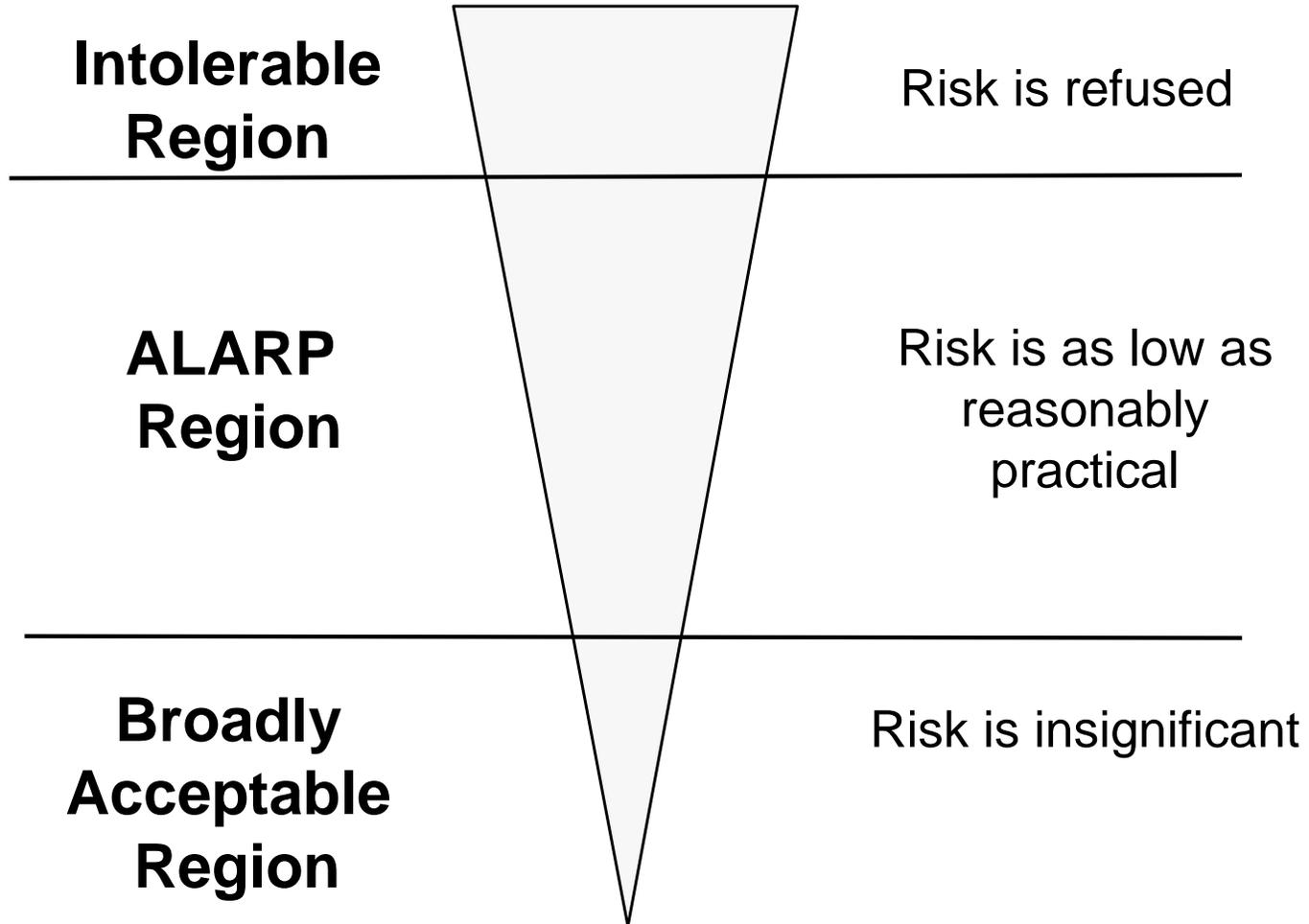
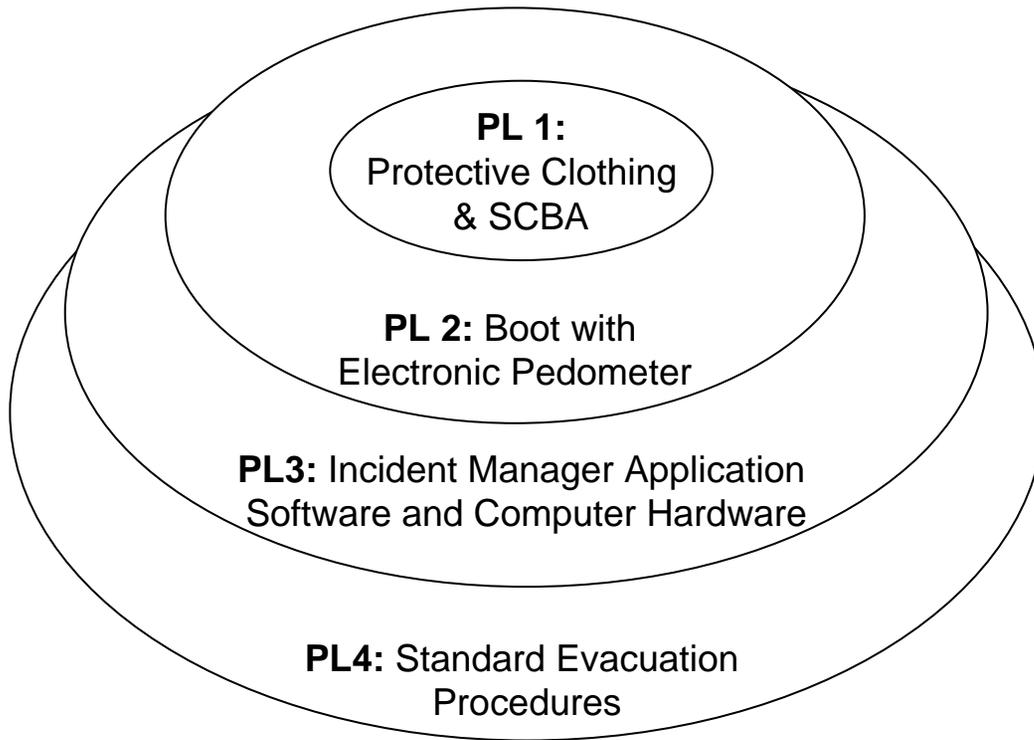


Reduced Risk

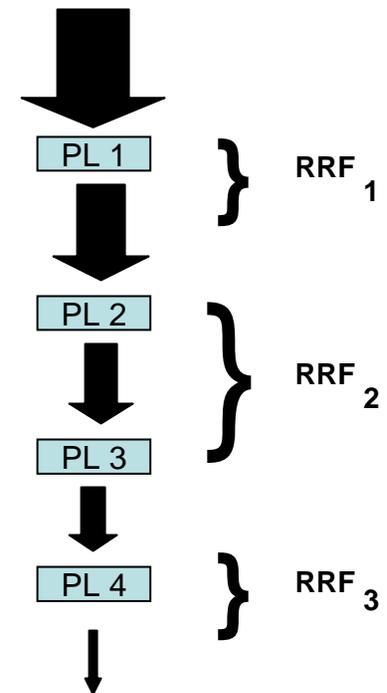


Layer of Protection (PL)



Risk Reduction Factors (RRFs)

Initiating Event: rapidly rising temperature



Impact Event: Loss of first responder's life due to rapid-fire progression

Functional Safety Goals

Life Cycle

Design and Performance

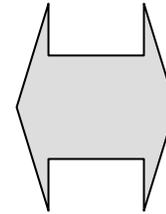
Configurability

Compatibility/Interoperability

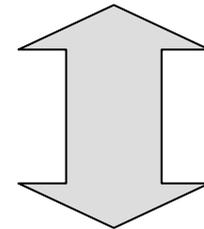
Scalability

Usability

Maintainability



Design & Test
Requirements



Compliance Requirements

- OSHA
- DOJ
- NFPA
- UL

Functional Safety Goals

Life Cycle

Design and Performance

Configurability

Compatibility/Interoperability

Scalability

Usability

Maintainability

Design & Test Requirements

Water Resistance

- Protection of ingress of water
- Internal corrosion

Software Integrity

- Engineering practices
- A/D and D/A logic
- Application logic

Standards/Clauses

Exposure

Criticality

RRF Category

E1: Severe exposure fire environment and potential for fire

C1: Life-Critical

1a

C2: Mission Assistance

1b

E2 :Hazardous or potentially hazardous non-fire environment

C1: Life-Critical

2a

C2: Mission Assistance

2b

E3: Non-hazardous, non-fire environment

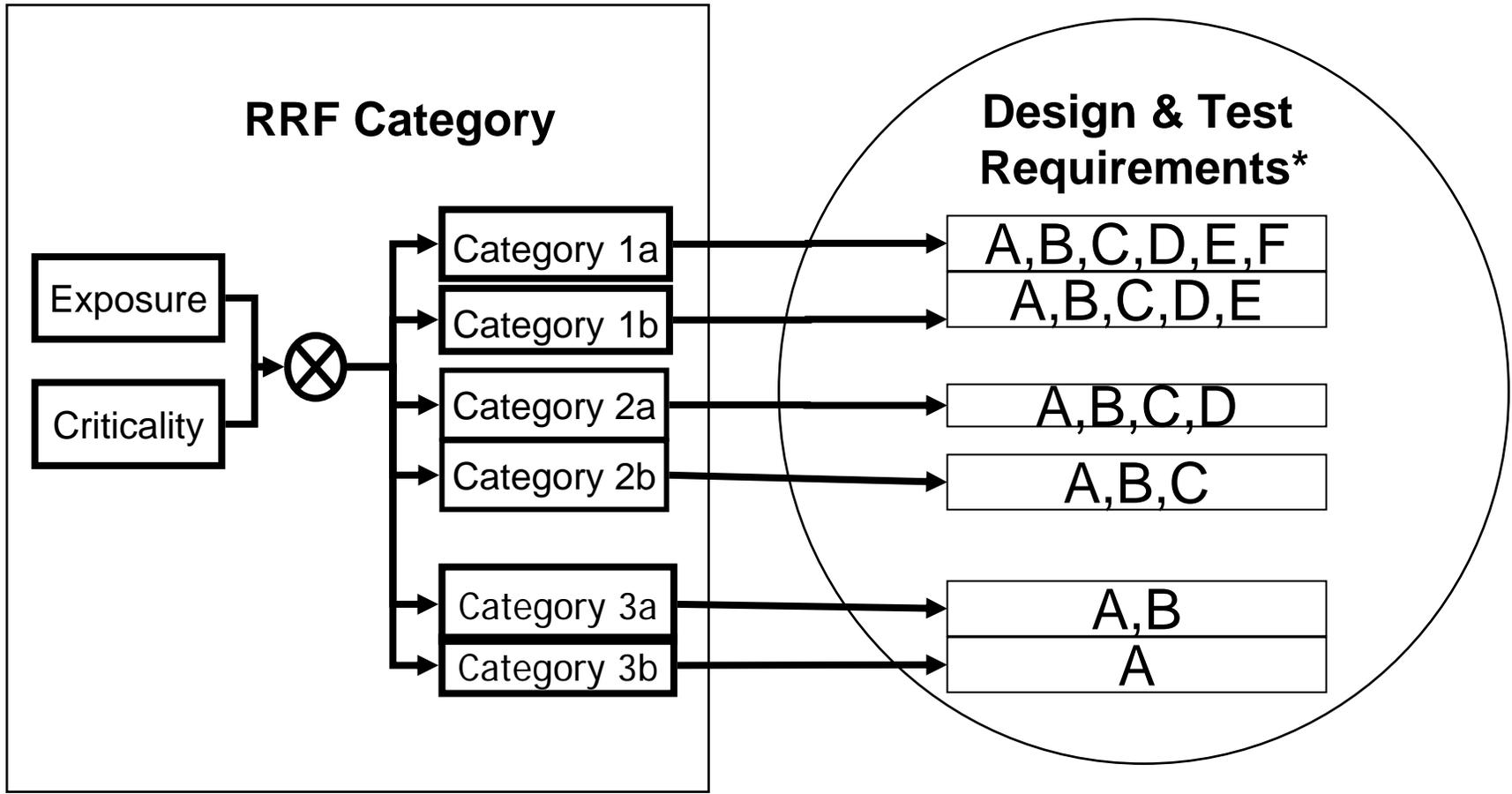
C1: Life-Critical

3a

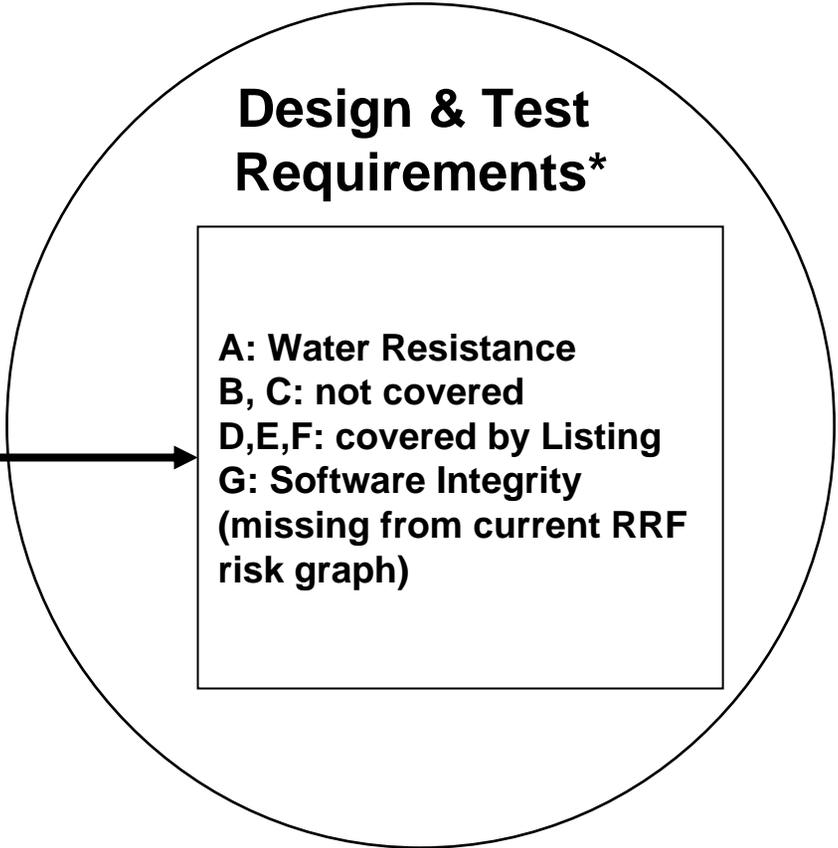
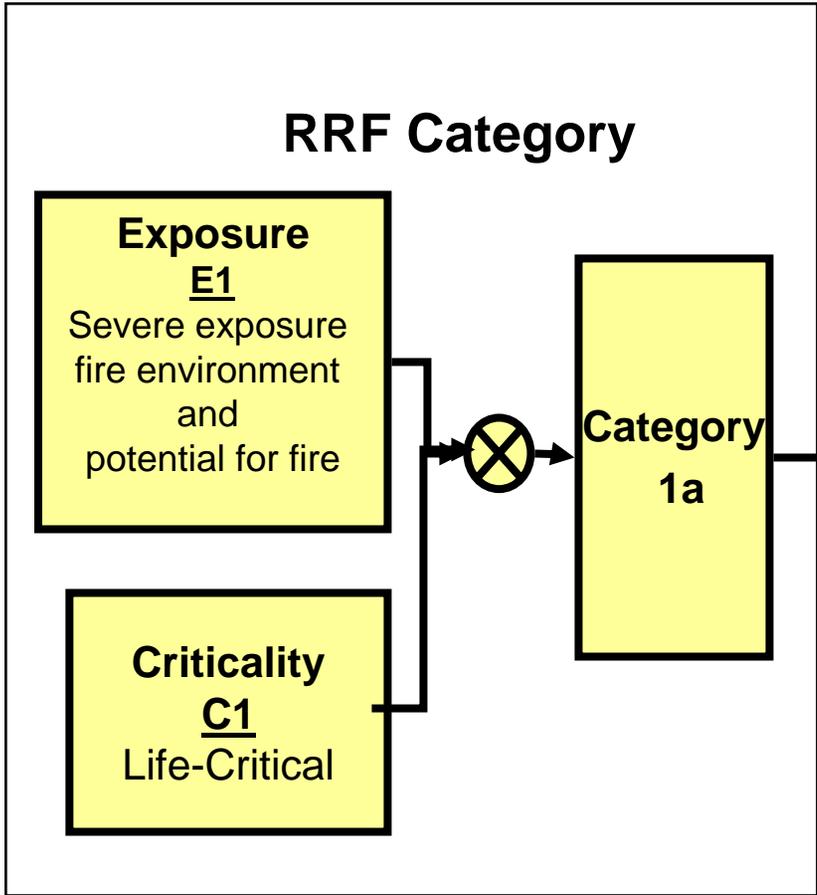
C2: Mission Assistance

3b

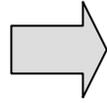




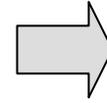
**Listed products may already have been demonstrated to meet some or all of the design and test requirements for the NFPA Safety Integrity category.*



**DESIGN & TEST
REQUIREMENT**

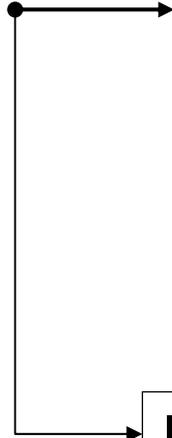


**TEST
OBJECTIVE**



**STANDARD/
CLAUSE**

Water
Resistance



Protection
Against Ingress
Of Water



- NFPA 1951-2001, 8.17
- NEC 250
- EC 60529: 1989,
- Refer to UL 60950, Annex T for Summary

Internal Corrosion



UL 60950, 2.6.5.6

Software
Integrity



- Engineering practices
- A/D and D/A logic
- Application logic



ANSI/UL 1998

