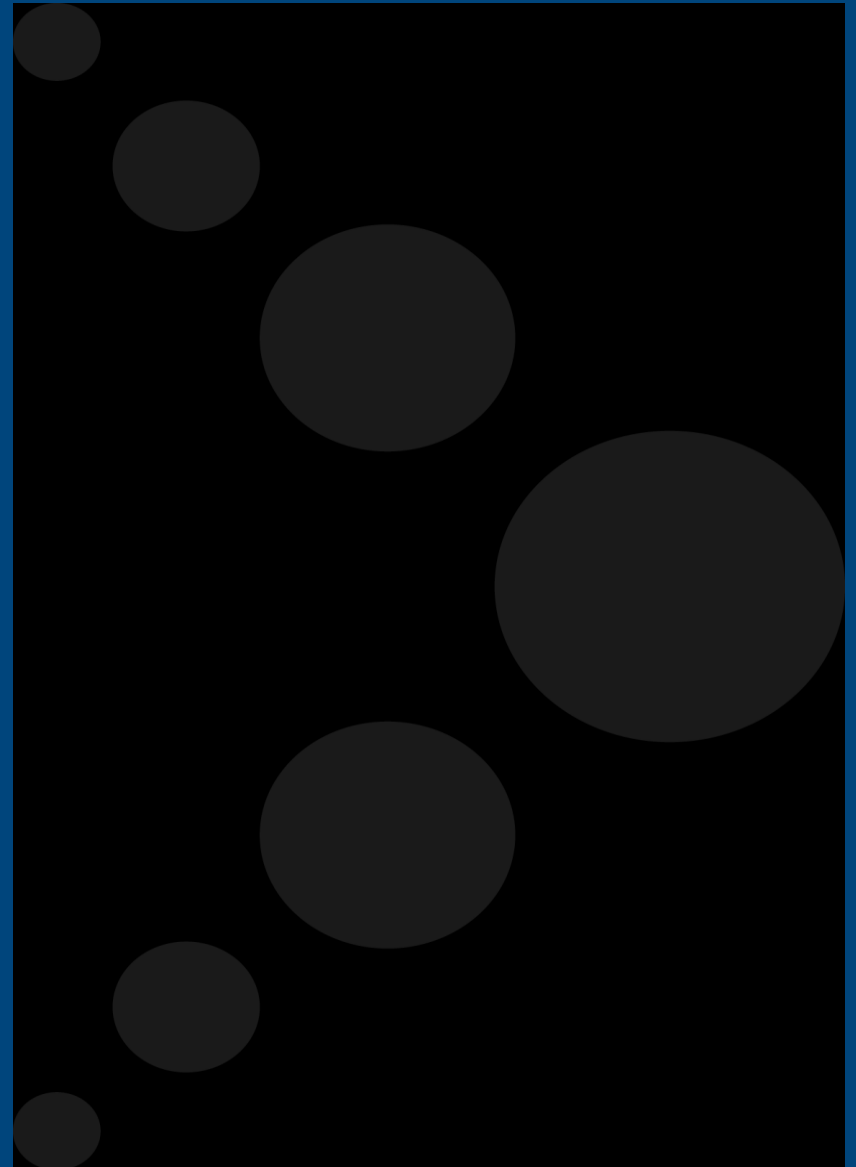




Integration of Security into a Concept Design for a Facility

Malcolm Baker
Jeremy Edwards
Robert Rodger
Ken Owens



Systematic Approach

Information, Assessment, Decision and Process

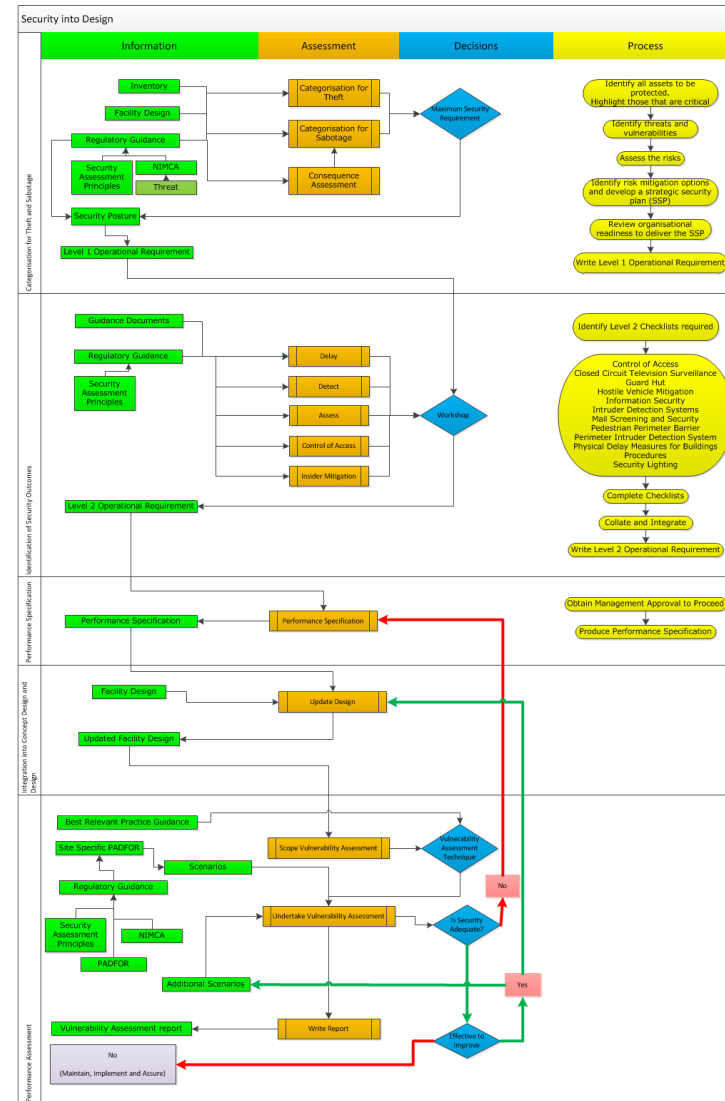
Categorise Assets for Theft and Sabotage

Identify requirements for:

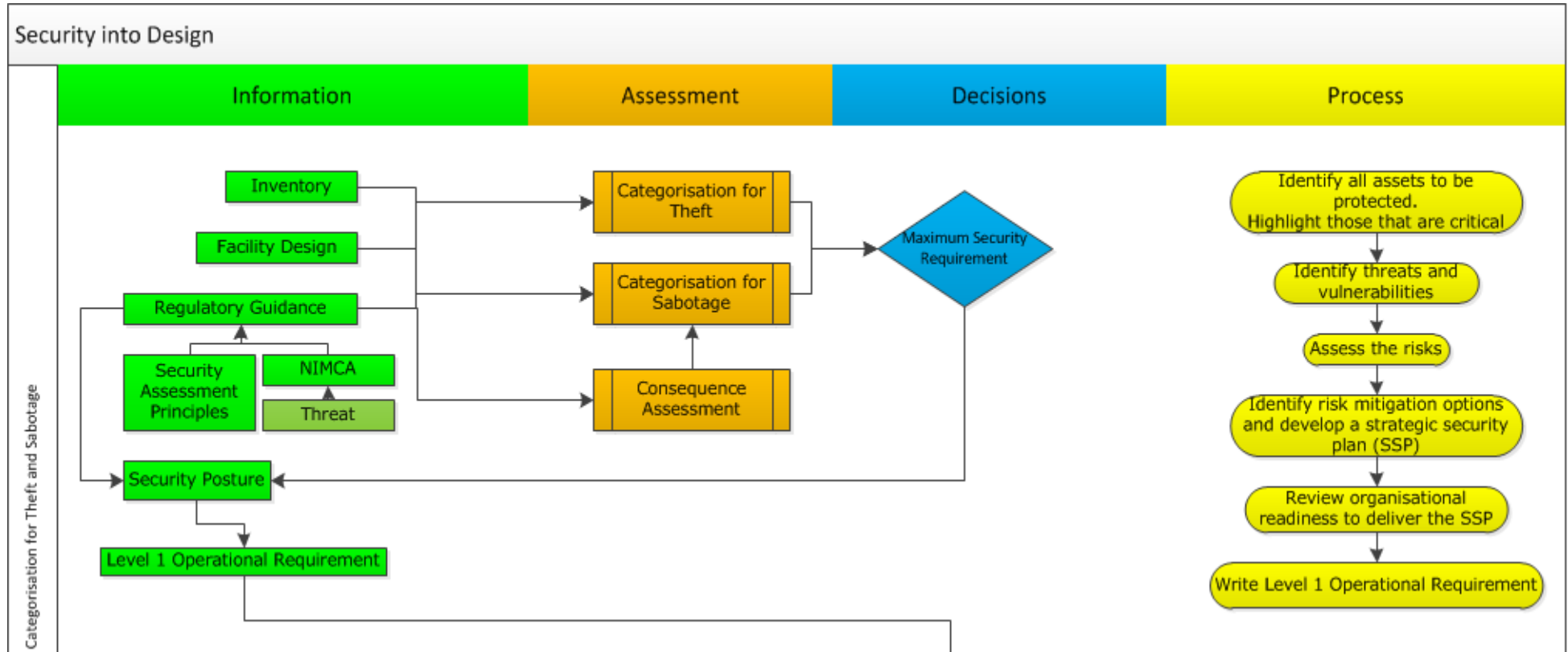
- ★ Delay;
- ★ Detect;
- ★ Assess;
- ★ Control of Access; and
- ★ Insider Mitigation.

Design including Performance Specification

Performance and Vulnerability Assessment



Categorisation for Theft and Sabotage



Need to Understand Assets and Potential Consequences

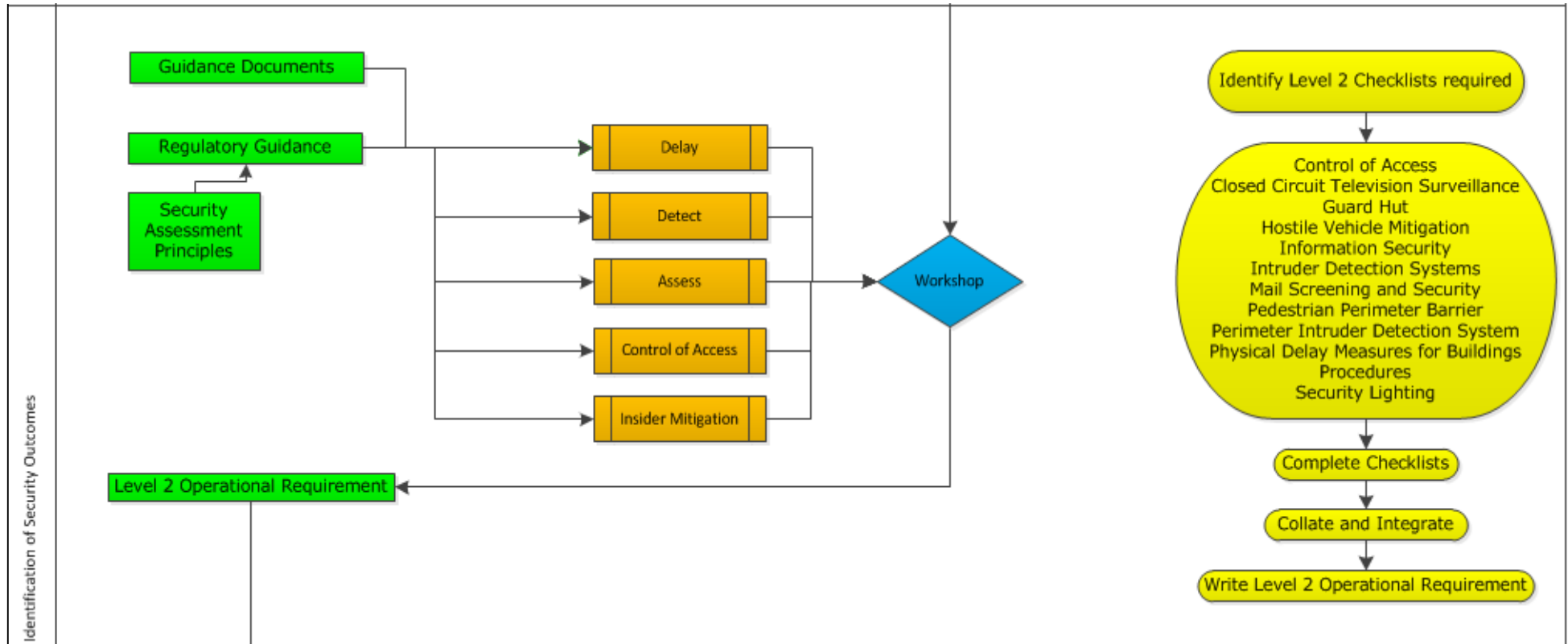
Nuclear Material Other Radioactive Materials Structures, Systems and Components



Design Basis Threat

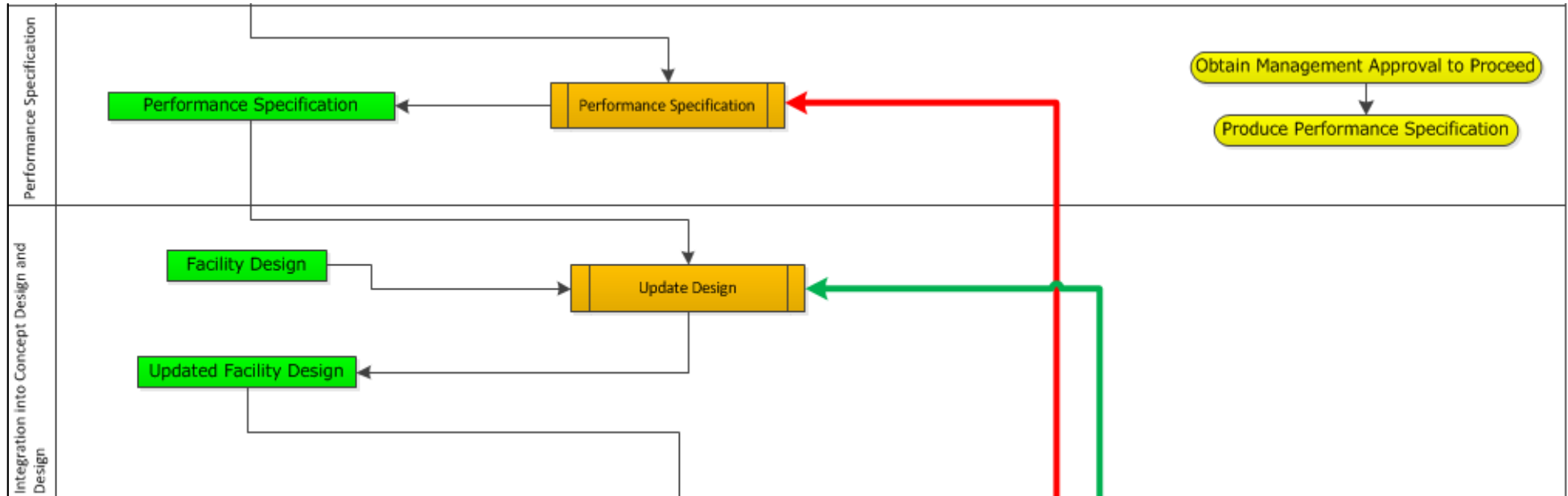


Identification of Security Outcomes

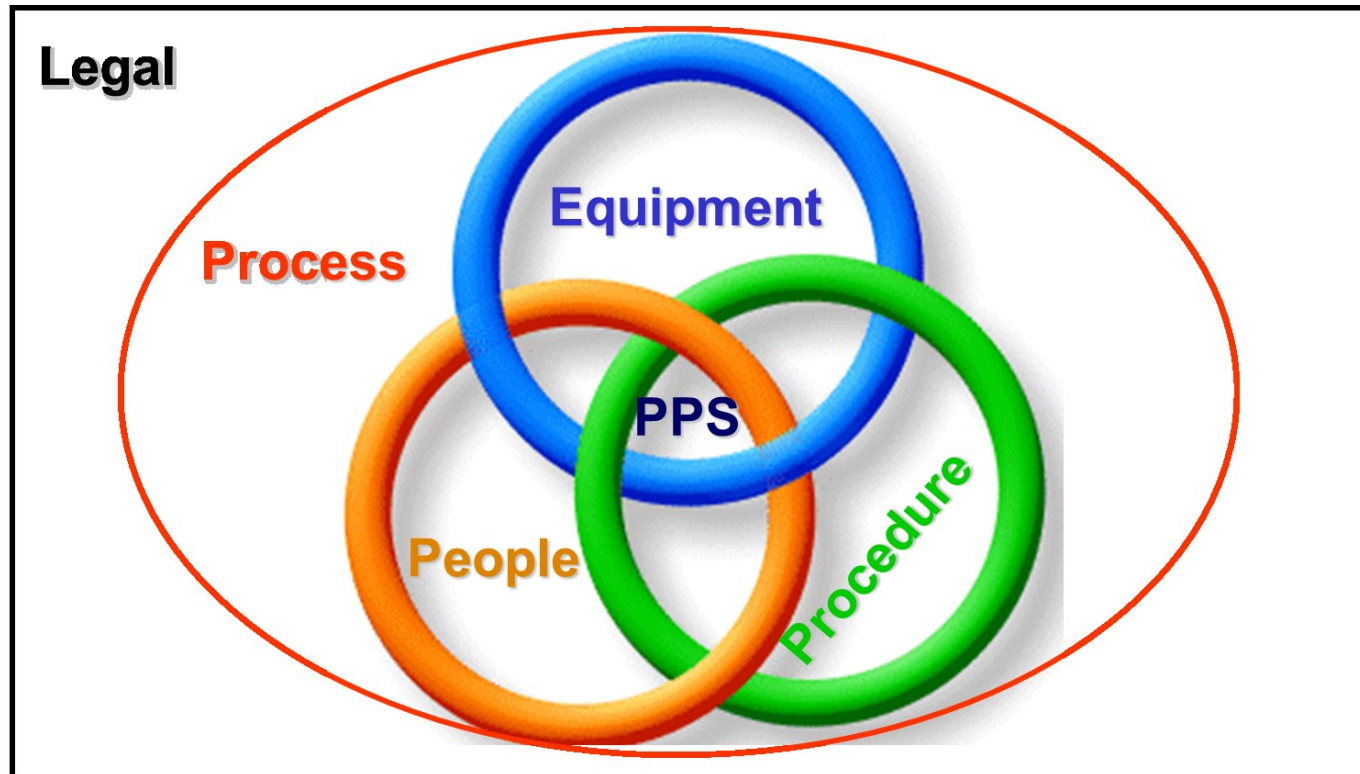


Understand Physical and Technical Regulatory Expectations
Categorisation drives required 'Security Outcomes'

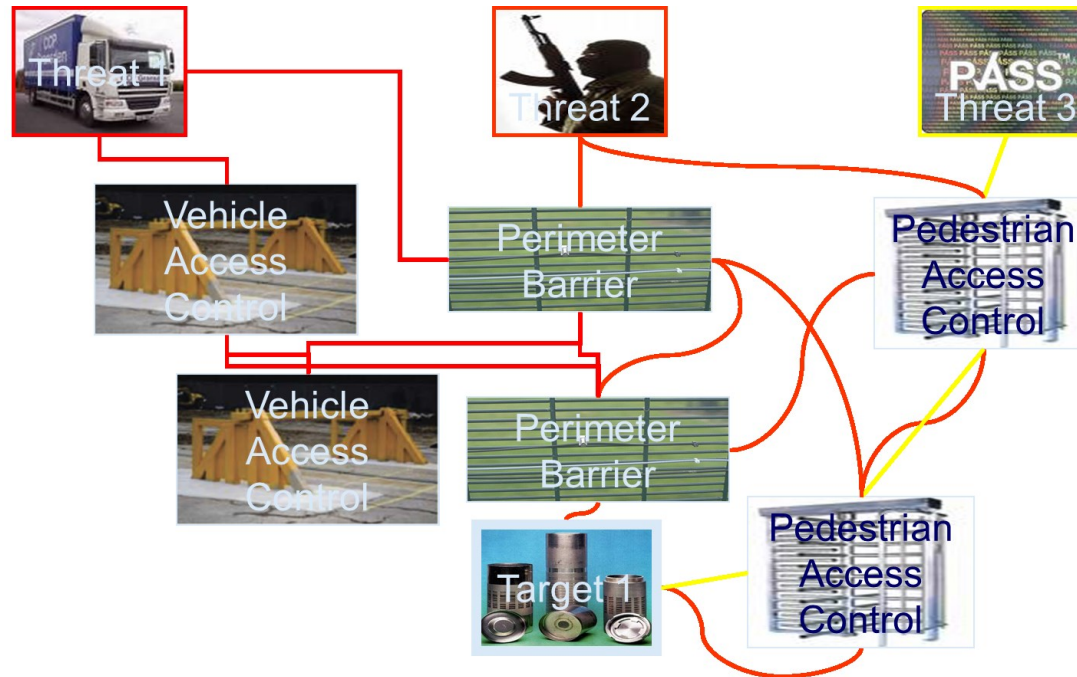
Specification and Integration into Design



Once Security Outcomes are Specified then Performance Specifications can be Provided to 'Design and Engineering' Teams



Vulnerability Assessment



Adversary →



← Response

Security into Design (Conclusions)

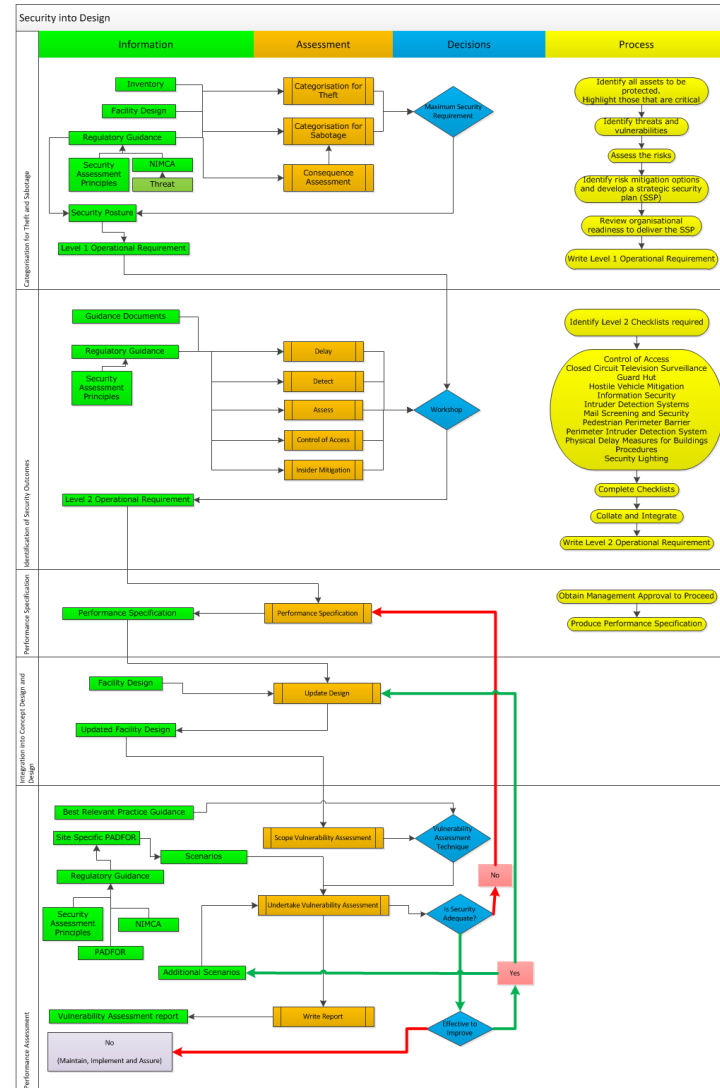
Iterative Process for Designing and Testing Concept Design

Ensures Appropriate Inclusion of Security at an Early Stage

Enables Safety and Security to be Discussed Before Large Investment Decisions are Made

Leads to a 'Right First Time' Result

Project Cost and Operational Efficiencies are Delivered



Integration of Security into a Concept Design for a Facility

Any Questions?

robert.m.rodger@nnl.co.uk

