

Evolution of the Global Nuclear Safety Regime

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IAEA

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Common World Views

- **The world is changing – Globalization**
 - Technology, information, money, people
 - Commodities, services
 - Anti-nukes
 - terrorism
- **Energy, environment, economy, politics and defense are all changing**
 - New types of global governance
 - Special focus on nuclear safety, security and safeguards as global issues
- **Historic turning point for nuclear community and for the world**

Common Nuclear Safety and Security Views (positive aspects)

- Ambitious plans for new NPP construction
- Encouraging signs of “Nuclear Renaissance” including innovative nuclear technologies
- Expanding use of advanced radiation technology
- High safety performance in NPPs and radiological applications
- Global momentum for improving safety and security

Common Nuclear Safety and Security Views (negative aspects)

Remaining safety and security concerns resulting from:

- Ageing or immature nuclear infrastructures
- Recurrent nuclear and radiological incidents
- Worldwide impacts of 9/11 and security events in other countries
- Waste management and disposal, and decommissioning
- Limited effectiveness of safety communication

Political Science View of “International Regimes”

- International regime is an institutional mechanism complementing state governments’ power and responsibility in a specific area to achieve shared international goals based on common rules and guidance, both binding and non-binding (hard and soft laws) without relying on a supra-state centralized government with enforcement power
- International organizations, with the support of International Experts’ Community (Epistemic Community), play a facilitating role to both establish and implement rules and guidance
- Transparency and openness combined with authoritative expert views contribute to effective functioning of the Regime

Perception and Institutional Changes Towards a Global Regime

- Since Chernobyl and 9/11, awareness of need for global institutional mechanism to control nuclear safety and security beyond borders among nation-states.
- “Passengers in the same boat”, “incident anywhere is an incident everywhere”, and “improvement anywhere should be an improvement everywhere”
- For the last 10 years, significant development in:
 - **Agreement and implementation of Conventions and Codes of Conduct in the areas of nuclear safety and security**
 - **Establishment of IAEA safety standards and security guidance and their application**

Global Nuclear Safety Regime

- Shares common goals of preventing serious incidents and continuously improving the global levels of safety to protect people, society and environment and facilitate development and use of nuclear technology
- Achieves goals by promoting compliance with the Conventions, Codes and Safety Standards

Global Nuclear Safety Regime

International Legal Instruments

IAEA Safety Standards

IAEA Safety Reviews and Services

Global Knowledge Network

Global Experts' Community

National and Regional Nuclear Safety Infrastructures

Regulation

Research & Education

Operation

International Legal Instruments

- Conventions -

- Convention on Nuclear Safety (CNS)
- Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
- Convention on the Physical Protection of Nuclear Material (CPPNM) and amendments of July 2005

International Legal Instruments

- Codes of Conduct -

- Code of Conduct on the Safety and Security of Radioactive Sources (approved September 2003)
 - 75 countries have expressed political support
 - Supplementary Guidance on the Import and Export of Radioactive Sources approved in September 2004
- Code of Conduct on the Safety of Research Reactors (approved March 2004)

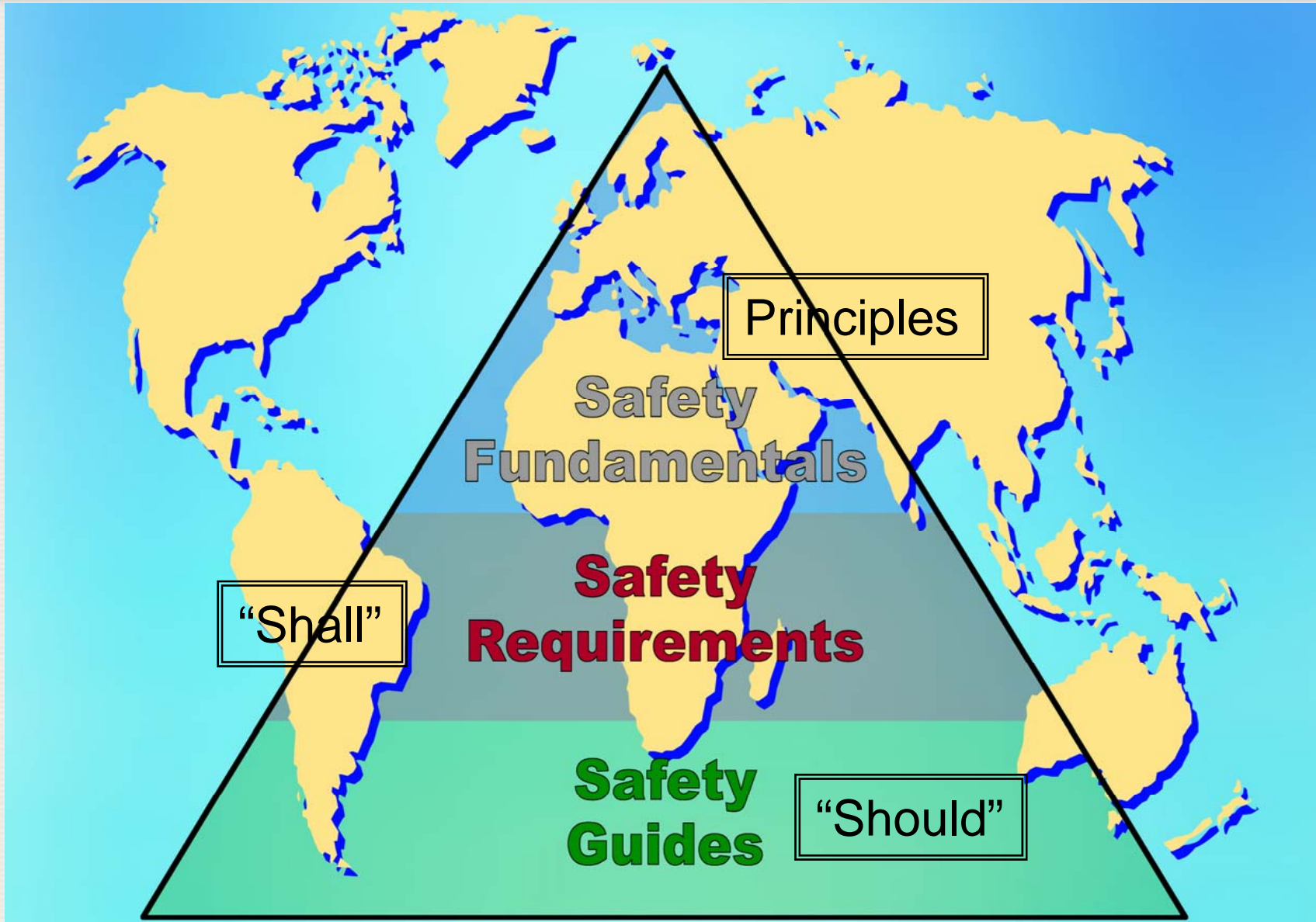
International Legal Instruments

Findings from 3rd Review Meeting of Convention on Nuclear Safety

- Openness and transparency
- Regulator's quality management systems
- Leadership and communication among regulators and operators
- Safety culture
- Probabilistic Safety Assessment
- Periodic Safety Review
- Knowledge management
- Peer reviews
- IAEA Safety Standards and services

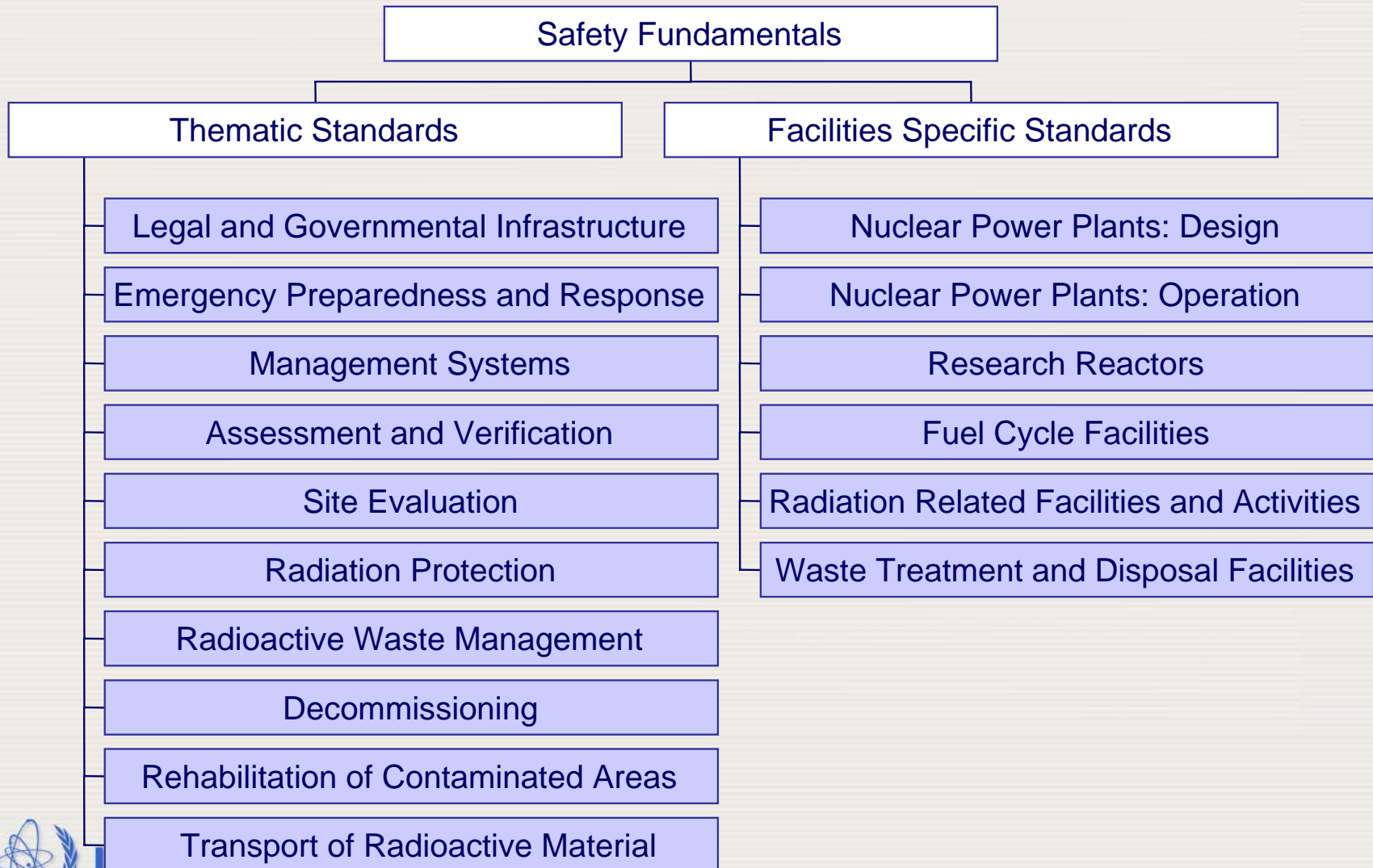
IAEA Safety Standards

- Hierarchy -



IAEA Safety Standards

- Global Reference for Striving for Excellence -

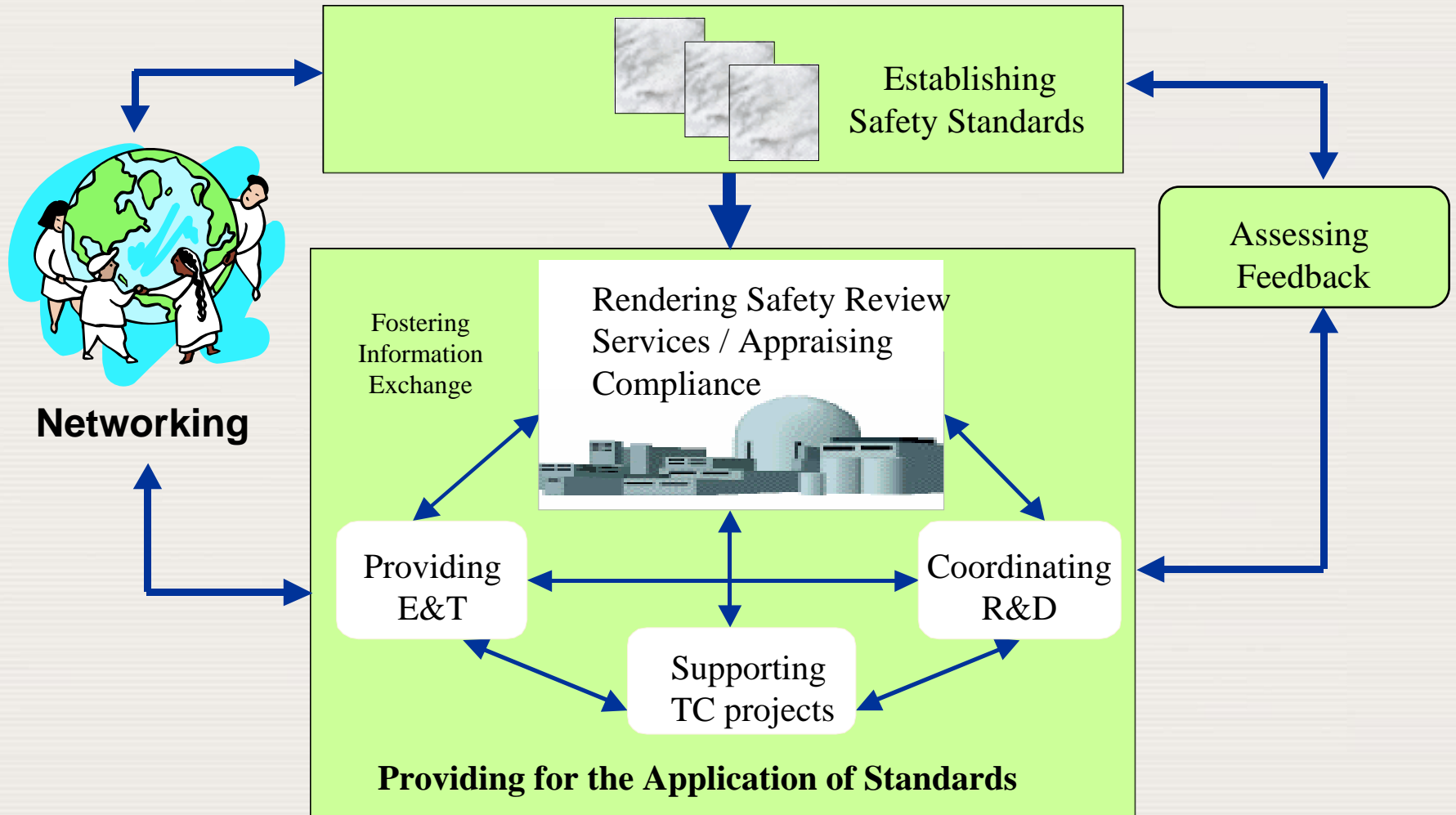


IAEA Safety Reviews and Services

- International Regulatory Review Team (IRRT)
- Radiation Safety, and Security of Radioactive Sources, Infrastructure Appraisal (RaSSIA)
- Design Safety Review Services (DSRS)
- Seismic Safety Review Services (SSRS)
- Ageing Management Review Teams (AMAT)
- Operational Safety Review Team (OSART)
- Peer Review of Operational Safety Performance Experience (PROSPER)
- Integrated Safety Assessment of Research Reactors (INSARR)

IAEA Safety Reviews and Services

- Integrated Safety Approach -



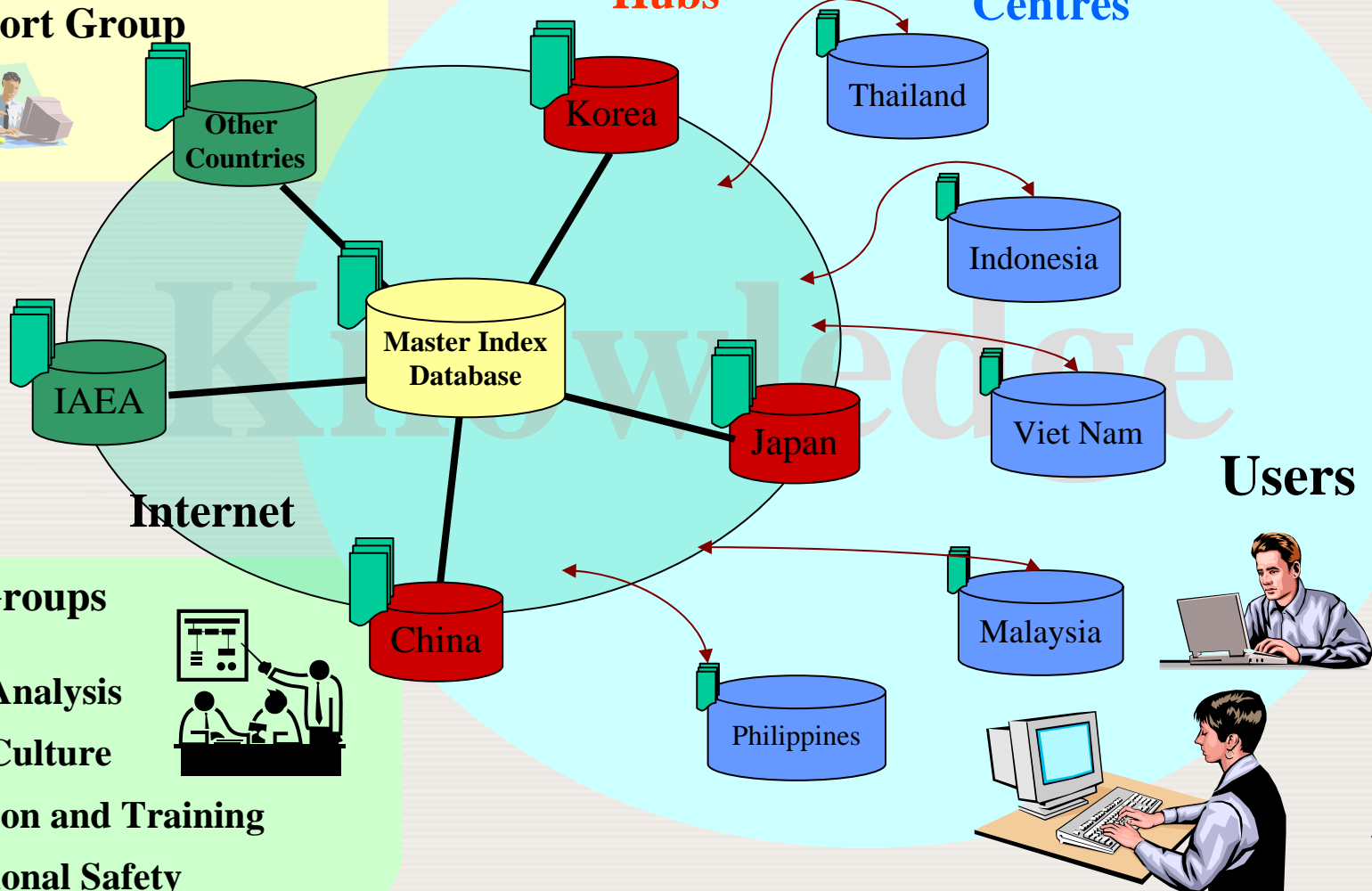
Global Knowledge Network - Asian Nuclear Safety Network -

ANSN Structure

Steering Committee



IT Support Group



Topical Groups

- Safety Analysis
- Safety Culture
- Education and Training
- Operational Safety



IAEA Safety Reviews and Services - Modularized Approach -

- The services will cater to the needs of both regulatory bodies and operators
- Each of the services will be established as modules
- The modular approach will enhance flexibility and allow for more focused and customized services
- The structure of the services will enable a self-assessment prior to, or as follow-up to, a peer review

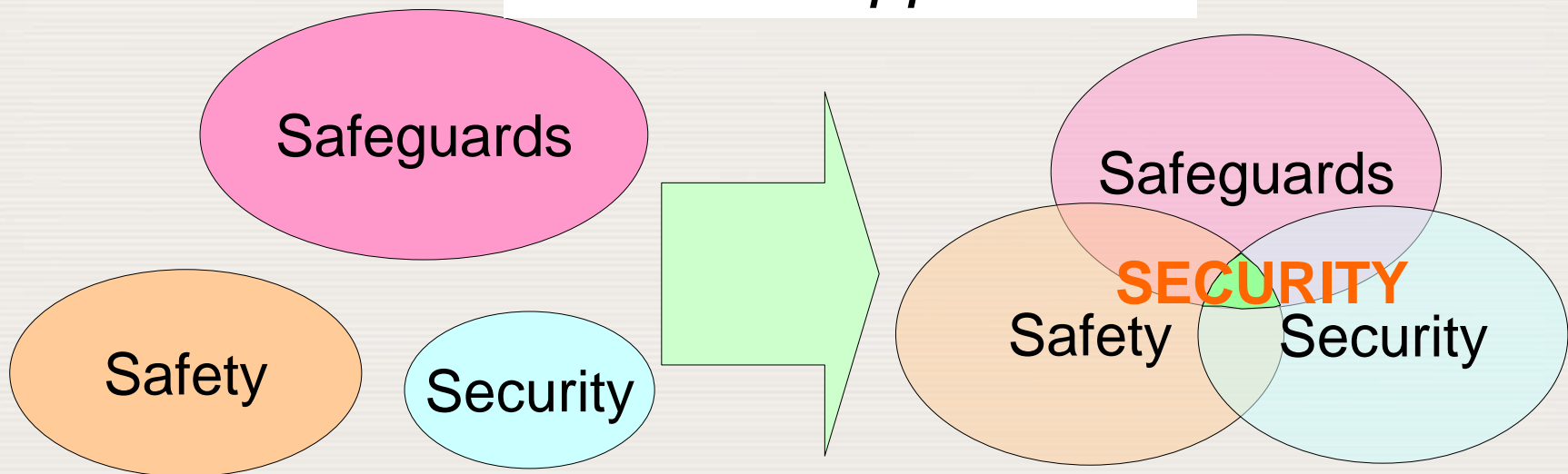
“I know of no safe depository of the ultimate powers of society but the people themselves, and if we think them not enlightened enough to exercise their control with wholesome discretion, the remedy is not to take it from them but to inform their discretion”

Thomas Jefferson

Holistic Approach for Safety and Security

- Nuclear Safeguards – Non-proliferation
- Nuclear Security – Counter Terrorism
- Nuclear Safety – Technical Control

Holistic Approach



Peaceful, safe and secure use of nuclear technology

Sustainable Development and IAEA

