



**International Atomic Energy Agency**

# **Preventive and Protective Measures Against Insider Threats**

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**“Appropriate Effective” Material Control and Accounting and Physical Protection  
A Joint Global Initiative and UNSCR1540 Workshop  
Nashville, USA, 18 July 2008**

# Guide and Workshop History

- Draft guide originally developed jointly by USA and France (2003-2005)
- Provided late 2005 to the IAEA to support the development of a Nuclear Security Series Implementing Guide on *Preventive and Protective Measures Against Threats by Insiders*
- Pilot workshops in Czech Republic (2005) and in Lithuania (2006)
- Reviewed and revised as necessary to become IAEA Workshop Material
- Pilot workshop in Slovakia in March 2008

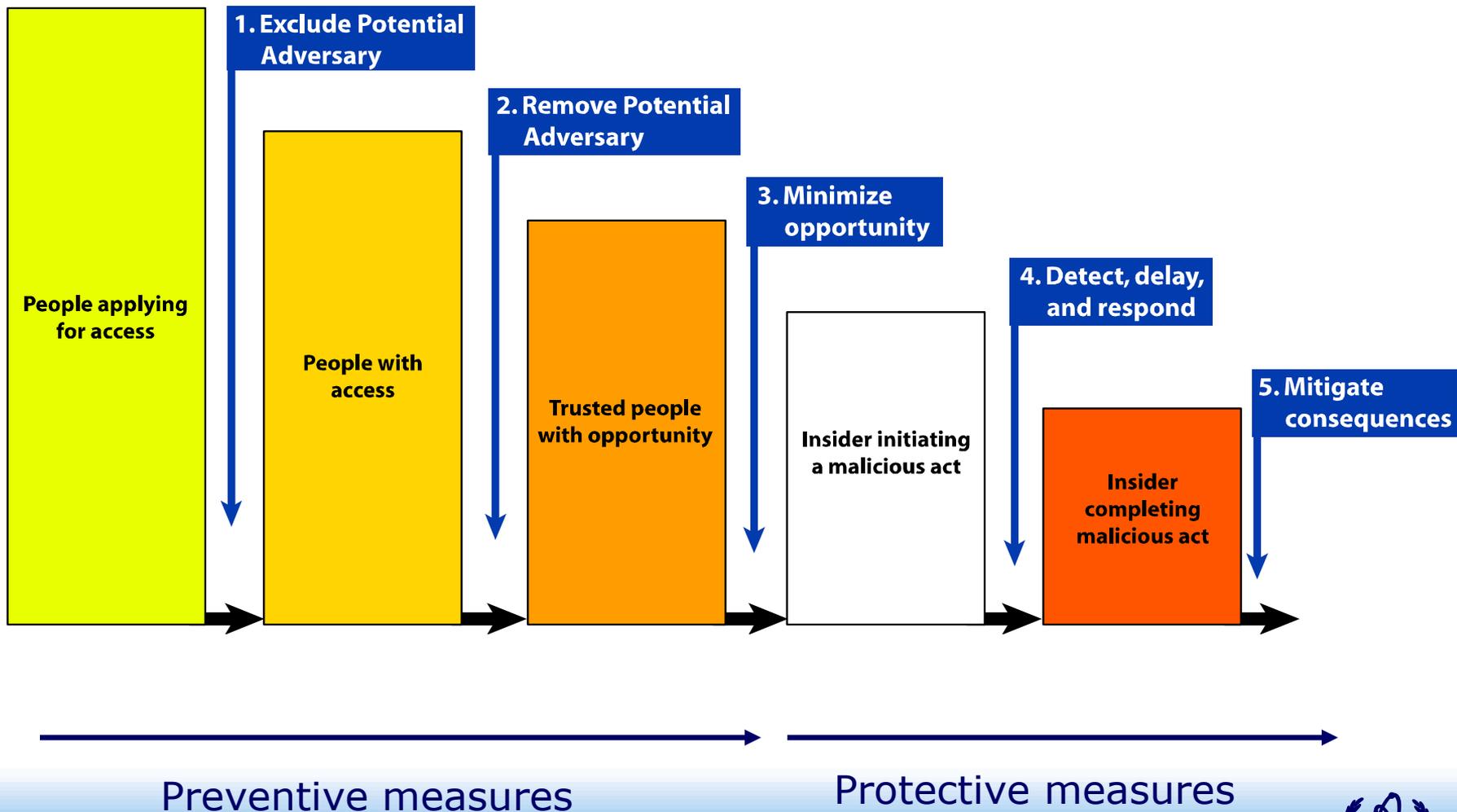


# Objectives and Scope of the Guide

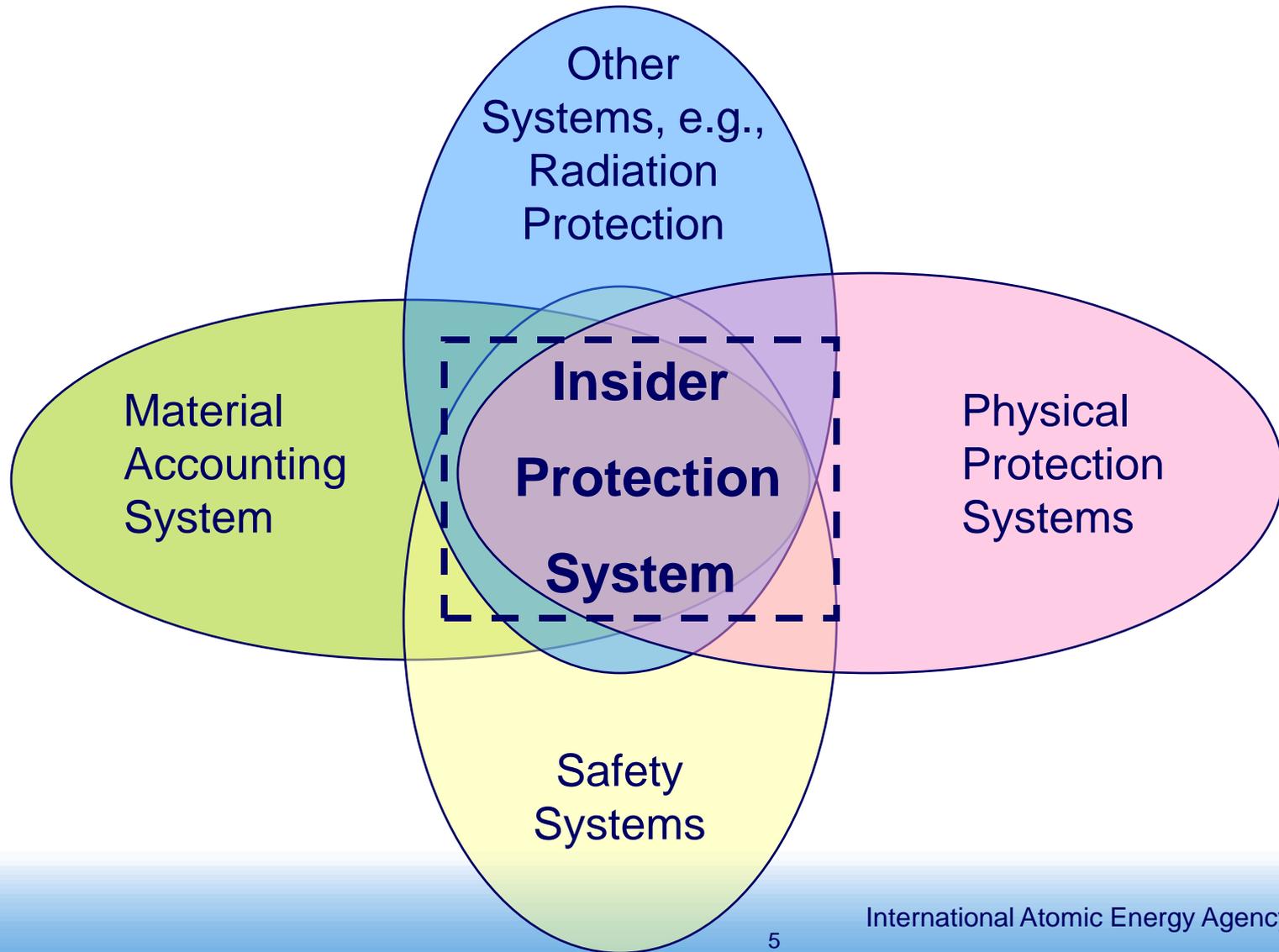
- To provide general guidance and methods of analysis to the competent authority and operators.
- In line with INFCIRC/225; covers unauthorized removal of nuclear material and sabotage of nuclear material and facilities.
- Also covers unauthorized removal of nuclear material and sabotage during transport of nuclear material.
- Applies to any type of nuclear facility whether in operation, shut-down or being decommissioned
- Should be considered during the design, construction, commissioning and operation phases of new facilities.
- Can also be applied to the physical protection of other materials such as radioactive sources or radioactive waste.



# Measures against Insiders



# Systems Contributing to Insider Protection



# Preventive Measures

- **Identity verification**
- **Trustworthiness assessment**
- **Escort and surveillance of infrequent workers and visitors**
- **Security awareness**
- **Confidentiality (security of information)**
- **Quality assurance**
- **Employee satisfaction**
- **Physical compartmentalization of areas**
- **Compartmentalization of activities**
- **Sanctions (disciplinary actions and prosecution)**



# Protective Measures

- Detection
- Surveillance
- Two-person rule
- Access control - to prevent or detect unauthorized entry and exit
- Searching people, packages and vehicles for contraband on entry
- Searching for nuclear material on exit
- Monitoring operational conditions
- Routine testing, maintenance and re-qualification of equipment.
- Protection of spare parts
- Inspections and audits
- Delay – personnel, procedures, physical barriers
- Response
- Emergency plans



# Material Control and Accountancy System

- **Accounting**
  - **Measurements include weight and isotope content**
  - **Measurement accuracy and error**
  - **Accounting documentation**
  - **Inventories**
- **Control**
  - **Movements between designating areas of physical control, .e.g., a Material Balance Area**
  - **Tags and seals**
- **Detects abnormalities in amounts and in measurement quality**
- **Tracks material movement through procedures and equipment**



# Summary

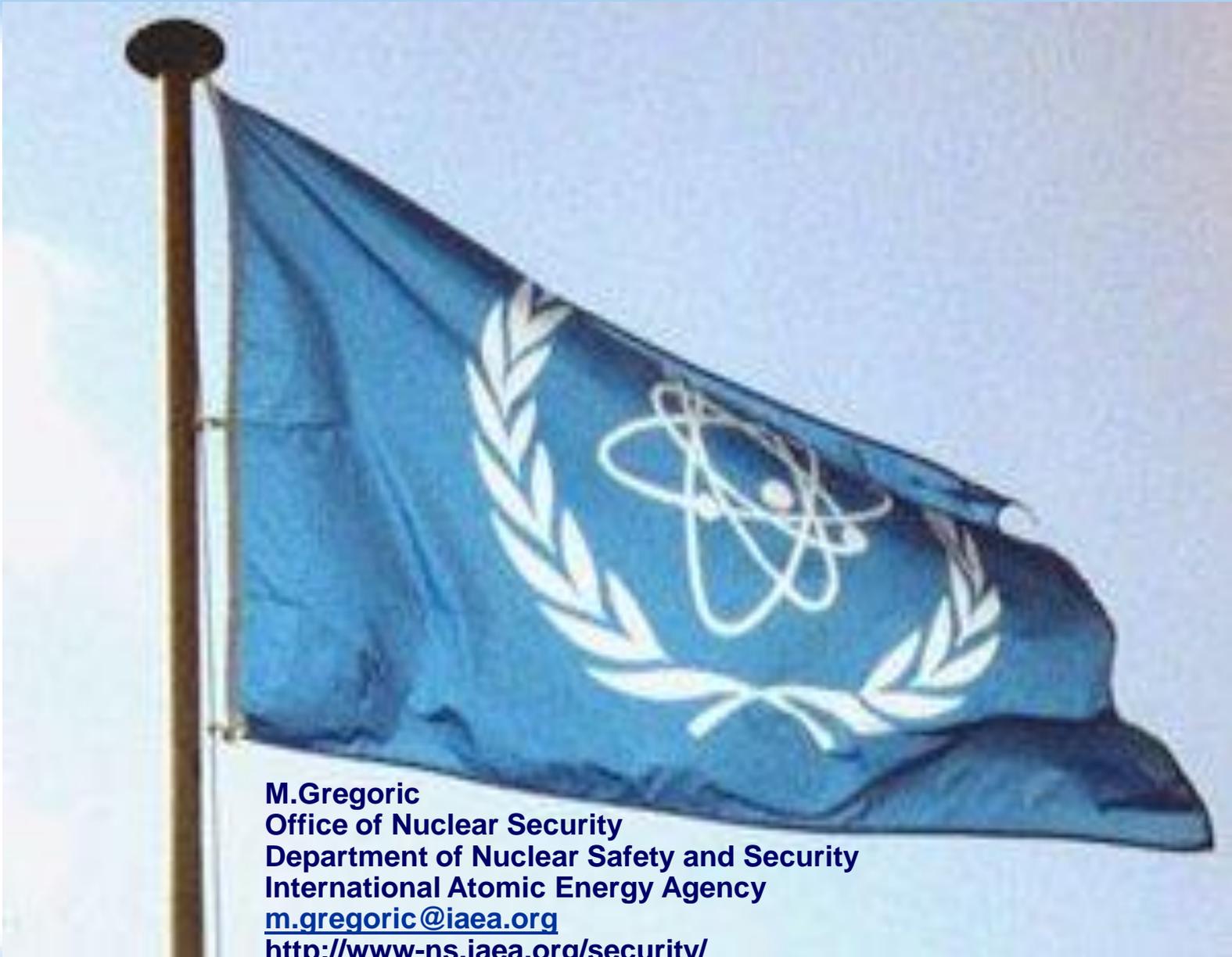
**Every facility faces the Insiders threat**

**Motivations (ideological, financial...) and opportunities (access, authority, and knowledge) create attempts**

**IAEA guide will be published this year**

**IAEA workshop is available to support Member States to design and implement effective measures against insiders**





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