The Role of IEC Standards in Knowledge Management
International Standards

- Agreed documentation for common, repeated use
- Rules, guidelines, characteristics
- Approved by recognized body
IEC Standards

- Core WTO principles
  - Transparency
  - Openness
  - Impartiality and Consensus
  - Effectiveness and Relevance
  - Coherence
  - Needs of Developing Countries
Knowledge Management

- Standards are combined knowledge of many experts
- Defined process to generate and evaluate knowledge
Standards Development

- Defined and thoroughly tested process for standards development
- Based on consensus
  - Lack of sustained opposition
- Up to 7 stages needed
- ISO/IEC Directives
  - Procedures
  - Drafting
Effectiveness and Relevance

- Tacit knowledge ⇔ Explicit knowledge
- Choices about objectives and procedures
- Accurate engineering data
- Collecting, storing and sharing of information
Transparency

- Shared body of knowledge
- Globally accepted
- Built on shared research results
- Stimulate development of new technologies
Openness

- Fast-moving innovation
- Impossible for single corporation to develop everything
- Standards bring together solutions of many
- Cooperation only possible with recognized standards
Impartiality and Consensus

- Consensus
  - Lack of sustained opposition
- Stringent process for preparation and approval
  - 178 TC/SCs
  - 1384 WGs/PTs
  - 20 000 experts
Coherence

- Standardized terminology (Electropedia)
- Processes for technical coordination
- Avoids misunderstanding
Global Reach

- IEC brings together 169 countries
- 20,000 experts
- Representing all stakeholder categories
  - Industry, governments, regulators, test labs, academia, users
- Global neutral platform
IEC standards for nuclear

- IEC/TC 45 – Nuclear instrumentation
  - SC 45A – Instrumentation, control and electrical systems of nuclear facilities
  - SC 45B – Radiation protection instrumentation
- Agreement with IAEA on implementation of terminology and high-level principles in IAEA safety guides
Participation

- Vital for all interested parties to take part
- Contribute to the knowledge pool of IEC
  - Through National Committees (NC)
  - Liaison organizations