

# Milestones for Nuclear Power Infrastructure Development

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## Establishment of A Regulatory Framework

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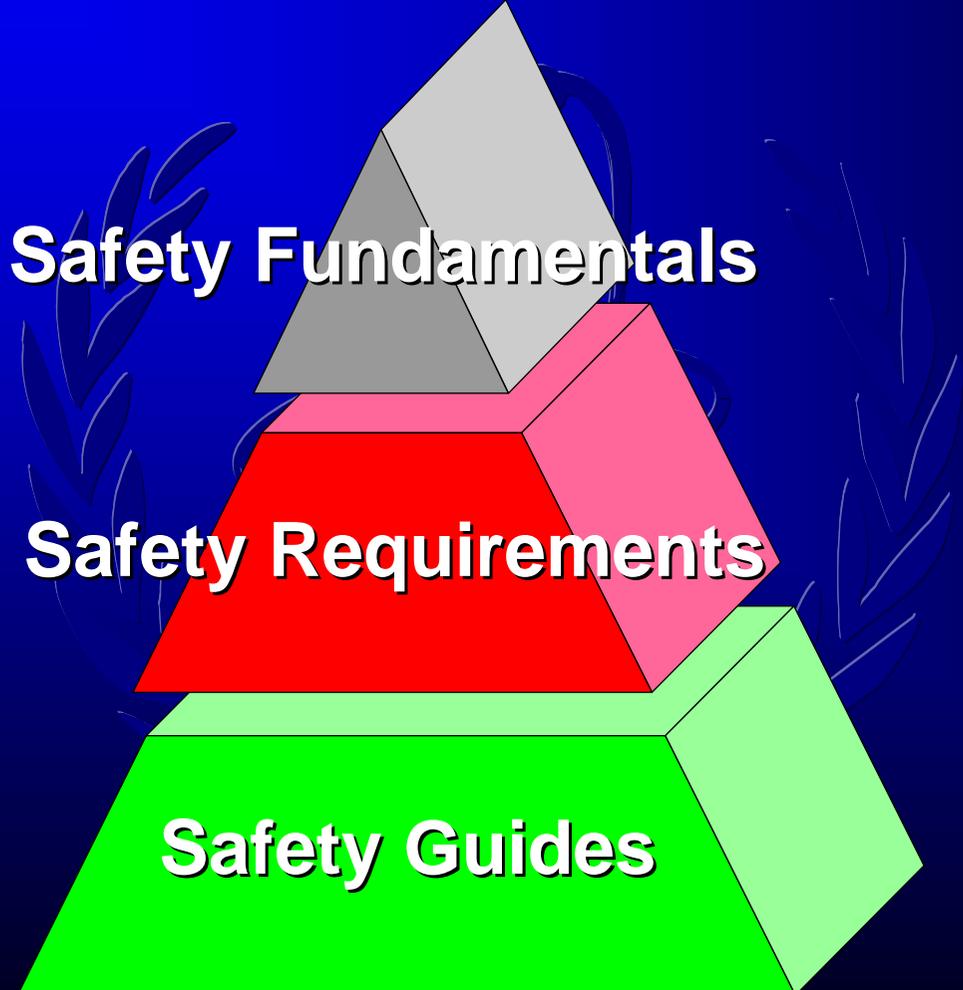
*David Graves, Senior Safety Officer*

*Division of Nuclear Installation Safety*



# IAEA SAFETY STANDARDS

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**Safety Fundamentals**

**Safety Requirements**

**Safety Guides**

# IAEA Safety Fundamentals

## IAEA Safety Fundamentals (SF-1)

### 10 Fundamental Safety Principles

- ✓ Responsibility for safety
- ✓ **Role of government**
- ✓ Leadership and management for safety
- ✓ Justification of facilities and activities
- ✓ Optimization of protection
- ✓ Limitation of risks to individuals
- ✓ Protection of present and future generations
- ✓ Prevention of accidents
- ✓ Emergency preparedness and response
- ✓ Protective action to reduce existing or unregulated radiation risks

# Establishment of Legal and Regulatory Framework

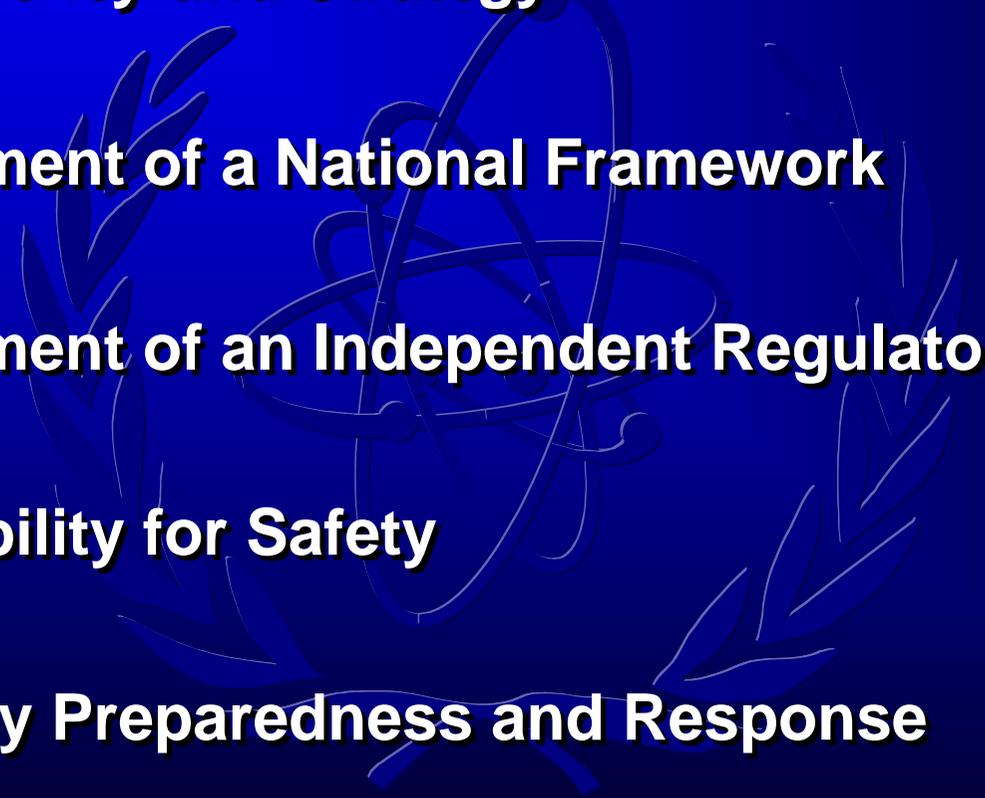
## Principle 2: Role of government

**An effective legal and governmental framework for safety, including an independent regulatory body, must be established and maintained.**

**“The government is responsible for the adoption within its national legal system of such legislation, regulations, and other standards and measures as may be necessary to fulfil all its national responsibilities and international obligations effectively, and for the establishment of an independent regulatory body.”**

# Establishment of Regulatory Framework

## GOVERNMENTAL RESPONSIBILITIES FOR SAFETY

- **National Policy and Strategy**
  - **Establishment of a National Framework**
  - **Establishment of an Independent Regulatory Body**
  - **Responsibility for Safety**
  - **Emergency Preparedness and Response**
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# Establishment of Regulatory Framework

## GOVERNMENTAL RESPONSIBILITIES FOR SAFETY

- **Intervention**
  - **Physical Protection and Security**
  - **Commitment to Radioactive Waste and Spent Fuel Management**
  - **Financial Liability**
  - **Competence in Nuclear Safety**
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# Establishment of Regulatory Framework

## INTERACTION WITH THE GLOBAL NUCLEAR SAFETY REGIME

- **Legally Binding International Instruments – Conventions**
  - **Non-Binding International Instruments - Codes of Conduct**
  - **International Safety Standards**
  - **Exchange of Operating and Regulatory Experience**
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# Establishment of Regulatory Framework

## INTERACTION WITH THE GLOBAL NUCLEAR SAFETY REGIME

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- **Multinational and Bilateral Arrangements for Cooperation**
  - **International Peer Reviews**
  - **Direct Access of Regulatory Bodies to International Contacts**

# Establishment of Regulatory Framework

## LEGISLATION

- **Legislation to establish a regulatory body**
- **Adequate authority, competence and financial and human resources to fulfil assigned responsibilities**
- **Description of the mandate and duties**
- **Relationship of the regulatory body to bodies responsible for the promotion and utilization of nuclear energy.**

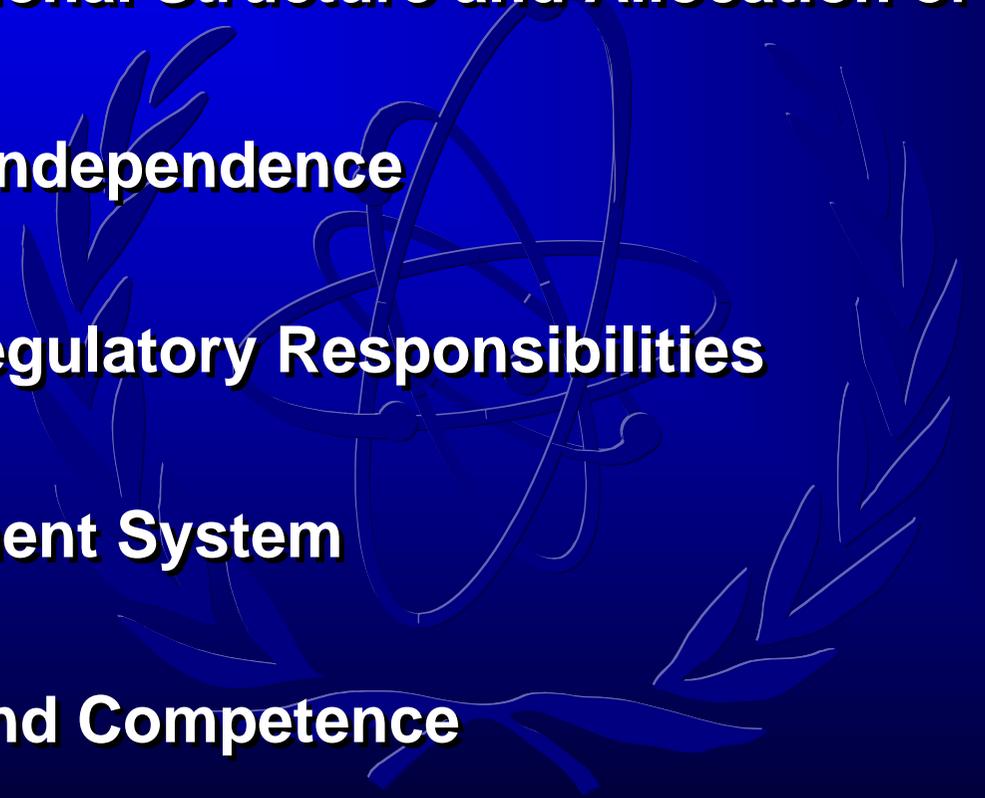
# Establishment of Regulatory Framework

## REGULATORY BODY

- **Establish structure of the regulatory body, its technical and support experts and organizations, and its human and financial resources**
- **Establish applicable national safety regulations and requirements, processes for authorization/licensing, review and assessment, inspection and enforcement, governing the safety of nuclear installations**
- **Establish a licensing process with regard to nuclear installations**

# Establishment of Regulatory Framework

## GENERAL REQUIREMENTS FOR REGULATORY BODY ORGANIZATION

- **Organizational Structure and Allocation of Resources**
  - **Effective Independence**
  - **Shared Regulatory Responsibilities**
  - **Management System**
  - **Staffing and Competence**
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# Establishment of Regulatory Framework

## GENERAL REQUIREMENTS FOR REGULATORY BODY ORGANIZATION

- **Advisory Bodies and Support Organisations**
  - **Relations between the Regulatory Body and the Licensee**
  - **Relations between the Regulatory Body and Interested Parties**
  - **Regulatory Stability**
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# Establishment of Regulatory Framework

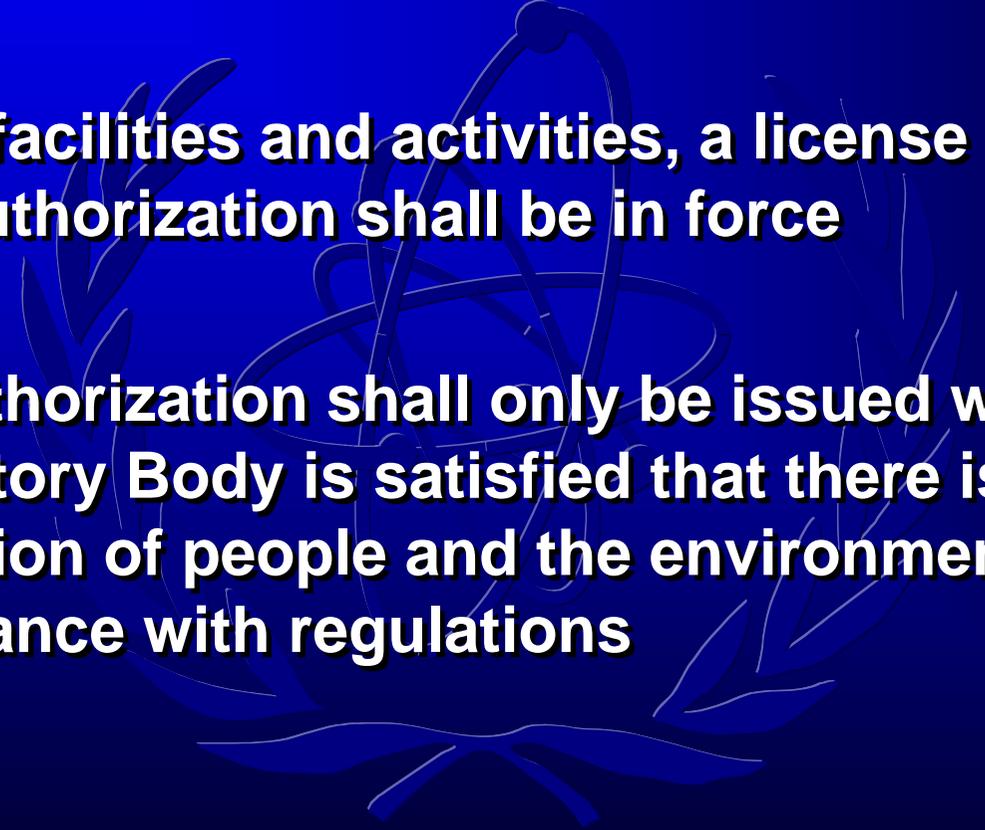
## FUNCTIONS OF THE REGULATORY BODY

- **Authorization (Licensing) Process**
  - **Review and Assessment**
  - **Inspection**
  - **Enforcement**
  - **Development of Regulatory Approach, Regulations and Guides**
  - **Information and Public Communication**
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# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Authorization (Licensing) Process

- ✓ For all facilities and activities, a license or other prior authorization shall be in force
  - ✓ The authorization shall only be issued when the Regulatory Body is satisfied that there is adequate protection of people and the environment and compliance with regulations
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# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Review and Assessment

- ✓ Review and assess the information submitted by applicants to:
  - demonstrate safety prior to authorization
  - demonstrate safety periodically during operation
  - determine whether the facility or activity complies with the relevant safety objectives and criteria
  - verify conditions upon which the authorization was given
- ✓ Develop and implement its own programmes for review and assessment of the facilities, as a confirmatory measure.

# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Inspection

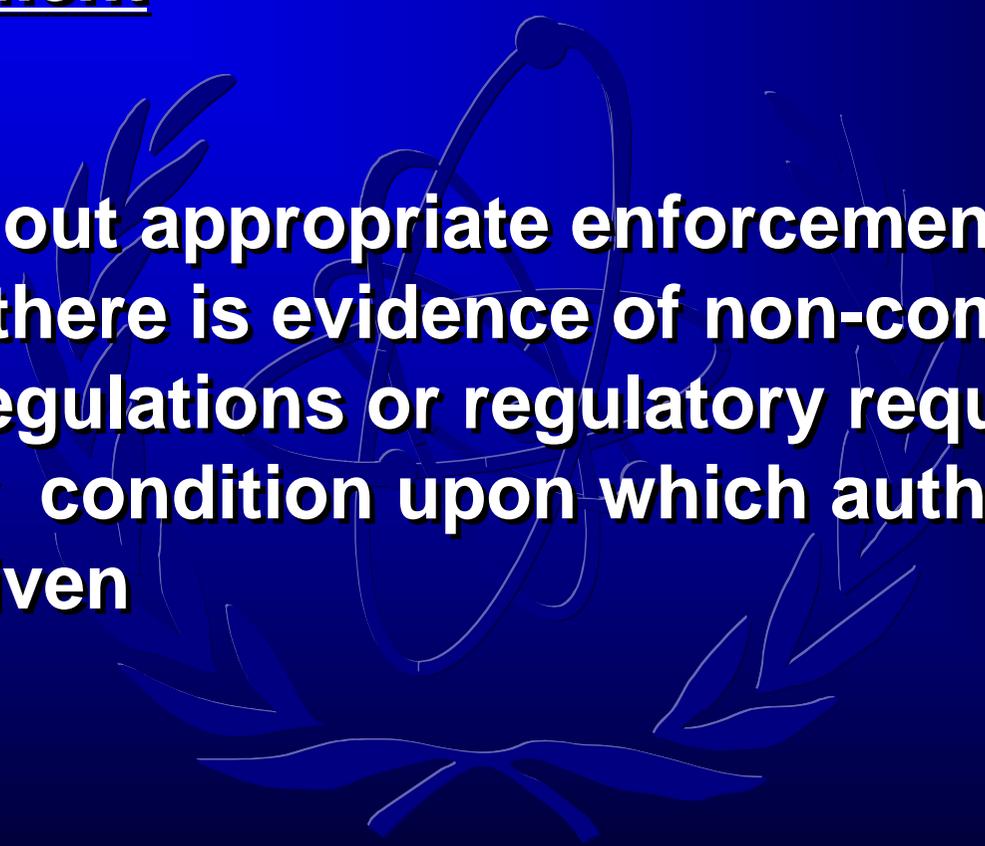
- ✓ Carry out inspections to verify that the licensee is in compliance with regulations, regulatory requirements and the conditions upon which authorization was given
- ✓ These inspections shall include routine and non routine inspections.
- ✓ These inspections shall include NPP programmes (surveillance, in service inspection and maintenance) as well as safety related hardware and activities.

# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Enforcement

- ✓ Carry out appropriate enforcement actions when there is evidence of non-compliance with regulations or regulatory requirements or any condition upon which authorization was given



# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Regulatory Approach, Regulations and Guides
  - ✓ Determine regulatory approach
  - ✓ Establish, promote or adopt regulations, safety principles, associated criteria and guides upon which regulatory actions are based
  - ✓ Keep documents up-to-date, taking into consideration internationally endorsed standards and recommendations

# Establishment of Regulatory Framework

## FUNCTIONS OF THE REGULATORY BODY

- Information and Public Communication

- ✓ Set up appropriate means of informing the public and other interested parties, and the information media about the safety aspects of NPPs and about regulatory processes
- ✓ Consult parties in the vicinity and other interested parties, as appropriate, in an open and inclusive process.

# IAEA STANDARD FOR REGULATORY INFRASTRUCTURE

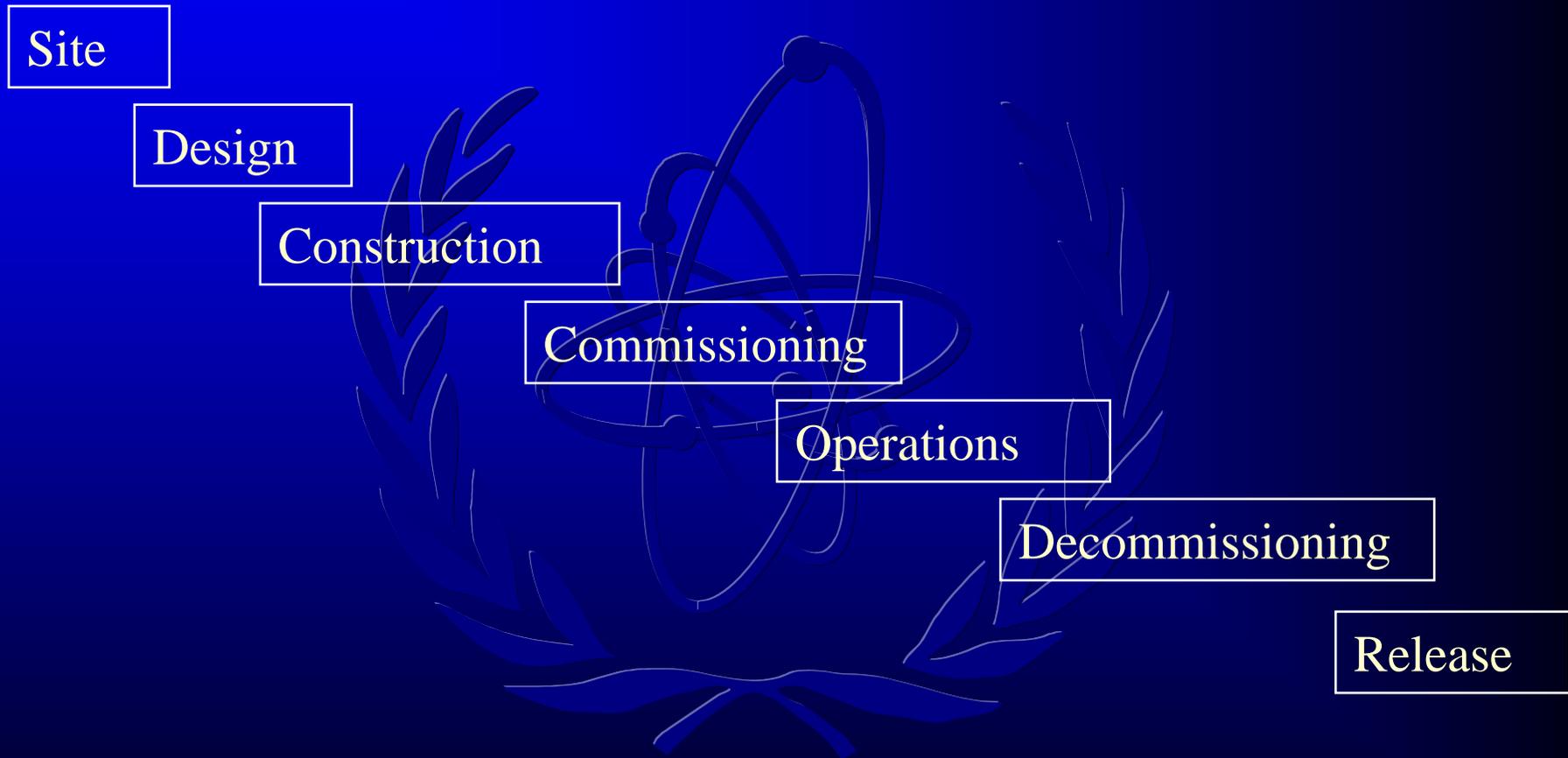
**GS-R-1:** *LEGAL AND GOVERNMENTAL INFRASTRUCTURE FOR NUCLEAR, RADIATION, RADIOACTIVE WASTE AND TRANSPORT SAFETY.*

**Structure:**

1. Legislative and governmental responsibilities
2. Responsibilities and functions of the regulatory body
3. Organization of the regulatory body
4. Activities of the regulatory body
5. Special thematic infrastructure

- **GS-R-1 Revision started in 2007**

# Facility Stages/Regulatory Applicability



# **REGULATORY INFRASTRUCTURE**

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**THANK YOU FOR YOUR ATTENTION!!**

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**Division of Nuclear Installation Safety**

