

# **Nuclear Regulatory Organization Changes in Korea**

**January 18, 2012**

**Yong Ho RYU, Ph.D.**

**Korea Institute of Nuclear Safety**

**<http://www.kins.re.kr>**

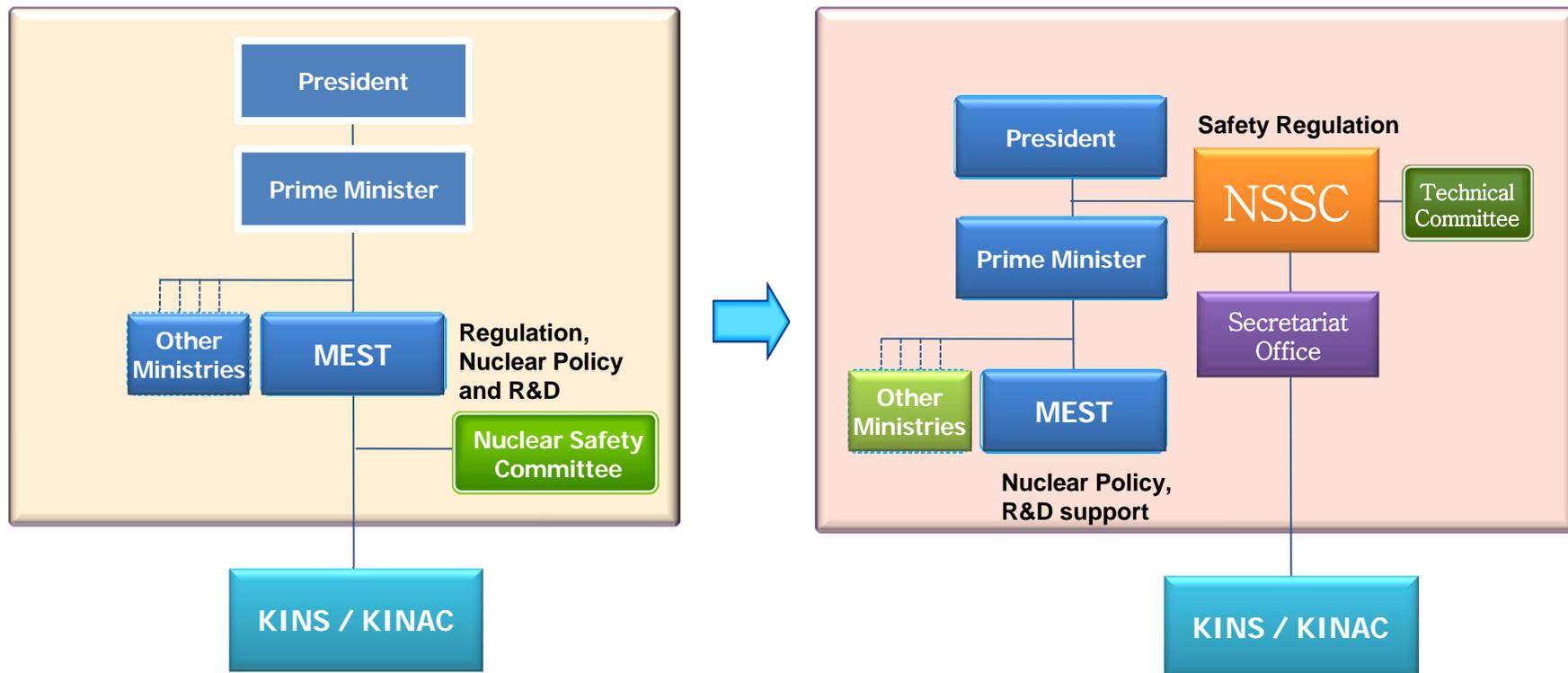
# Background

- **Concerns about regulatory independence in Korea**
  - Some controversy about mixed role of regulatory body (MEST)
    - ♦ Nuclear safety regulation
    - ♦ R&D, including the promotion of nuclear energy utilization
  - However, no dispute over NPP regulation (separated at ministerial level)
    - ♦ MEST's safety regulation vs. MKE's nuclear power program
- **Regulatory reform initiative by National Assembly**
  - 3 bills introduced by legislators during Jul. 2009 ~ Mar. 2010
  - Common goal to establish a standalone independent regulatory body
  - Reviewed at the Science Committee of National Assembly
- **Accident at Fukushima expedited review process**
  - President ordered the Cabinet to establish a new stand-alone regulatory body
  - Bill to establish the **Nuclear Safety & Security Commission (NSSC)**, passed at the National Assembly on 29 June, 2011

\* MEST: Ministry of Education, Science & Technology, MKE: Ministry of Knowledge and Economy

# Reorganization of regulatory body

- **NSSC** to be a dedicated regulatory body, supported by KINS/KINAC
- **MEST's** role is now restricted to **Nuclear Policy and R&D support**



- **NSSC** Nuclear Safety and Security Commission
- **KINS** Korea Institute of Nuclear Safety
- **KINAC** Korea Institute of Nuclear Nonproliferation and Control

# NSSC, as a new regulator

- Independent, stand-alone, minister-level government agency
  - as the control tower in managing nuclear safety and security *en masse*.
  - reports directly to the President
  - launched on Oct. 26, 2011
- A holistic approach has been taken in assuring “Nuclear Safety, Security and Safeguards”



# Changes in Legal Framework

- **Act on Establishing & Operating NSSC**, newly enacted
- **Nuclear Safety Act**, separated from **Atomic Energy Act** (renamed to **Promotion of Atomic Energy Utilization Act**)
- Other laws for nuclear safety moved to the jurisdiction of NSSC

## Laws under the jurisdiction of the NSSC

- **Act on Establishing & Operating NSSC** (new)
- **Nuclear Safety Act** (divided from Atomic Energy Act)
- **Act on Safety Management of Naturally Occurring Radioactive Material** (new)
- **Act on Physical Protection and Radiological Emergency**
- **Nuclear Liability Act**
- **KINS Act**

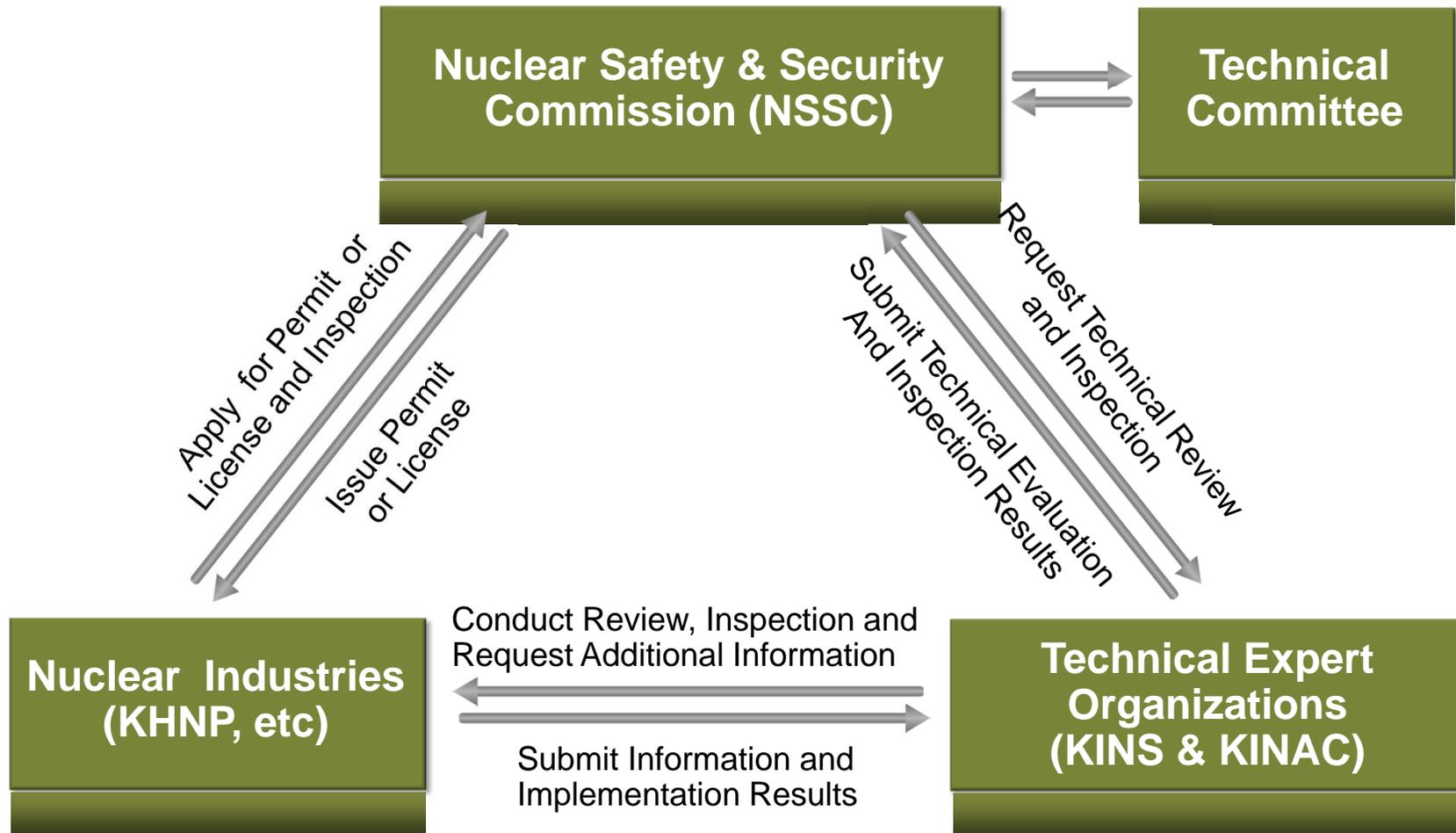
## Laws under the jurisdiction of the MEST

- **Promotion of Atomic Energy Utilization Act** (separated from Atomic Energy Act)
- **Promotion of Radiation and Radioactive Isotope Utilization Act**

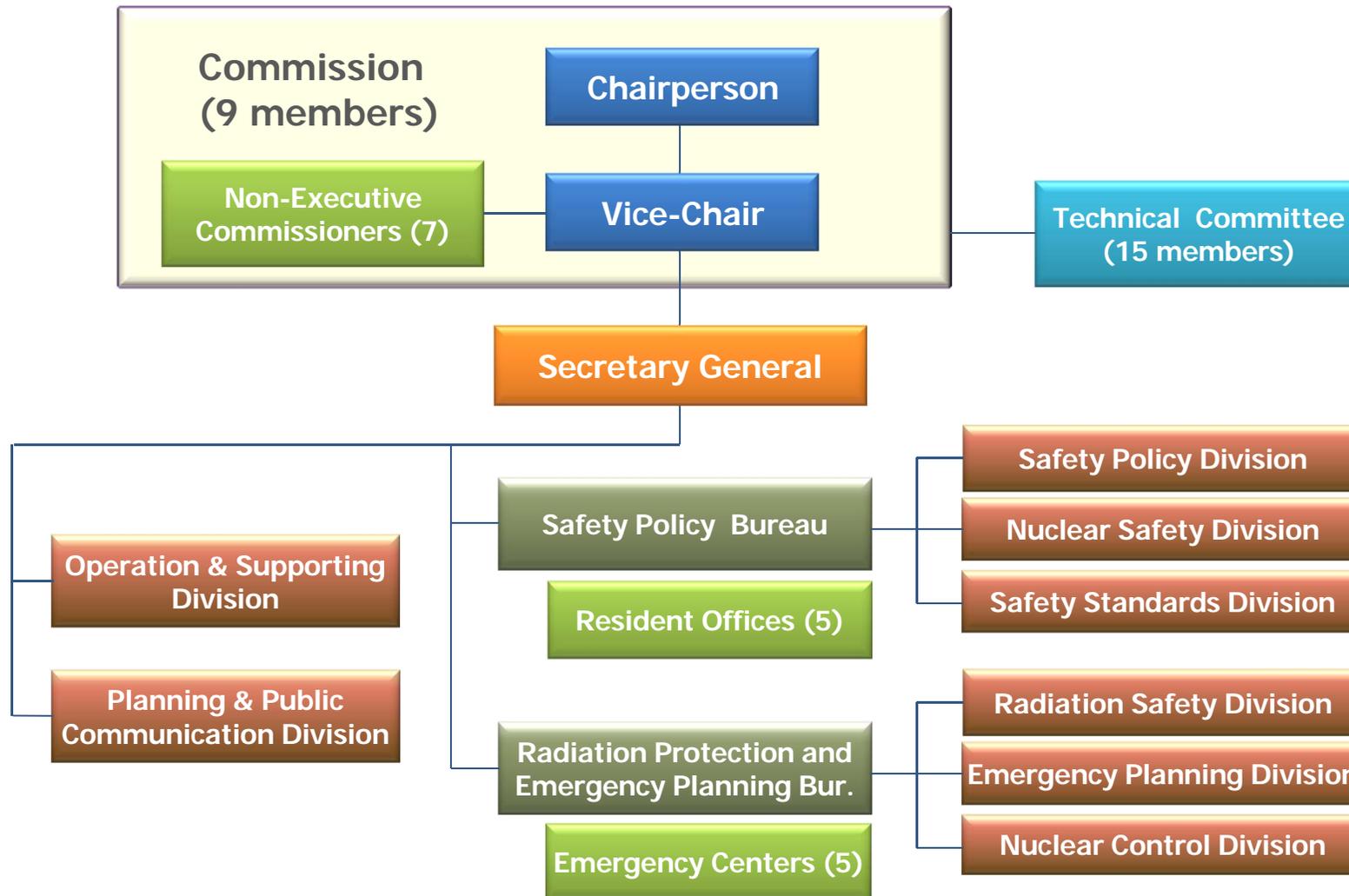
# Measures for Independence

- **Law declares “independence” as an operating principle of NSSC**
  - NSSC shall maintain independence and impartiality... (Art. 2 of NSSC Act)
- **Exception from the Government Organization Act (GOA)**
  - Prime Minister(PM)’s general power on Administration (Art. 16 of GOA)
    - PM directs and supervises central administrative agencies
    - PM may suspend or cancel any order or disposition of central administrative agencies, when it is deemed unlawful or unjust
  - NSSC is a special central administrative agency, exempted from such intervention by PM (Art. 3(2) of NSSC Act)
- **Guarantee for NSSC Commissioners** (Art. 8 of NSSC Act)
  - Commissioners shall not be dismissed against their will except prescribed cases like guilty of wrongdoing, etc.
  - Commissioners shall not receive unfair instructions or interference while performing their duties
  - Commissioners shall have a guaranteed 3-year term (could be reappointed once)

# Licensing/Inspection Process



# NSSC's Organization Chart



# NSSC's Organization

- **Commission (9 members)**
  - **Chairperson** (minister level) – Dr. C.S. Kang, former professor emeritus at Seoul National University
  - **Vice-chair** (vice-minister level) – Dr. C.H. Yun, former president of KINS
  - **7 non-executive commissioners** – includes experts with various background: law, social science, environment, medical science, etc.
- **Technical Committee (15 members)**
  - Members are **senior experts from various technological areas**
  - **Chairperson** – Dr. U.C. Lee, professor at Seoul National University
  - **Ad-hoc subcommittees** can be formed, **if needed**
- **Secretariat Office**
  - **2 bureaus and 8 divisions (total staff : ~ 90)**
  - **5 onsite resident offices** on NPPs and a radwaste repository site
  - **5 offsite emergency management centers** near facilities

# NSSC's Mission & Responsibility

## ■ Mission

Perform regulatory activities to

- **protect the public health and safety**
- **preserve the environment**
- **promote the national defense and security**
- **fulfill the international obligations**



## ■ Major responsibility

- **Rulemaking**, codes and standards for nuclear regulation
- **Authorization** of nuclear facilities, materials and activities
- **Inspection and enforcement** for authorized facilities, materials and activities
- **Incident response and emergency preparedness**
- **Physical protection** of nuclear facilities and materials
- **Non-proliferation and safeguards** activities
- **Export and import control** of nuclear related materials and equipment

# NSSC's Slogan & Core Values

- **Slogan**
  - “Nuclear Safety and Security, Our Top Priority”
  
- **Core Values**
  - **Excellence** in regulation
  - **Independence** from outside influence and pressure
  - **Transparency** in regulatory process
  - **Fairness** in regulatory activities
  - **Reliability** of regulatory decision
  
- **Principles of Operation**
  - First priority on **servicing the people**
  - **Mutual respect** based on trust
  - **Performance enhancement** through efficient management
  - Active **information disclosure** and **public communication**
  - **International collaboration** for global partnership

# Clarification of NSSC's Function

- **Stand-alone ?**
  - Technical tasks of nuclear safety regulations to be performed by expert organizations, KINS/KINAC
- **Political Appointment ?**
  - Commissioners shall not participate in political activities (NSSC Act)
  - Party members shall not be eligible to be a commissioner (NSSC Act)
- **Judicial Power ?**
  - Punishment by fine is under jurisdiction of criminal court, except some administrative penalty (e.g., penalty for lateness or negligence)
- **Responsible for 3S ?**
  - NSSC is responsible for safety, security and safeguards, including export control

# IRRS Recommendations on NSSC (July 2011)

- Prepare **selection criteria for the NSSC members** to reflect the need of independence and nuclear safety competence
- Clearly define the **responsibilities within the new regulatory body** and avoid overlaps between the Secretariat, KINS and the Advisory Committee
- Allocate **resources and staff**, commensurate with those responsibilities
- Prepare **human resources plans** for the Secretariat that provide appropriate staff to enable the accomplishment of its administrative function in support of the Commission
- Establish an **advisory committee** to support the decision-making process
- Provide for development of a **management system** to cover all activities of the new Nuclear Safety Commission and its Secretariat

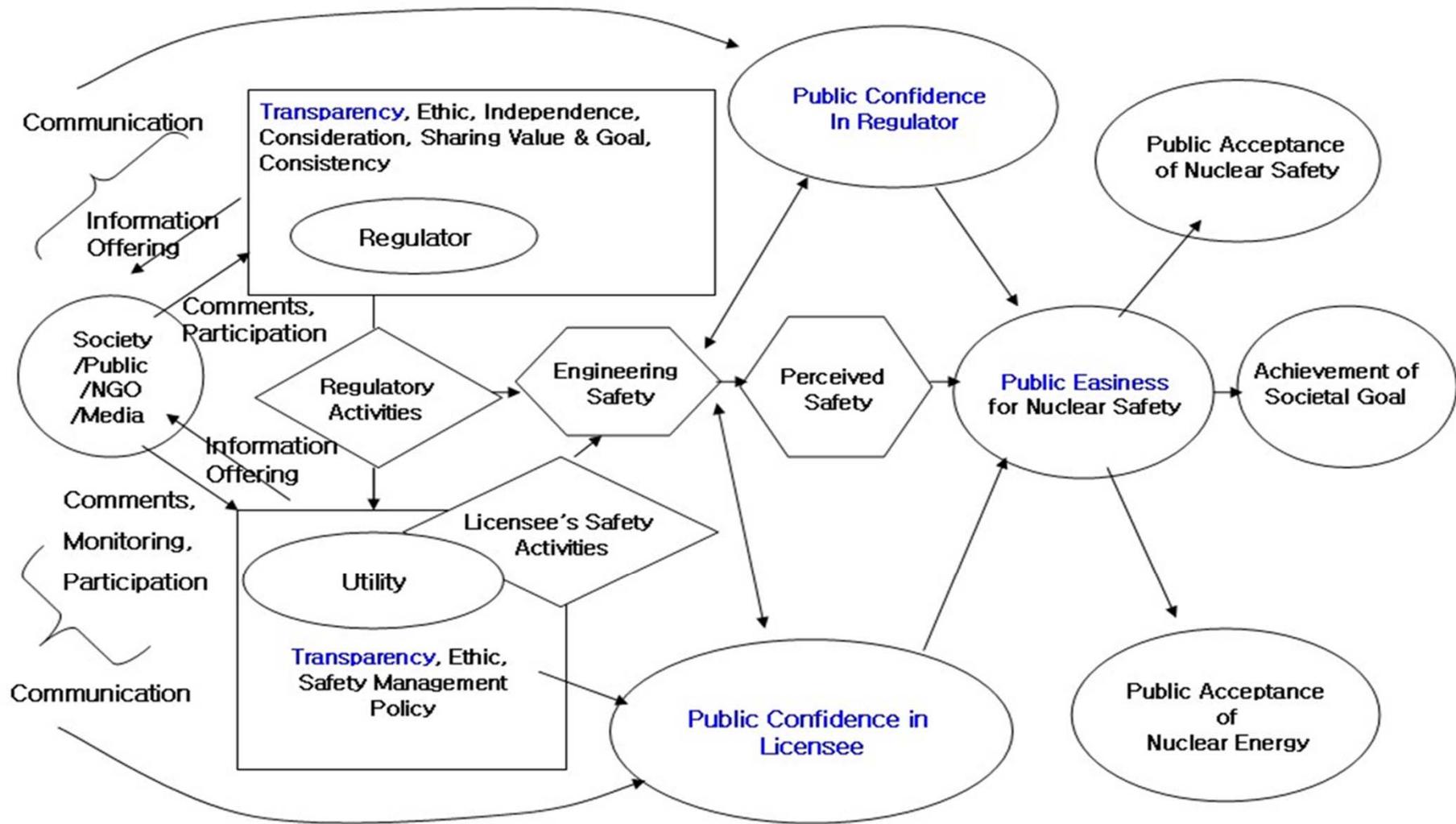
# Potential Challenges associated with Transition

- **Change Management**
  - Potentials for weakening regulatory function by new assignment of many regulatory staff following significant organizational changes
  - Measures needed for maintaining continuity of regulatory activities in progress
  
- **Securing competent staff**
  - Difficulties in recruiting officials to serve in a small, independent, separate government organization (NSSC)
  - Incentive program needed to attract competent staff
  
- **Emotional separation from nuclear promotion**
  - Concerns about culture of complicity in nuclear community
  - Special efforts needed to recognize regulator's identity and role and also to construct strong safety culture of regulatory body
    - Survey of Safety climate within regulator needed

# Public Confidence(Trust) Building

- **Public Confidence in Regulator**
  - An expectation that the regulator will not allow the public to be harmed when vulnerable
- **Status in Korea**
  - Low level of public confidence in the government
  - Investing significant social capital to increase public confidence in nuclear power - expected to decrease the cost of electricity production
- **Strategy for Public Confidence Building**
  - Establish a model for public confidence in nuclear safety
  - Develop specific elements of public confidence expectation for various public groups
  - Implement practical measures for improving public confidence

# Public Confidence Model

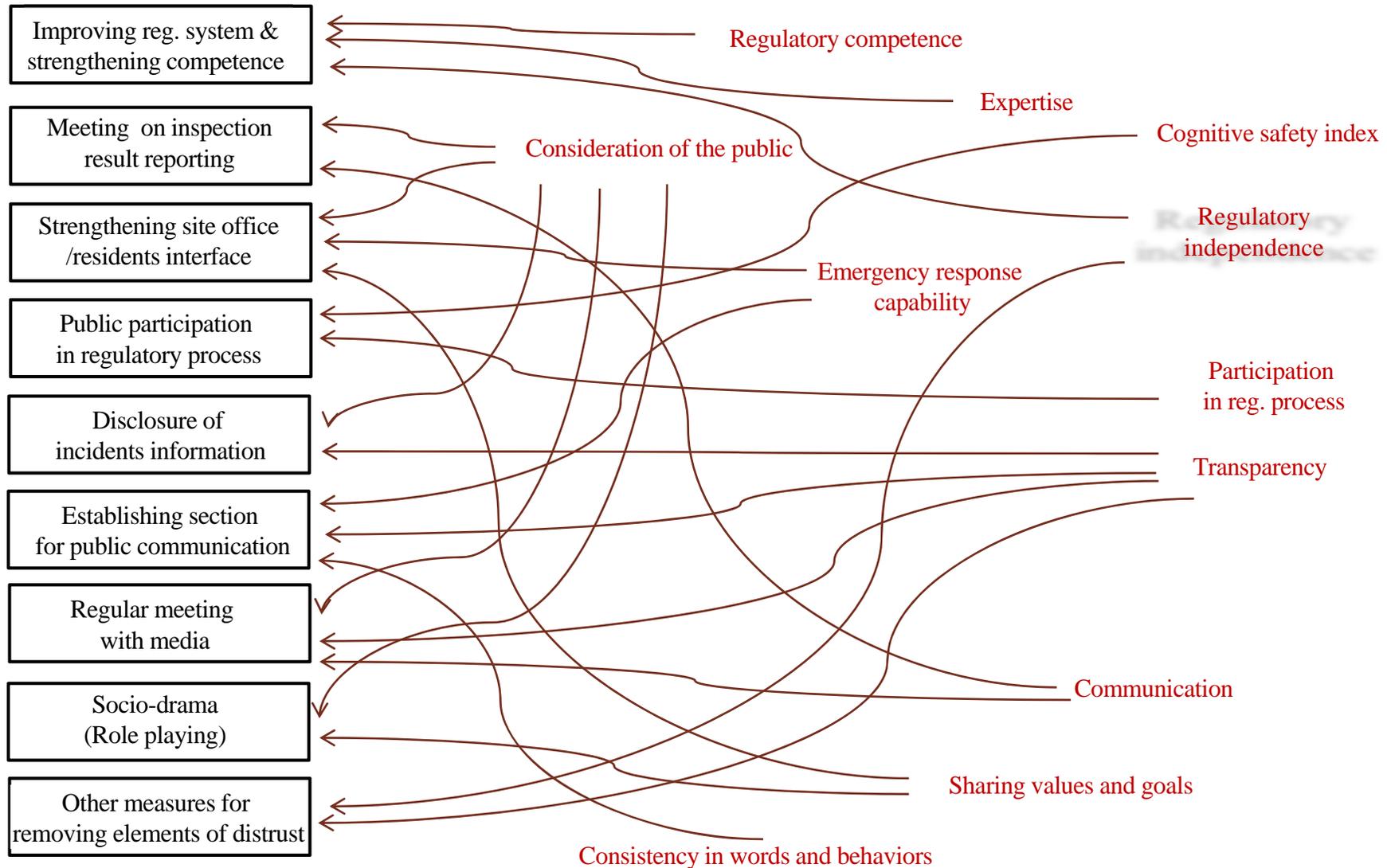


Choi's model, 2007

# Elements of Confidence in regulator

	Elements of confidence in regulator
Local Residents	Observance of commitments, consistency, regulatory independence, prompt response to the incident, considerations, emergency response capability, sharing values and goals, communication, expertise
NGOs	Regulatory independence, information disclosure, cooperation, sharing values and goals, expertise, communication
Media	Transparency, prompt information disclosure, regulatory independence, expertise, communication
General Public	Prompt responsiveness (via media), conservatism in measures in incident/accident situation, expertise, communication

# Measures for Public Confidence in Regulator



# Concluding Remarks

- **Regulatory reform to establish the NSSC is an important and leading part of Korea's action plan to strengthen nuclear safety**
- **Continuing efforts are to be made to establish a good regulatory culture, in line with regulatory framework change**
- **Measures for transition management and public confidence are being implemented**
- **Best efforts shall be made by the NSSC towards implementation of lessons learned from Fukushima accident, and IAEA's Action Plan on Nuclear Safety as well**
- **Korea continues to support the initiatives for strengthening nuclear safety framework worldwide, and to provide full cooperation and participation in those efforts**

**Thank you for your attention!**

**(Q/A)**