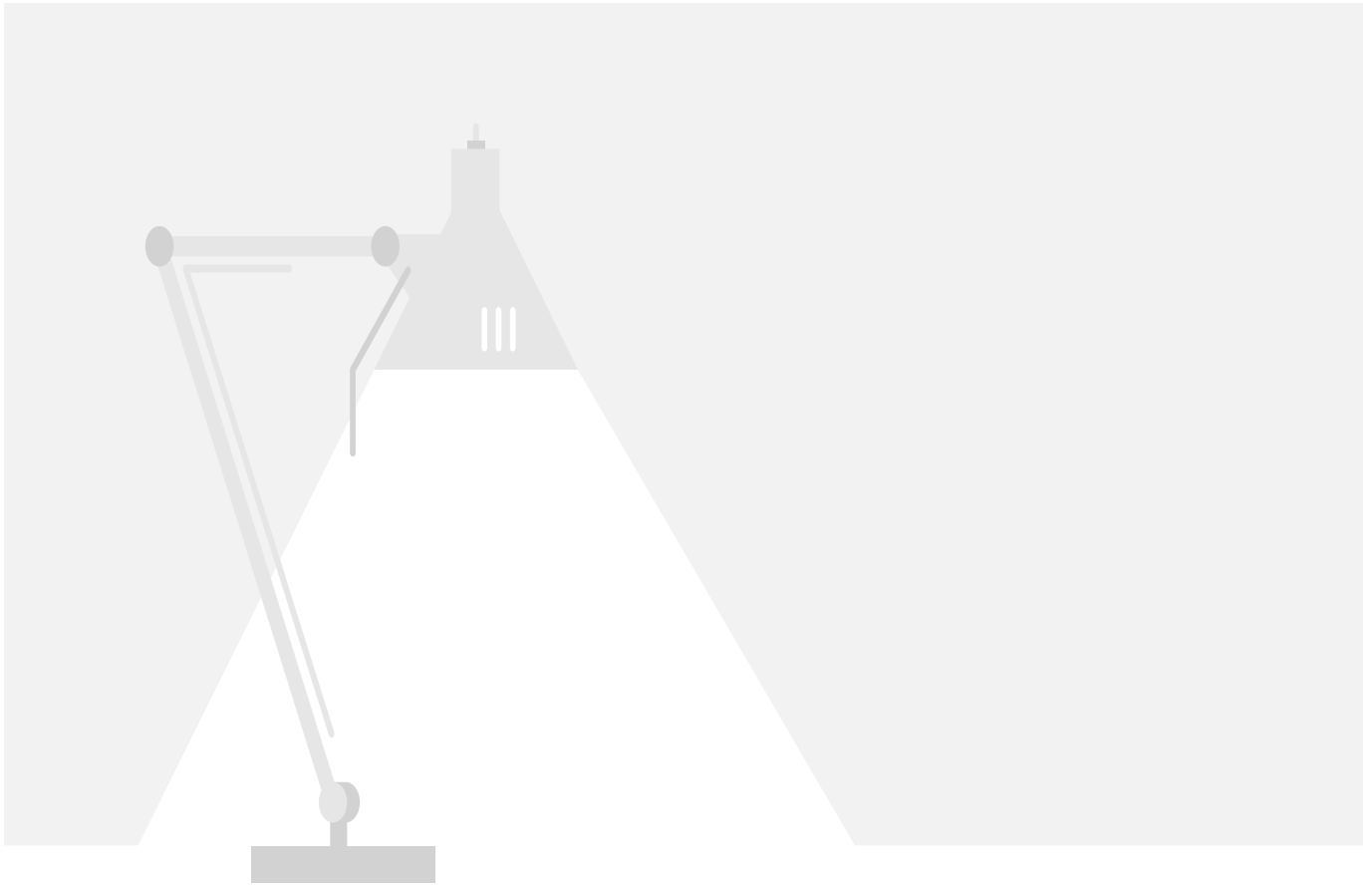




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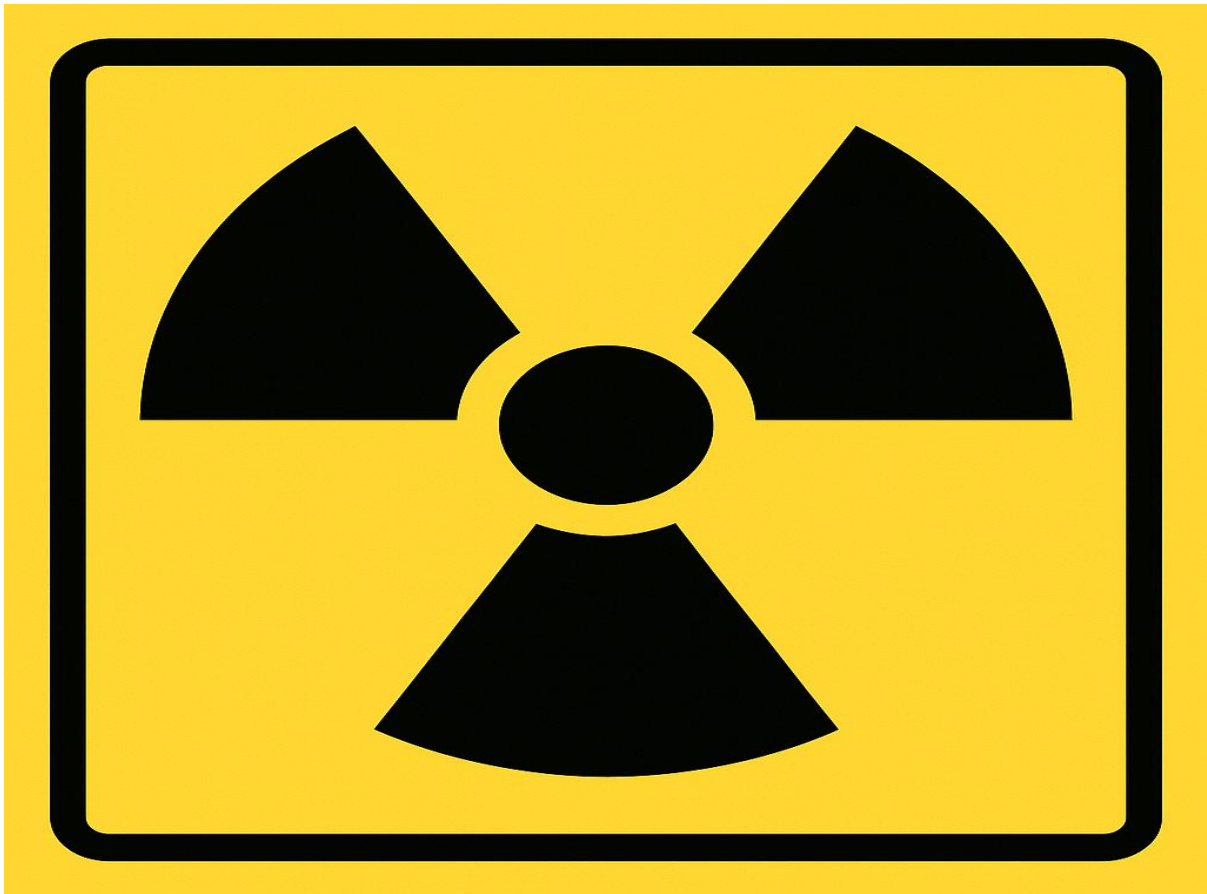
**BROCHURE - RADIATION**  
**PROTECTION EMERGENCY**  
**PREPAREDNESS WORKSHOP.**

## 1. Introduction to Nuclear Safety and Security Culture



Nuclear security culture is the foundation of all protective efforts surrounding nuclear and radiological materials. It emphasizes the shared responsibility among all personnel to maintain high standards of vigilance and integrity, ensuring these materials are safeguarded against unauthorized access or malicious acts.

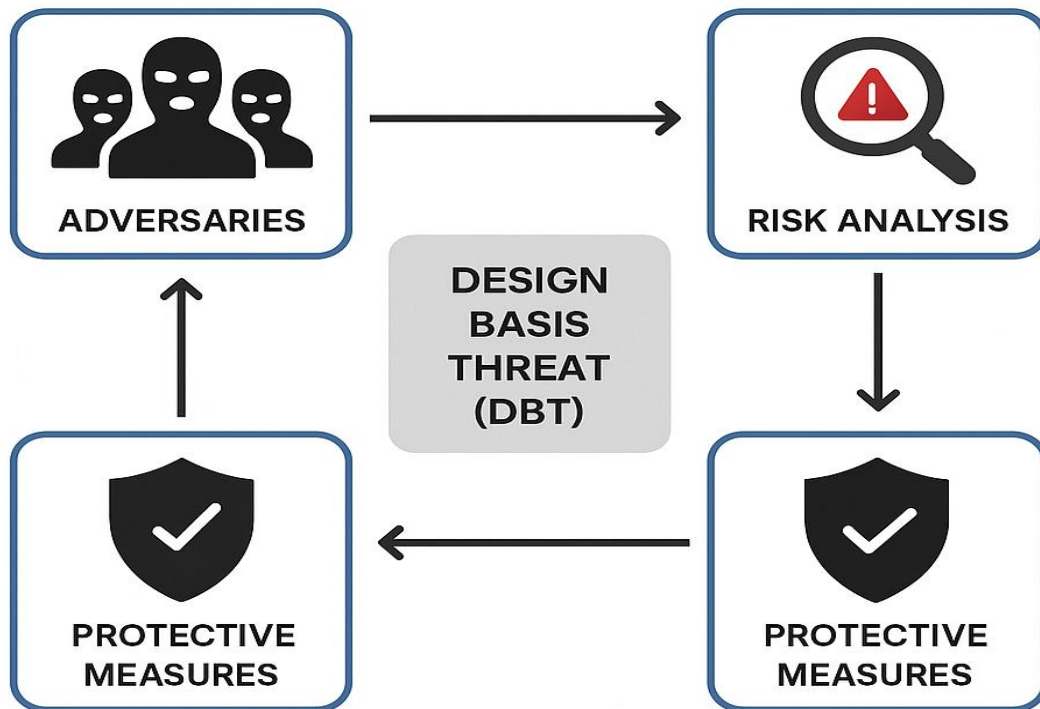
## 2. Basic Radiation Awareness



Understanding the basic principles of radiation, its sources, and its effects are essential for all staff involved in the handling, storage, or transport of nuclear and radiological materials. This awareness forms the basis for safe and secure operations.

### 3. Design Basis Threat (DBT) Fundamentals

## THREAT ASSESSMENT PROCESS FOR NUCLEAR SECURITY



A Design Basis Threat (DBT) is a profile defined by the Government of Mozambique, outlining potential adversaries and their capabilities. It serves as the cornerstone for the design of robust protection systems for nuclear or radioactive materials. The DBT is grounded in comprehensive threat assessments, ensuring that security measures match the identified risks.

#### 4. Physical Protection System (PPS) Fundamentals for Radiological Sources



Physical Protection Systems (PPS) are complex frameworks that combine people, procedures, and equipment to prevent the unauthorized use of radioactive materials. The PPS employs a graded approach, where the level of protection is tailored to the hazard presented by the materials in question. Key functions of the PPS include deterrence, detection, delay, and response.

## 5. Safety and Security Systems



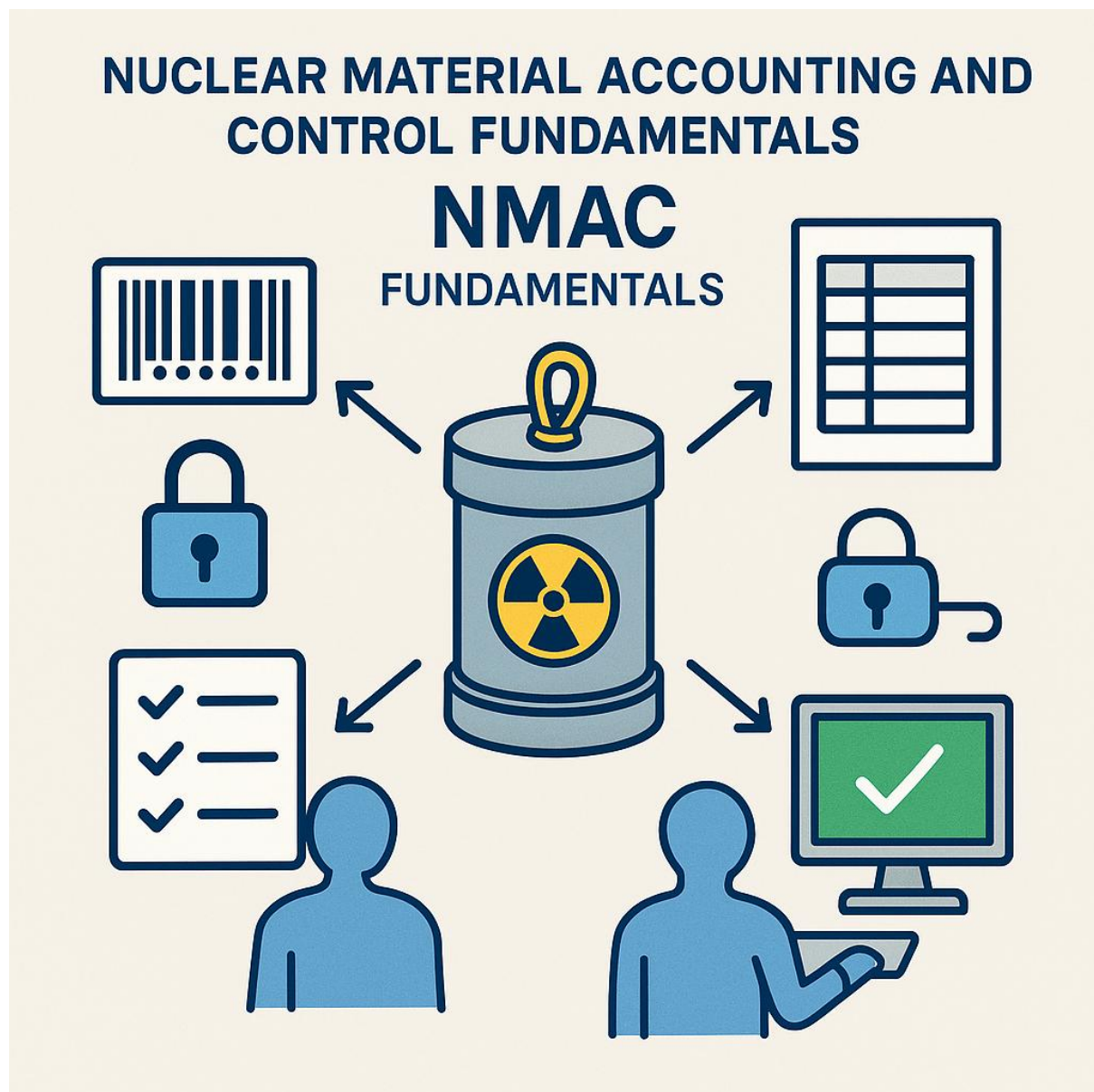
The integration of safety and security systems ensures comprehensive protection of nuclear and radiological materials. By aligning safety protocols with security measures, organizations can create effective, mutually reinforcing defenses.

## 6. Human Factors in Security



Human factors play a critical role in the effectiveness of nuclear security. Attention to training, motivation, and the psychological well-being of staff enhances the reliability and integrity of security measures.

## 7. Nuclear Material Accounting and Control (NMAC) Fundamentals



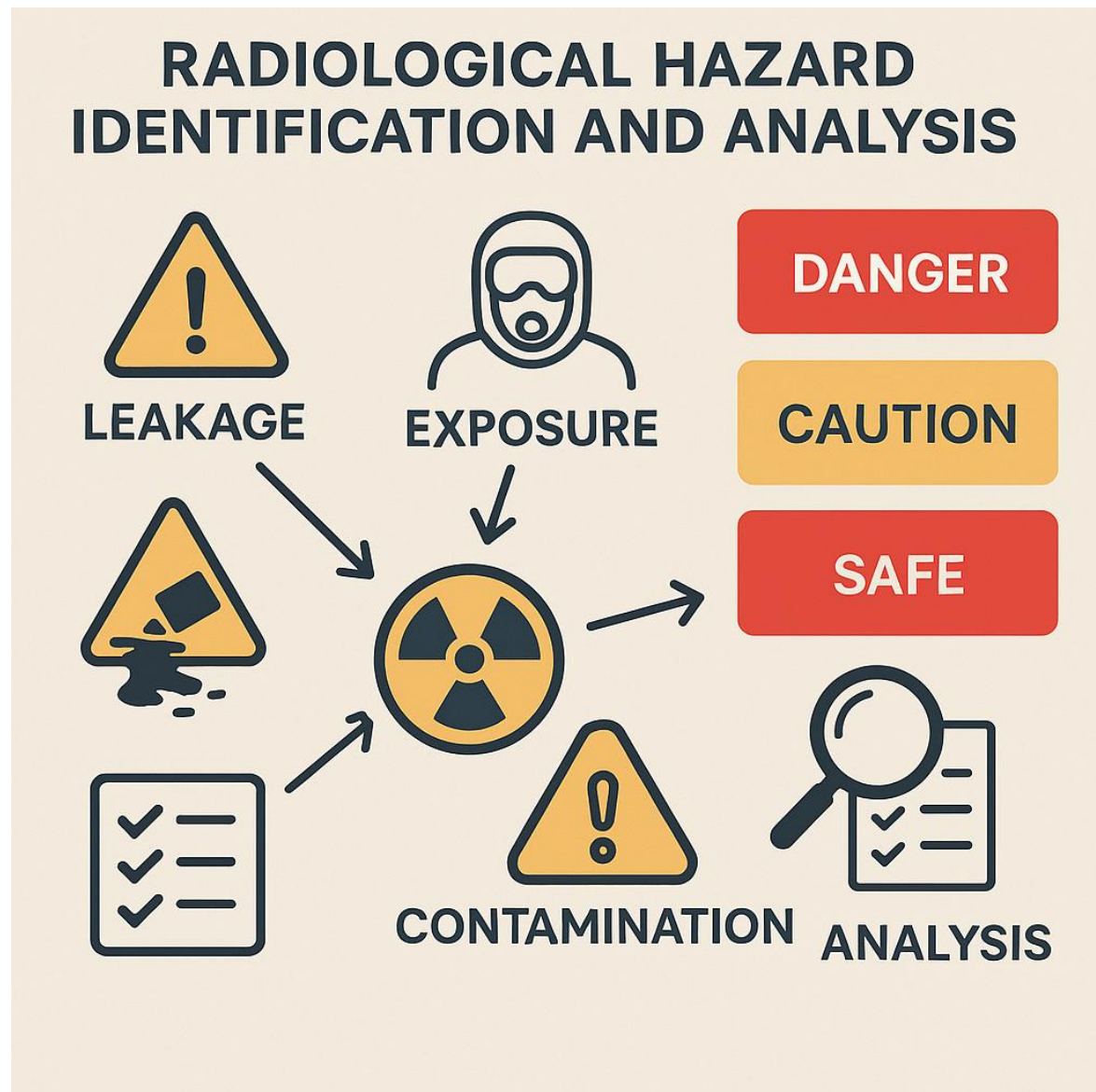
NMAC is a set of measures and procedures aimed at tracking and controlling nuclear materials. These practices ensure that all materials are properly accounted for, reducing the risk of loss, theft, or diversion.

## 8. Physical Protection System Design Strategy



A strategic approach to PPS design ensures that protective measures are appropriately balanced and layered. This involves analyzing potential threats and customizing the system to address specific vulnerabilities and operational needs.

## 9. Radiological Hazard Identification and Analysis



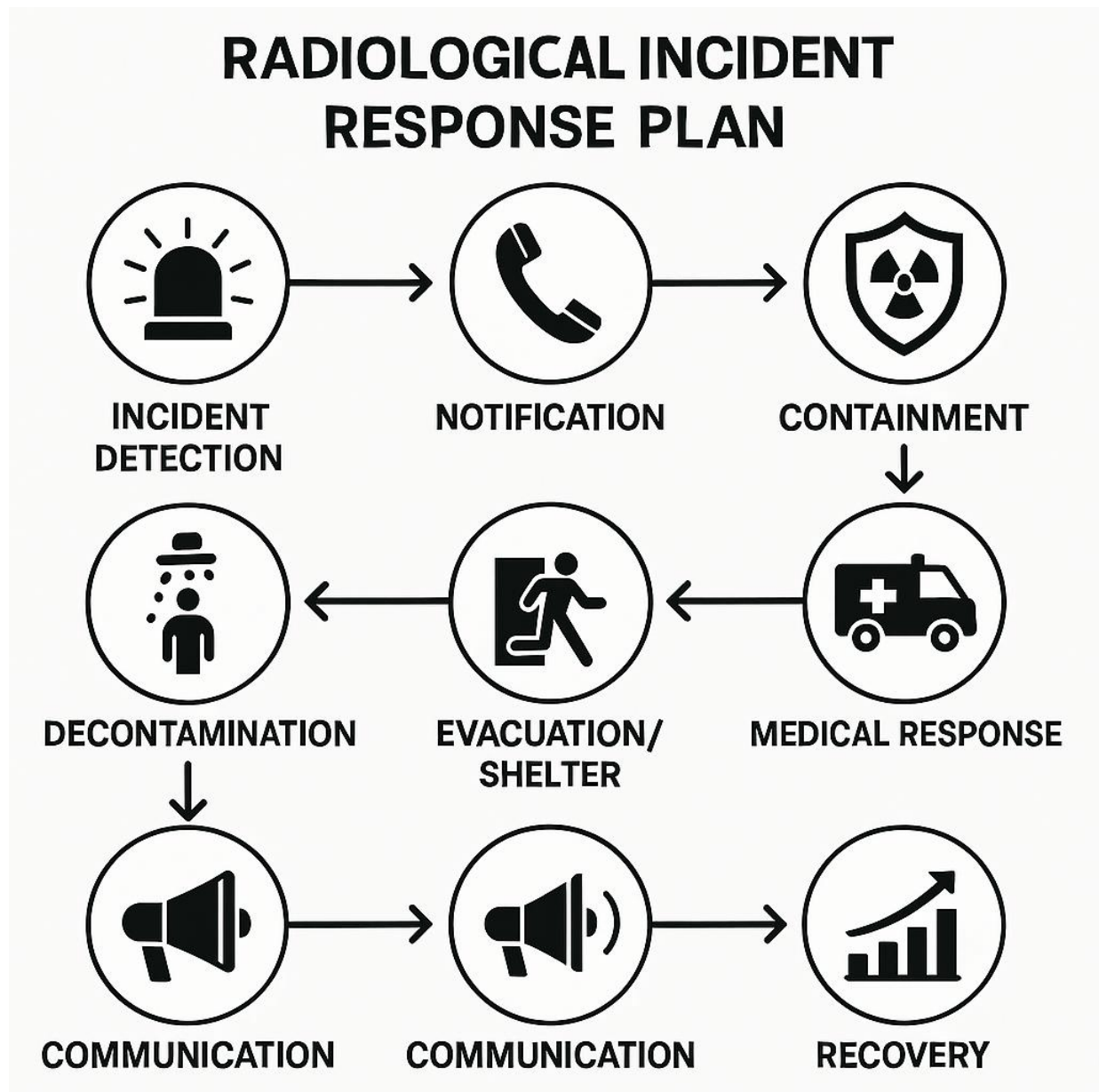
Identifying and analyzing radiological hazards is vital for risk assessment and management. This process enables organizations to prioritize resources and implement targeted protective measures.

## 10. PPS Configuration Management & Maintenance Fundamentals



Effective configuration management and maintenance are crucial for sustaining the integrity and performance of physical protection systems. Regular reviews, updates, and technical support help prevent vulnerabilities from emerging over time.

## 11. Response to Radiological Incidents



Preparedness to respond to radiological incidents ensures rapid and effective mitigation of potential impacts. Well-developed response plans and regular exercises are key components of an effective incident management framework.

## 12. Developing a DBT Methodology



Establishing a robust methodology for developing the Design Basis Threat ensures that the process is systematic, comprehensive, and adaptable to evolving risks. This methodology should be reviewed and updated regularly to reflect changes in the threat environment.

### 13. Radiation incident/accident control room



#### **Radiation Incident/Accident Control Room minimum requirements**

- Secure, dedicated control room space with restricted access.
- Reliable communication systems (phones, radios, intercoms, internet).
- Emergency power supply (generators, UPS).
- Computers and incident management software.
- Maps, facility layouts, and emergency plans displayed and accessible

**The workshop schedule for December 2025 is as per Table below:**

| Date                            | Topic Description                                        | Session Start time | Session end time |
|---------------------------------|----------------------------------------------------------|--------------------|------------------|
| Session 1: 08-12 December 2025  | Opening and welcome. Introduction and general discussion | 09H00              | 11H00            |
| Morning break                   | BREAK                                                    | 11H00              | 11H15            |
| Session 2: 08-12 December 2025  | Workshop Programme                                       | 11h15              | 12h15            |
| Session 2: 08-12 December 2025  | Radiation and you                                        | 12h15              | 13h15            |
| Lunch break                     | LUNCH                                                    | 13H15              | 13H45            |
| Session 3: 08-12 December 2025  | Radiation Fundamentals                                   | 13h45              | 15h45            |
| Afternoon break                 | BREAK                                                    | 15H45              | 16H00            |
| Session 4: 08-12 December 2025  | Questions and Answers                                    | 16h00              | 16h30            |
| Close of day 1                  | END OF DAY                                               |                    | 16H30            |
| Session 5: 08-12 December 2025  | Design Basis Threat -DBT                                 | 09H00              | 11H00            |
| Morning break                   | BREAK                                                    | 11H00              | 11H15            |
| Session 6: 08-12 December 2025  | Physical Protection system                               | 11H15              | 13H15            |
| Lunch break                     | LUNCH                                                    | 13H15              | 13H45            |
| Session 7: 08-12 December 2025  | Emergency Control room                                   | 13H45              | 15H45            |
| Afternoon break                 | BREAK                                                    | 15H45              | 16H00            |
| Session 8: 08-12 December 2025  | Questions and Answers                                    | 16H00              | 16H30            |
| Close of day 2                  | END OF DAY                                               |                    | 16H30            |
| Session 9: 08-12 December 2025  | Concepts and Objectives of Emergency Preparedness        | 09H00              | 11H00            |
| Morning break                   | BREAK                                                    | 11H00              | 11H15            |
| Session 10: 08-12 December 2025 | First responder basic knowledge                          | 11h15              | 13h15            |
| Lunch break                     | LUNCH                                                    | 13H15              | 13H45            |
| Session 11: 08-12 December 2025 | First responder basic knowledge (cont.)                  | 13h45              | 15h45            |
| Afternoon break                 | BREAK                                                    | 15H45              | 16H00            |
| Session 12: 08-12 December 2025 | Questions and Answers                                    | 16h00              | 16h30            |
| Close of day 3                  | END OF DAY                                               |                    | 16H30            |
| Session 13: 08-12 December 2025 | Emergency Preparedness Instruments                       | 09H00              | 11H00            |
| Morning break                   | BREAK                                                    | 11H00              | 11H15            |
| Session 14: 08-12 December 2025 | Emergency Preparedness Instruments (Cont.)               | 11h15              | 13h15            |
| Lunch break                     | LUNCH                                                    | 13H15              | 13H45            |
| Session 15: 08-12 December 2025 | Emergency Preparedness Instruments (Cont.)               | 13h45              | 15h45            |
| Afternoon break                 | BREAK                                                    | 15H45              | 16H00            |
| Session 16: 08-12 December 2025 | Instruments Questions and Answers                        | 16h00              | 16h30            |
| Close of day 4                  | END OF DAY                                               |                    | 16H30            |
| Session 17: 08-12 December 2025 | RPP requirements                                         | 09H00              | 11H00            |
| Morning break                   | BREAK                                                    | 11H00              | 11H15            |
| Session 18: 08-12 December 2025 | Emergency Control room                                   | 11h15              | 13h15            |
| Lunch break                     | LUNCH                                                    | 13H15              | 13H45            |
| Session 19: 08-12 December 2025 | Emergency Control room (Cont.)                           | 13h45              | 15h45            |
| Afternoon break                 | BREAK                                                    | 15H45              | 16H00            |
| Session 20: 08-12 December 2025 | Formal closing of proceedings by stakeholders            | 16h00              | 16h30            |
| Close of day 5                  | END OF EVENT                                             |                    |                  |

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