸ **Accreditation:** Formal recognition given by an authoritative body that another body or person is competent to carry out specific tasks. An accreditation body will accredit – approve – a conformity assessment body as competent to carry out certification in specific business sectors.

▸ **Certification:** Formal assurance that a product, service, system, process or material conforms to specific requirements.

Fundamental principle

▸ Check to see if a product adheres to a standard.

▸ Three types of checking:

   ▸ 1st party, the seller: supplier's declaration of conformity (manufacturer does in-house testing).

   ▸ 2nd party, the buyer: purchaser does his own testing.

   ▸ 3rd party, neither seller nor buyer: independent testing service.

▸ IEC CA is 3rd party:

   ▸ IEC CA Schemes do not carry out testing themselves

   ▸ IEC CA Schemes organize testing labs around the world into a system for mutual recognition of certificates of conformity.

   ▸ In some instances, enable direct entry to some markets.

IECEE

Worldwide system for conformity testing and certification of electrotechnical equipment

IECEx

▸ Worldwide system for certification to standards relating to equipment for use in **Ex**plosive atmospheres

IECQ

Worldwide approval and certification program for electronic components

IEC serves world population

Chart: IEC serves world population, showing stacked bars for 1980, 1990, and 2000 with a y-axis ranging from 1,000,000 to 7,000,000. Legend: IEC Members, Affiliates, World.
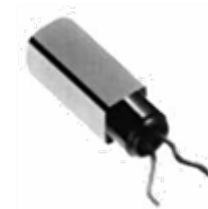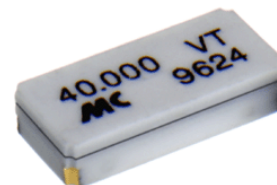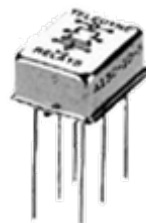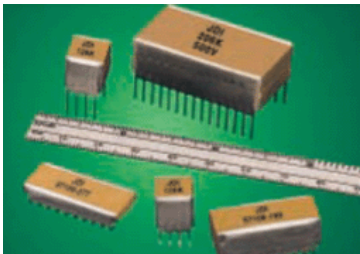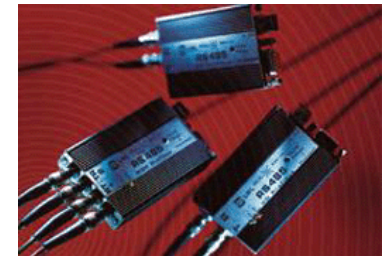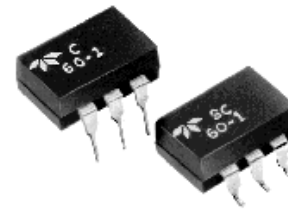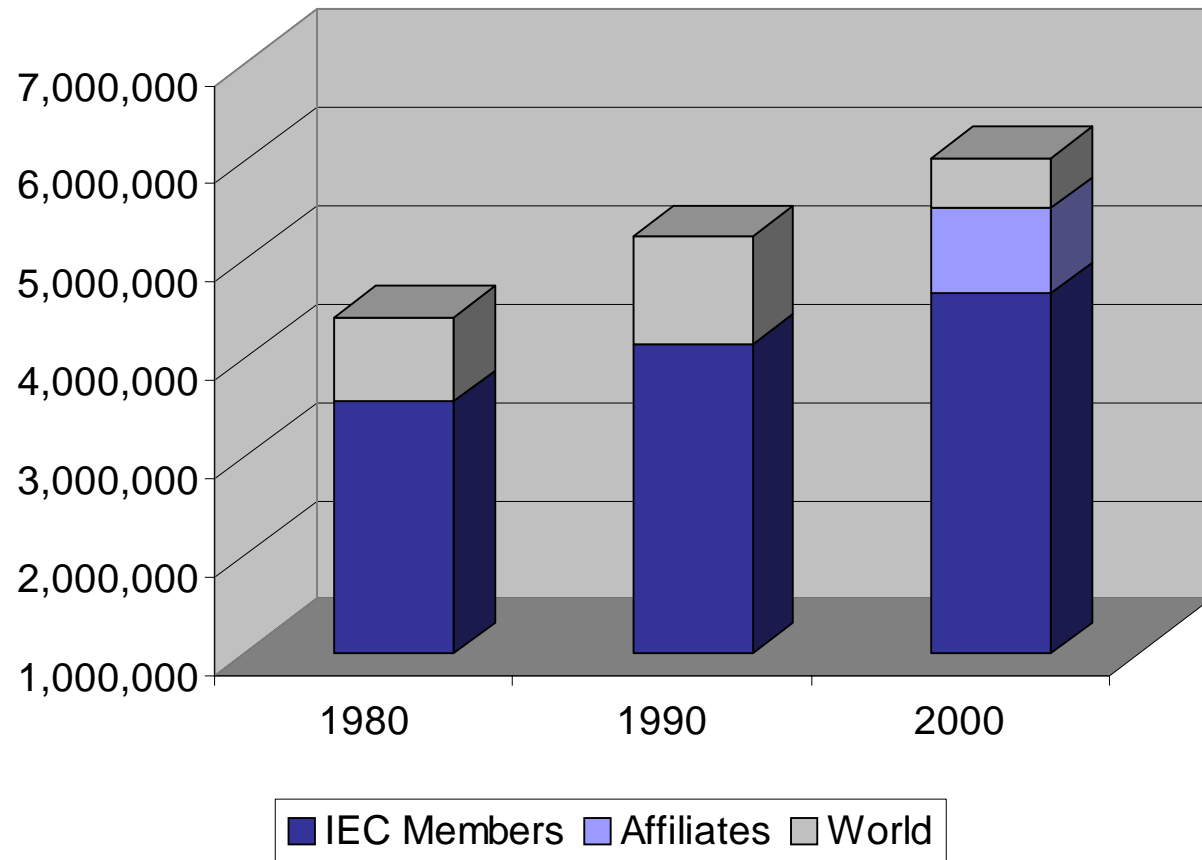
IEC family in Africa

Members (5) ◼

Affiliates (36) ◼
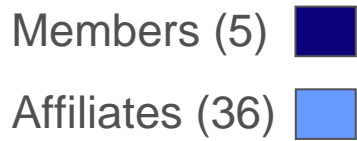
Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

South African National Committee of the IEC

SECRETARY

Jo-Anne BYNG

HISTORY

▸ Originally:participation in IEC by hand picked elite group of stakeholders

▸ Then:Chairs of SA Mirror Committees = SANC (National President and Secretary appointed by DG of SABS)

▸ More recently: To conform with the IEC Statutes established an Electrotechnical Sector Board (ETSB). Members nominated by various stakeholder orgs – elected Chair – SABS appointed Secretary

▸ Now: Modern, more representative SANC

▸ Still hosted by SABS

Standards South Africa

▶ Part of SABS

▶ Develops National Standards (consensus)

▶ Coordinates participation in international stds work (StanSA TC – mirror committee(s) - needs – P/O status)

▶ Funded by DTI

▶ Provides standards info (national, international)

▶ Sells standards (national, international)

▶ Electrotechnical Standards in South Africa are 75% IEC adoptions (growing – 90% of new).

Mirror Committees

▸ Chair responsible for ensuring necessary expertise to give a South African view on IEC documents

▸ Ensures SA comments/votes are collated and submitted to the SANC Secretariat for submission to IEC.

▸ MC nominates WG experts

Levels of involvement in IEC Work

▸ All national work on IS is done in MCs.

▸ IEC/TC

  ▸ SA is the member
    - Input from SANC at the various stages
    - Votes on NWIP
    - Comments and voting on Committee Drafts (CD)
    - Voting on DIS
    - Voting on FDIS

▸ Working Groups
    - Individuals in personal capacity
    - Develop CD
    - level where individuals can have most technical input

CA SCHEMES

▶ Participation is through SANC

▶ Scheme Mirror Committee is formed in SA (SMC)

▶ IEC standards and services that relate to Conformity assessment enable

- Market access
- Global awareness
- Transfer of technology
- Business efficiency

South African National Committee (SANC)

▶ For the good of the nation.

▶ Chair is President of the SANC and represents South Africa at IEC Council meetings.

▶ 15 Members: 8 core members elected for a 3 year term plus 7 co-opted members

▶ Provides input into IEC at management levels

▶ Eligible to participate in IEC Management Structures

▶ Considers proposals for new areas of IEC technical activity

▶ Monitors SA's participation in IEC standardization and conformity assessment work to ensure efficiency and effectiveness.

▶ Fully representative of relevant national interests

Mirror Committees cont

▸ Provides feedback to StanSA and other SA stakeholders on International developments in IEC area of interest.

▸ Co-ordinates with StanSA on participation in regional fora

▸ Invites and hosts IEC TC/SC meetings (subject to funds)

▸ Accredits national experts to attend meetings on behalf of the SANC Mirror Committee

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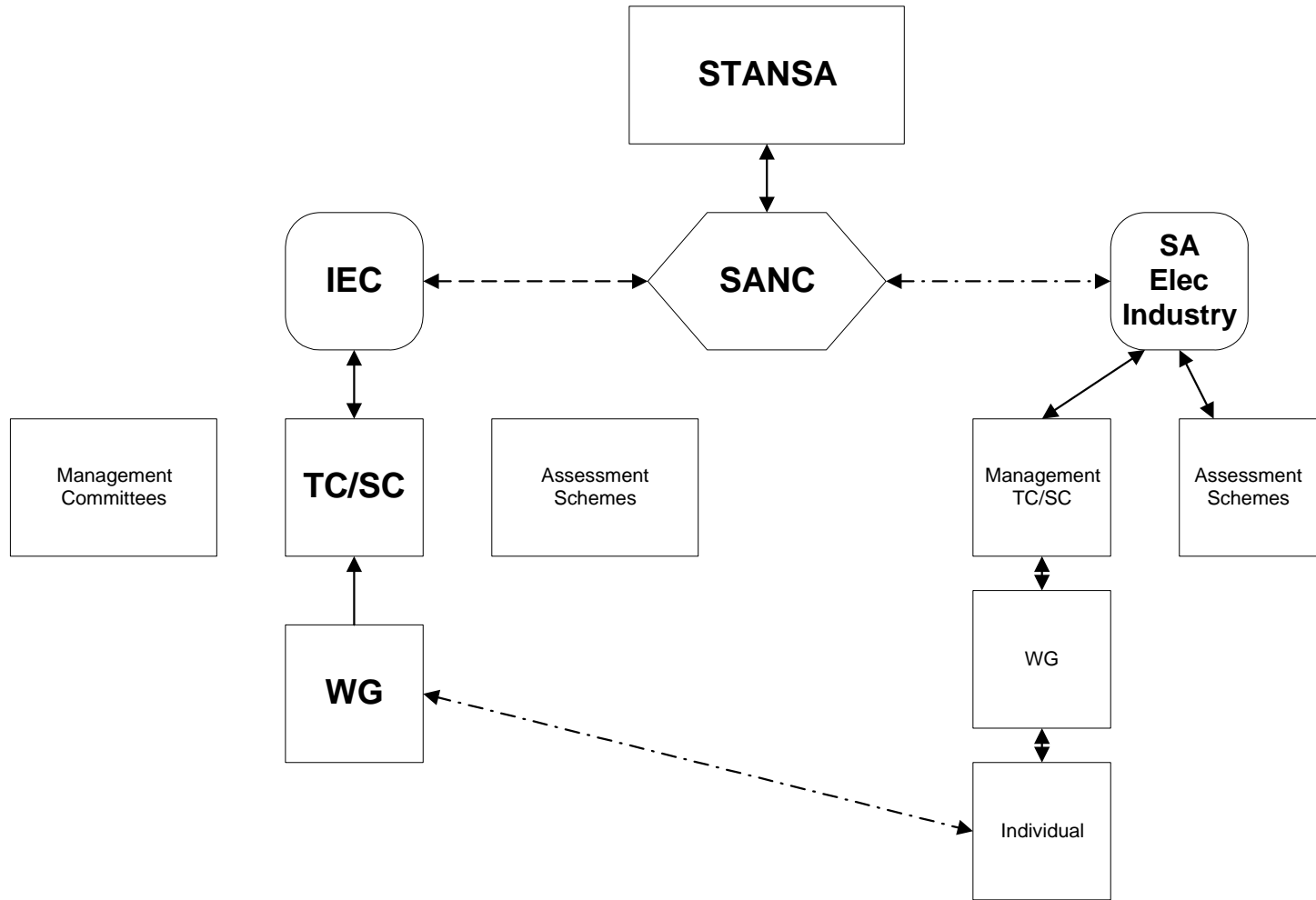
Conclusion

▶ Participation;

▶ Provides a basis for technical regulations

▶ Improvement of quality and safety of products and services

▶ Facilitates global trade

▶ Environmental care – TC 111

▶ Brings real economic benefits

Any Questions

Thank you