



Module 4

Threat Characterization

Threat Characterization

- **Design Basis Threat**
 - **Defines the threat MPC&A systems must perform against**
 - **Based on threat assessment**
 - **Periodically reviewed and revised**

Threat Characterization

(continued)

- **Threat definition**
 - **Types of adversaries**
 - **Insiders**
 - **Outsiders**
 - **Insider/Outsider collusion**
 - **Range of adversary tactics**
 - **Capabilities**
 - **Motivation**

Insiders

- **Definition: Any individual with authorized access to *nuclear facilities or transport* who might attempt unauthorized removal or sabotage, or who could aid *outsiders* to do so.**
- **Insiders might include:**
 - Management
 - Operations personnel
 - Security personnel
 - Service providers
 - Visitors
 - Inspectors
 - Past employees
 - Others?

Insiders

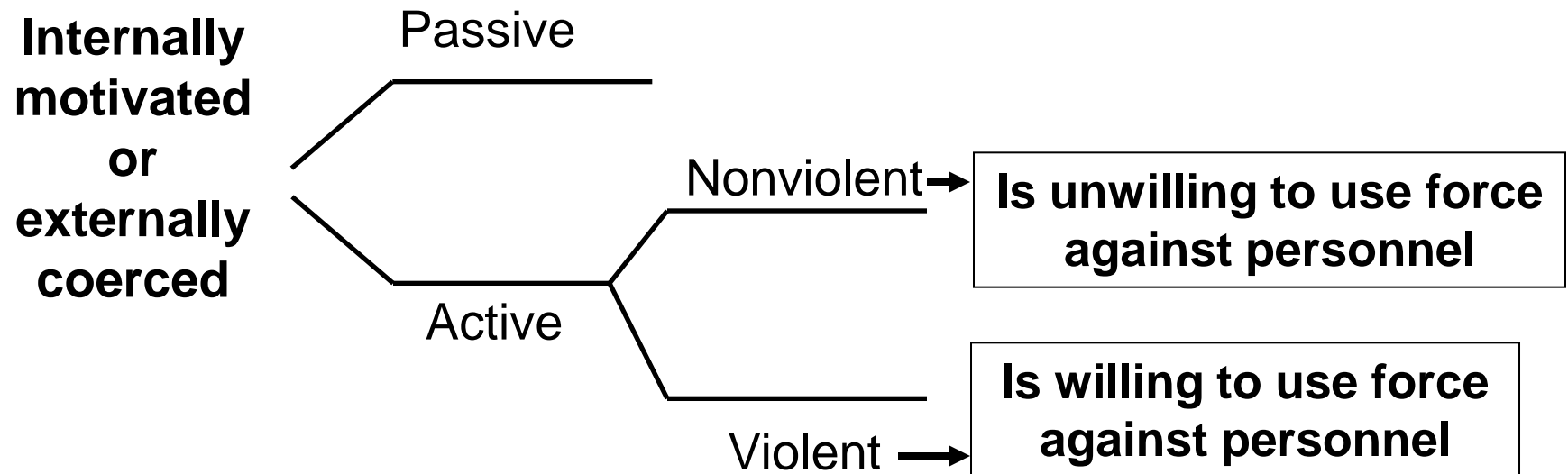
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- **Insiders represent formidable threats:**
 - **they can often circumvent system elements**
 - **they interact directly with the target without being detected**
- **The delay and detection timelines are not as relevant because insiders can choose the most opportune times and optimum strategies**
- **Insiders can roll-up materials to acquire a goal quantity**

Insiders

(continued)

Categories:



- All insiders can use stealth and deceit
- Violent insiders may be rational or irrational

Insiders

(continued)

Motivations:

- Ideological – fanatical conviction
- Financial – wants / needs money
- Revenge – disgruntled employee or customer
- Ego – “look what I am smart enough to do”
- Psychotic – mentally unstable but capable
- Coercion – family or self threatened

Motivation is an important indicator for both level of malevolence and likelihood of attempt

Insiders

(continued)

Advantages:

- **Time**
 - Can select optimum time to implement plan
 - Can extend acts over long periods of time
- **Tools**
 - Has capability to use tools and equipment at work location
 - Can attempt to introduce new tools as necessary
- **Tests**
 - Can test the system with normal “mistakes”
- **Collusion**
 - May recruit / collude with others, either insiders or outsiders

Insiders

(continued)

Access:

- **Authorized work areas**
- **Special temporary access**
- **Escorted or unescorted**
 - **Restrictions on insider during access**
- **Emergency access (fire, medical, police, etc.)**
- **Unauthorized access**
- **Duration of target exposure**
 - **Conditions of target during insider access**
- **Special site equipment**
- **Accounting database**

Insiders

(continued)

Knowledge:

- **Targets**
 - Locations, characteristics, and details of targets
 - Details of facility layout
- **Security systems**
 - Security forces capabilities and communications
 - Details of facility and security operations
 - Location and details of safety and security protection systems
- **Operations and processes**
 - Materials accounting
 - Operational processes
 - Tools and equipment

Insiders

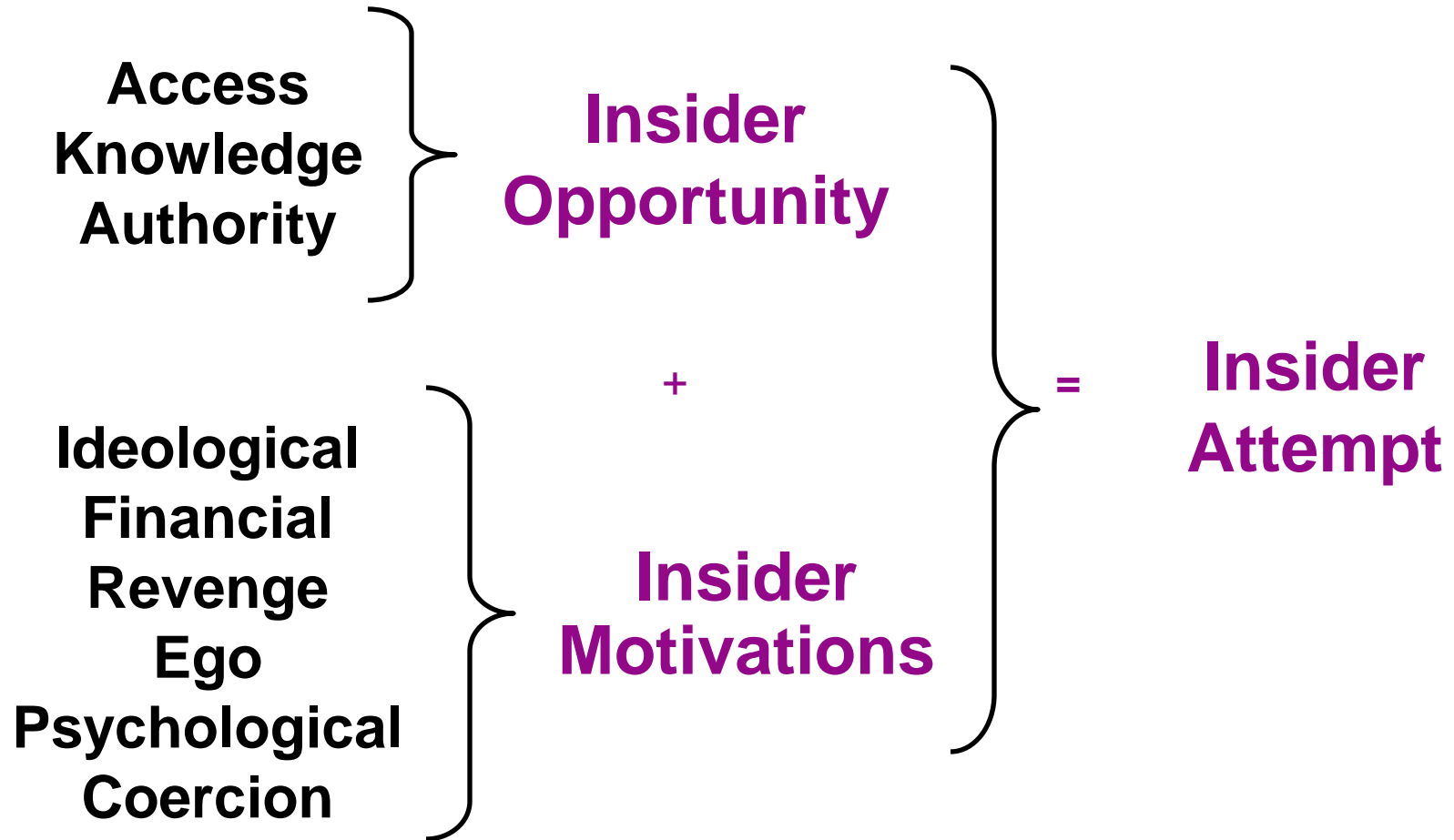
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Authority:

- **Authority over people**
 - Designated authority over others
 - Personal influence over others
- **Authority over tasks and equipment**
 - Assessment of alarms
 - Preparation of sensitive forms
 - Authorization of processes and procedures
- **Temporary authority**
- **Falsified authority**
- **Exemption from procedures**

Insiders

(continued)



Outsiders

- **Outsider categories**
 - **Terrorists**
 - **Criminals**
 - **Anti-Nuclear Extremists**
- **Outsider motivations**
 - **Financial**
 - **Ideological**

Outsiders

(continued)

- **Outsider characteristics:**
 - **Equipment**
 - **Weapons**
 - **Methods of attack**
 - **Knowledge of the facility**
 - **Insider Cooperation**
 - **Training**
 - **Funding**

Outsiders

(continued)

- **Outsider Tactics**
 - **Deceit**
 - **Attempt To Defeat A Security System By Using False Authorization And Identification**
 - **Force**
 - **The Overt, Forcible Attempt To Overcome A Security System**
 - **Stealth**
 - **Attempt To Defeat The Detection System And Enter The Facility Covertly**

Insider/Outsider Collusion

- **An insider's knowledge and access combined with outside resources and skills**
 - Insider can remove delay elements for outsider
 - Insider can move target partially along path, to be collected by outsider
 - Insider can defeat detection elements (CAS operator ignores alarms, maintenance technician bypasses sensors, etc.)
 - Insider can defeat access controls for outsiders (vouches for outsiders, escorts outsiders past security barriers, etc.)