Reducing Insider Threat through Positive Incentives
Extending the Traditional Insider Threat Security Paradigm

Empirical analysis shows insider alienation and the potential of positive incentives for reducing insider threat baseline. A simulation model illustrates benefits in terms of fewer incidents and lower costs. Balanced deterrence is key!

Preconditions involving A stock (grouping) A /f_low between stocks A direct (positive) in/f_luence

Key:

• Sensitivity simulation captures uncertainty
• Annual data on USG employee attitudes
model illustrates benefits in terms

An Emerging Physics of Employee Dissatisfaction and Insider Threat

- System Dynamics model of how flow of dissatisfaction translates into incidents
- Empirical analysis providing structural validation of model
- Annual data on USG employee attitudes grounds simulation model
- Sensitivity simulation captures uncertainty

Future Research and Transition:

- Theory: Experiment to determine cause-effect relationship between positive incentives, threat
- Adoption: Transition model for organization to go from current state to state with appropriate mix of positive and negative incentives
- Technology: Detection of insider alienation by identifying at-risk behaviors and indicative changes in networks of coworker relations

Balanced Deterrence: Extending the Traditional Security Paradigm

Security Through Positive Incentives

- Engagement Feedback
- Corrected Employees
- Connected Employees
- Engaged Employees
- Organizational Supportiveness
- Supported Employees

Traditional Security Approach (Negative Incentives)

- Deterrence Feedback
- Deterred Abuse
- Prevented Abuse
- Sanctions
- Detected Abuse
- Punished Abuse

Preliminary Analysis Conducted:

- Case analysis shows organization support foundational
- Insider threat program survey shows negative correlation between organization support, insider threat

Slope = -1.04 Statistically significant 95% confidence level

Simulation Controls

- 0 • 2 • 5
- Percent disgruntled starting to attack

- 0 • 50 • 100
- Percent satisfaction improvement

Insider Threat Incidents

Number of Insider Threats After 20 Years

Positive Incentive-Based Workforce Management Practice Areas

- Employee satisfaction, retention, performance, and recognition