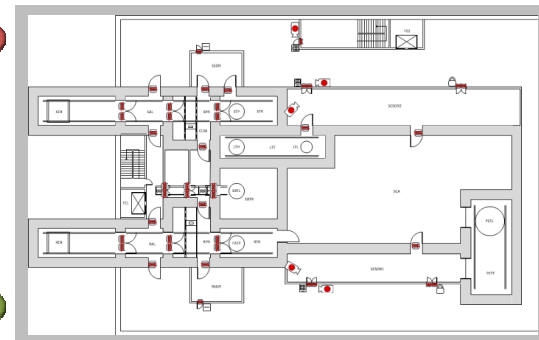
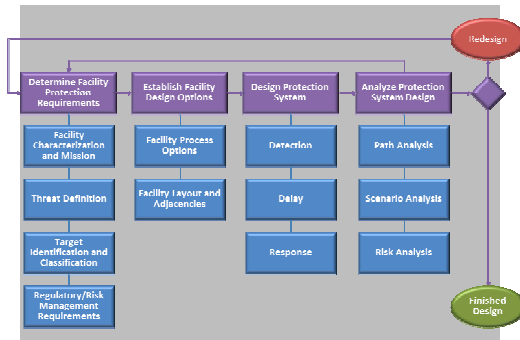
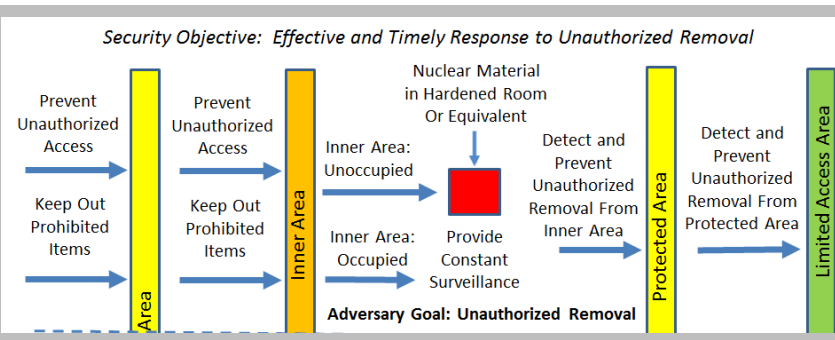


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Application of Design-Centered Insider Protection Techniques

Felicia A. Durán, and Mark K. Snell

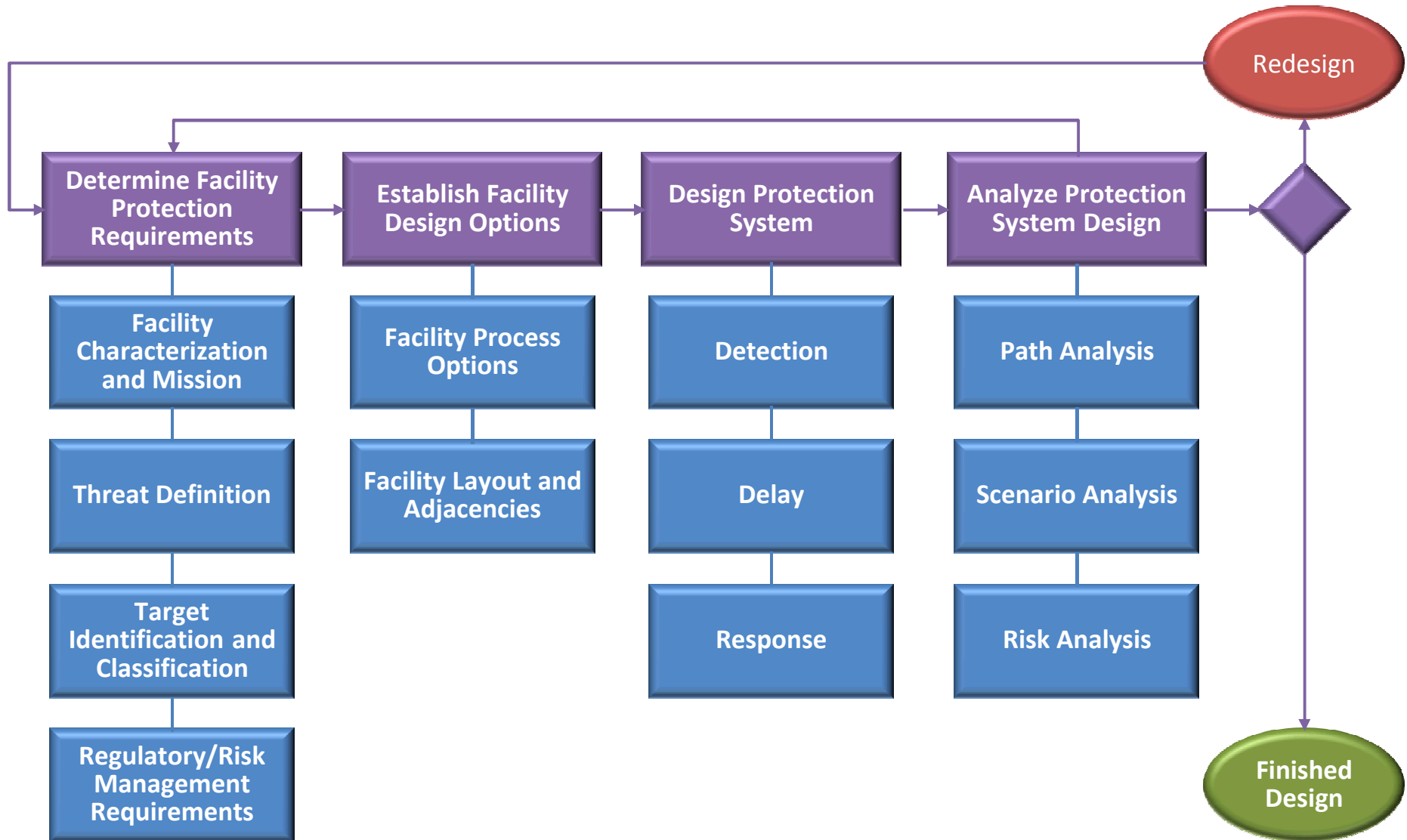


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Introduction

- Initial version of an approach for a “design-centered” approach for facilities to protect against theft and sabotage by a malicious insider
- Elements of the approach
- Steps in the proposed design-centered approach
- Suggested classes of protection and prevention measures
- Summary

Elements of a Design-centered Approach for Insider Protection

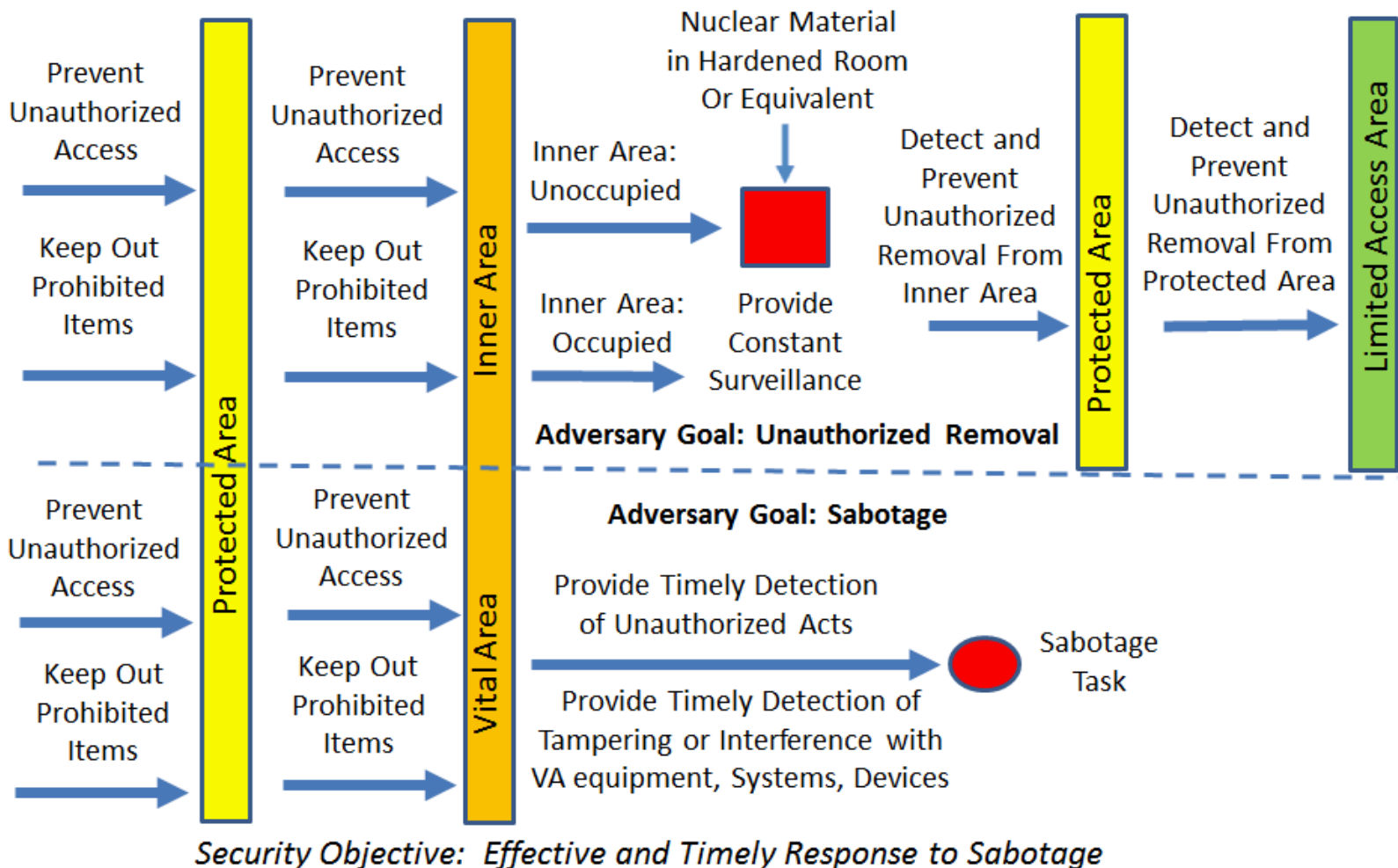


Steps in the Design-Centered Approach Sandia National Laboratories

- Consider malevolent acts to be addressed – theft/sabotage
- Identify targets associated with the acts, including nuclear material assets and critical systems (will evolve for facility design stages)
- Design layers of protection as well as general protection and prevention measures
- For new facility design, develop different conceptual designs for facility layouts and process equipment
- Develop sets of protection measures for the design options
- Create insider groups for evaluation of design options
- Summarize results, redesign, proceed to next design stage or finish design

Suggested Classes of Protection Measures for Theft or Sabotage

Security Objective: Effective and Timely Response to Unauthorized Removal



Summary

- **Focus on defining protection and prevention measures for specific layers, areas or activities rather than specific insiders groups**
 - **Addresses target materials, critical areas and equipment**
 - **Allows consideration of operational impacts and different operational concepts**
- **Leverage synergy between insider protection measures and safety and safeguards measures**
- **Basis for Security-by-Design for insider threats**
 - **Can be applied more comprehensively to existing facilities**