

Security by Design

SNL-JAEA NNS&T

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Review of US DOE-JAEA PAS-PP04

- **“The physical protection experts agreed to pursue collaboration to determine whether and how efficient and effective physical protection systems could be adapted to future facilities.”**
- **Sides agreed to develop a “security by design” handbook for future facilities**
 - **Potential use in international community**
 - **Aims at current designers, next generation designers, and designers in emerging countries**
 - **Based on physical protection principles and best practices from Japanese, US , and international sources**
 - **Integration into a generic facility design process**

Design Considerations

Design Elements

International Norms

Security

Safety

Technology

Best Practices

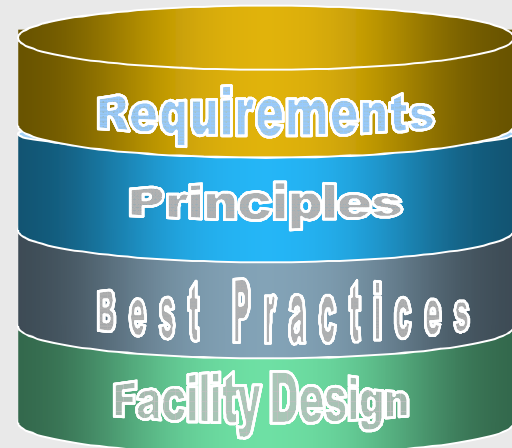
Safeguards

Principles

- Effective and efficient facility physical protection systems (PPS) are essential
- Successful PPS are deeper than simply deploying technology
- Excellence occurs when elements are intrinsic to facility design

Scope

Security by design :
Develop a framework
and handbook for
design of future
facilities integrating
principles and
practices with facility
design





Security by Design Phases

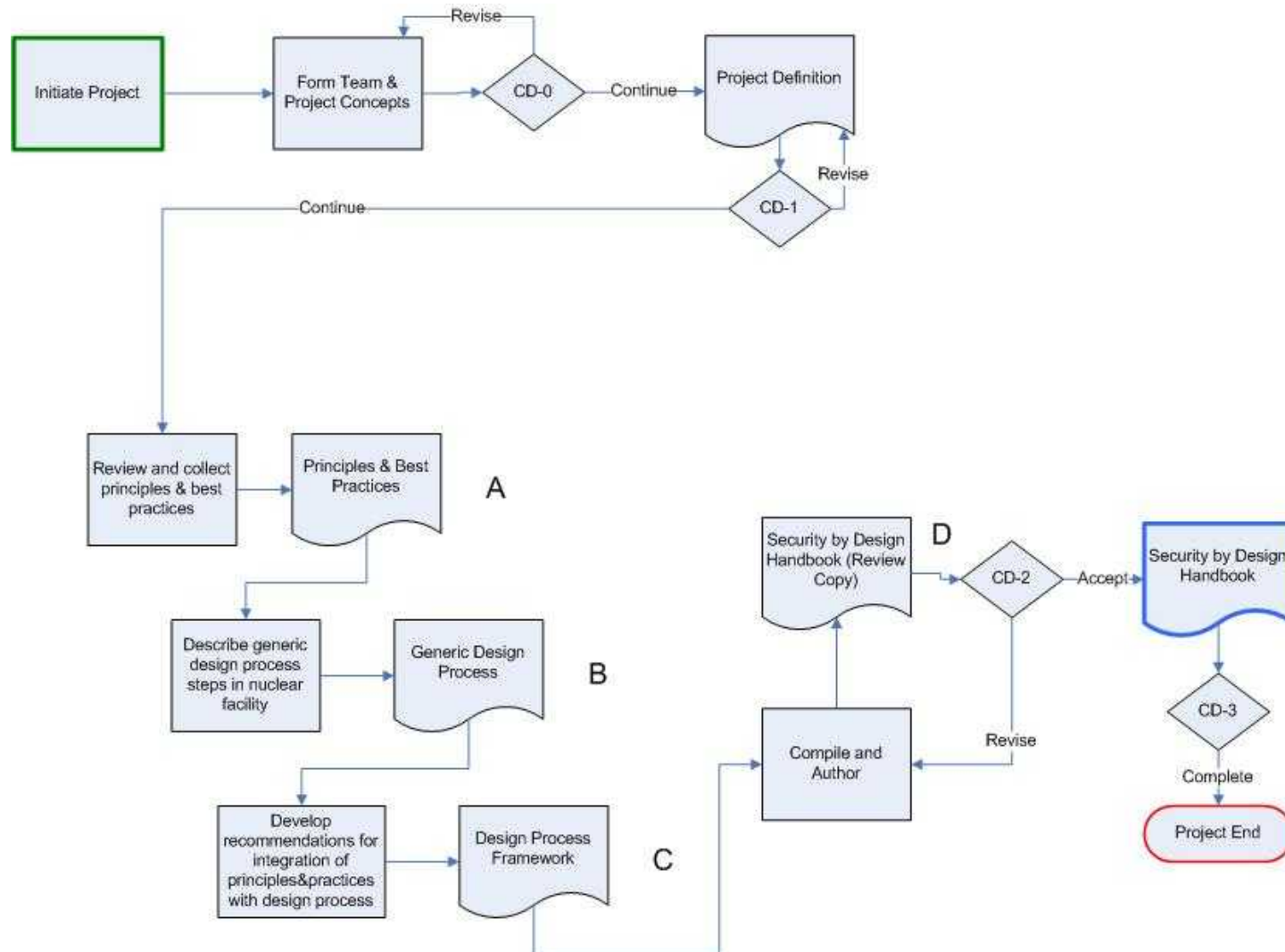
- A. Review and collect existing physical protection principles and best practices from international, Japanese, and US sources.
- B. Describe generic design process steps involved in the construction of a nuclear facility.
- C. Propose recommendations where physical protection principles and best practices can best be applied/integrated into the design process framework.
- D. Develop a security by design handbook



Project Deliverables

- Task A: Describe principles and best practices
- Task B: Describe generic design process steps involving a nuclear facility
- Task C: Recommend where physical protection principles and practices can best be applied design process framework
- Task D: Develop a security by design handbook

Process Flow





Goals

- Define a shared view of security by design
- Publish findings in internationally usable handbook



Objectives

Security by design will be:

- Fully vetted and supported using recognized principles and best practices
- Balanced in its consideration of national differences
- Complete in its description of the design framework



Summary

- Effective and efficient facility PPS are essential to security
- Security by design integrates principles and best practices of physical protection with nuclear facility design processes
- The joint team should form and create a security by design handbook