

HOLISTIC

PHYSICAL SECURITY

USING

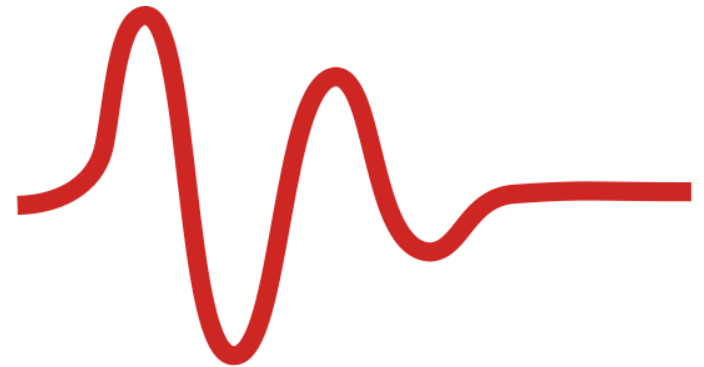
RISK ANALYSIS METHODS

Bödvar Tomasson

ASIS 2015 Middle East Security
Conference & Exhibition, Dubai



HOLISTIC approach



- Risk and Risk Management
- Approach for Security Risk Management
- Security objectives
- Risk analysis techniques used for vulnerability assessment
- Prioritizing risk treatments
- Case study: Exhibition of Icelandic manuscripts

RISK

Effect of uncertainty
on objectives

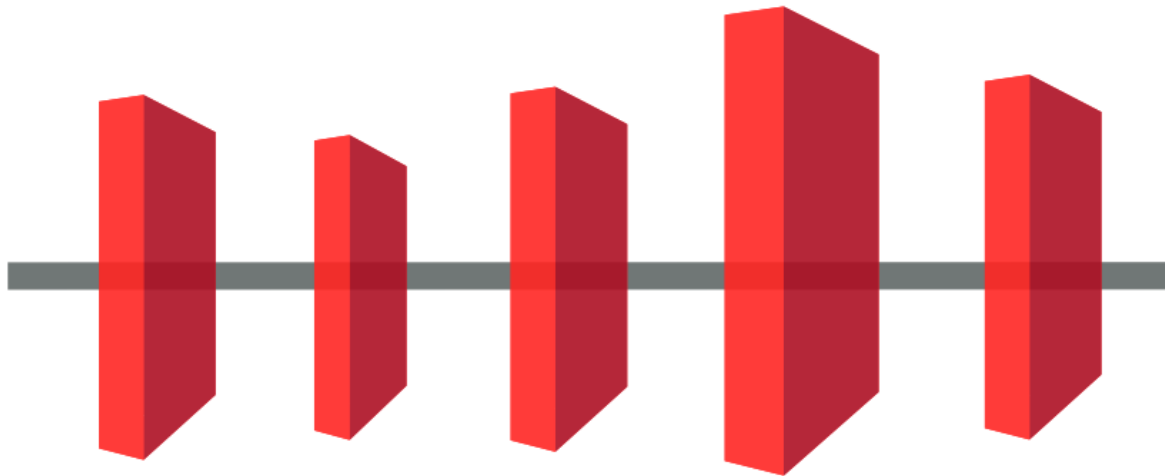
SECURITY

objectives

- Main objectives vs specific objectives
- Security objective must align with the main objectives
- Management of all risks towards the objective
- Better understanding the nature of security threats and their interaction
- Prioritizing treatments based on actual risk

BALANCED

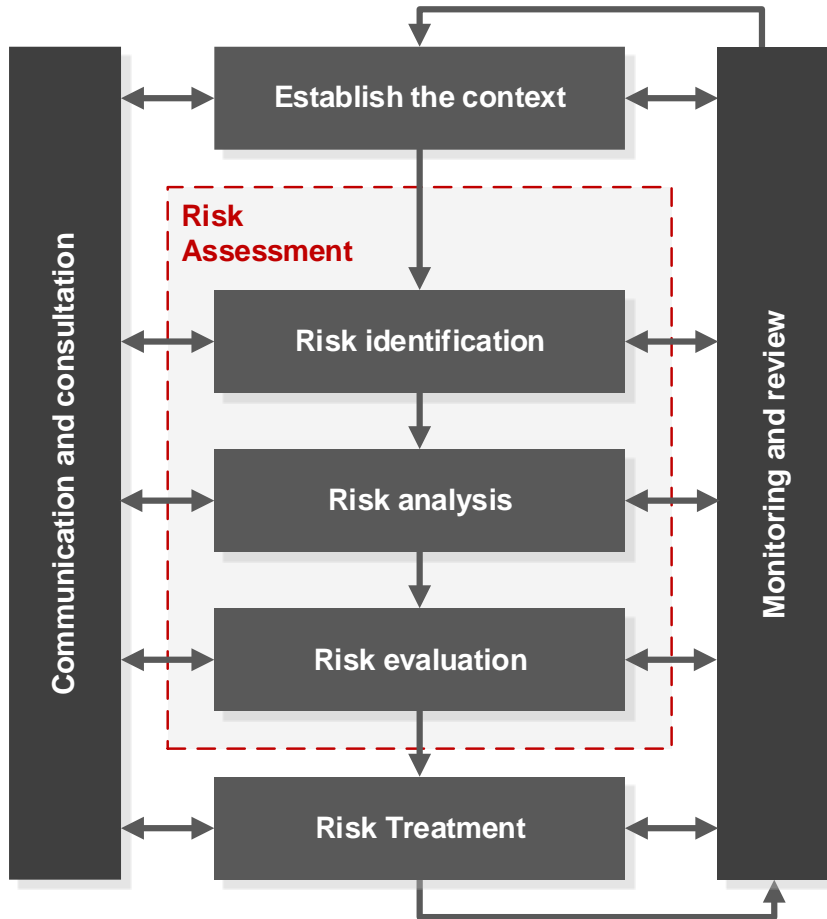
security



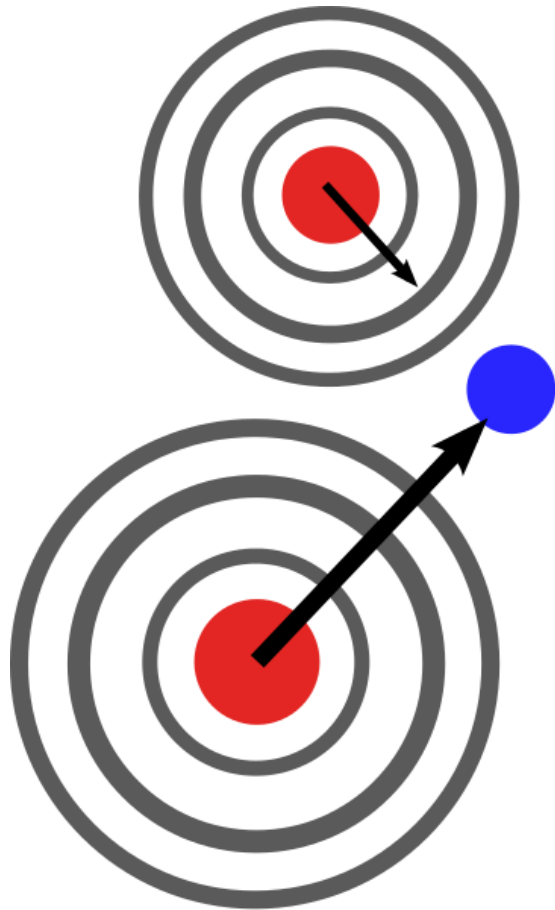
- Balanced protection from threats
- Defined security level or unknown level
- Fixed resources or risk based
- Cost-effective approach

RISK

management



- Established risk management process ASIS and ISO 31000
- Establish the context: Internal and External
- Allows for holistic risk approach



SECURITY

risk management

- Part of general risk management and integration within organization
- Security context and objectives
- Protection from all threats
- Wide perspective of the security threat landscape
- Risk-based cost-effective protection

THREAT

landscape



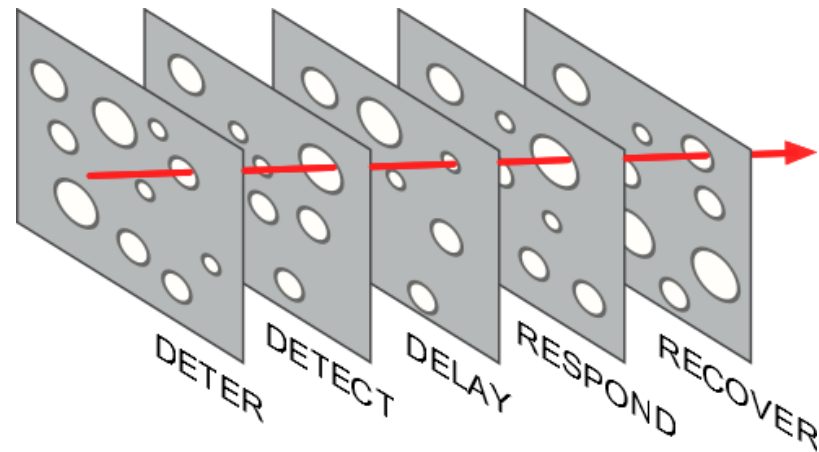
What has the potential to threaten our objectives?

- Human related
- Technical
- Environmental
- Intentional / Unintentional
- Internal / External

VULNERABILITY

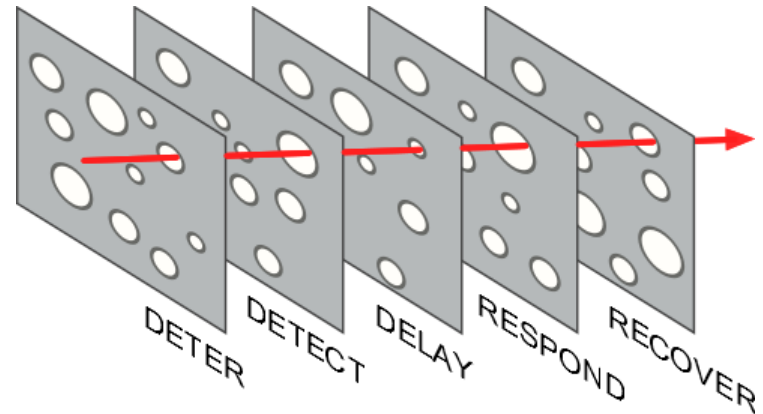
analysis

- Time-based approach
- Holes covered by controls
- Threat-specific layers
- Interaction of layers and interdependencies
- Combination of threats and effect on layers



FIRE

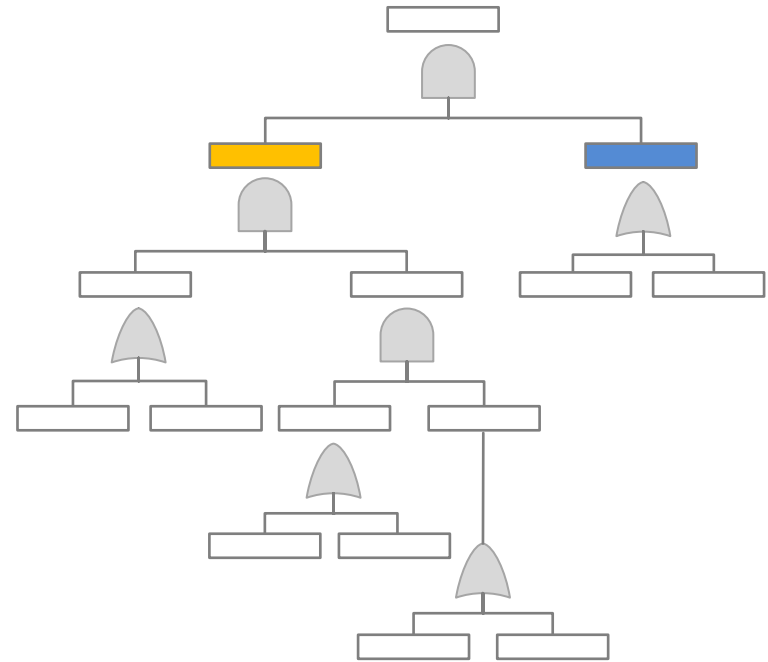
protection



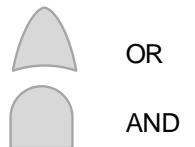
- DETER the fire from starting
- DETECT the fire
- DELAY the fire spread
- RESPOND to put out the fire
- RECOVER the asset

LAYERED

protection

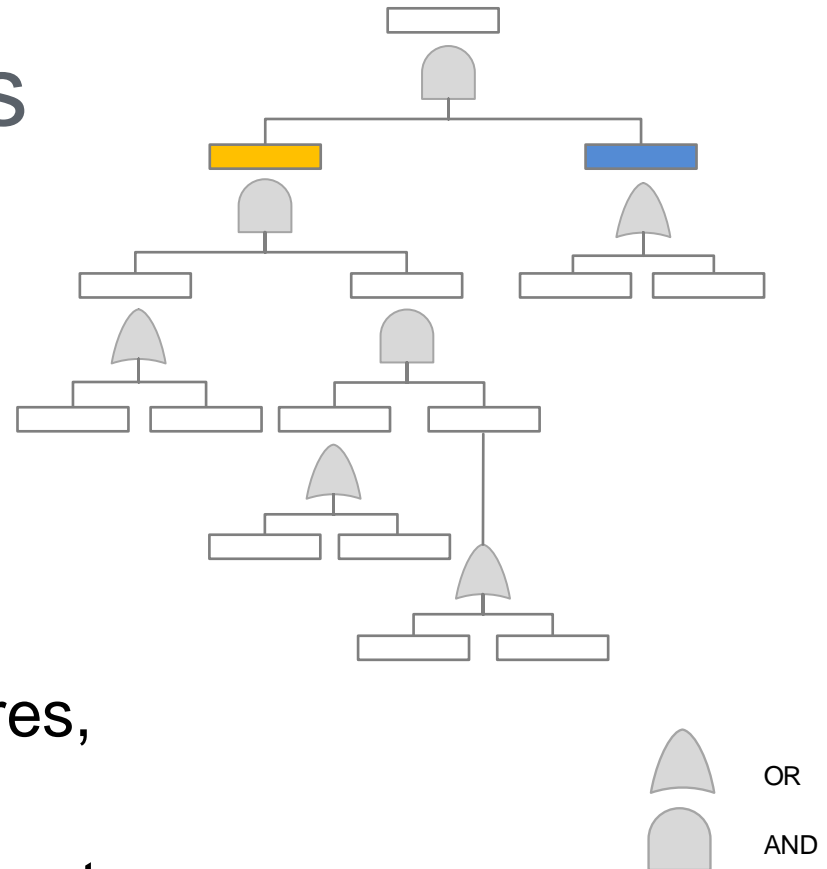


- Layered protection for every threat
- Failures that affect many layers

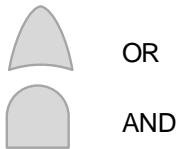
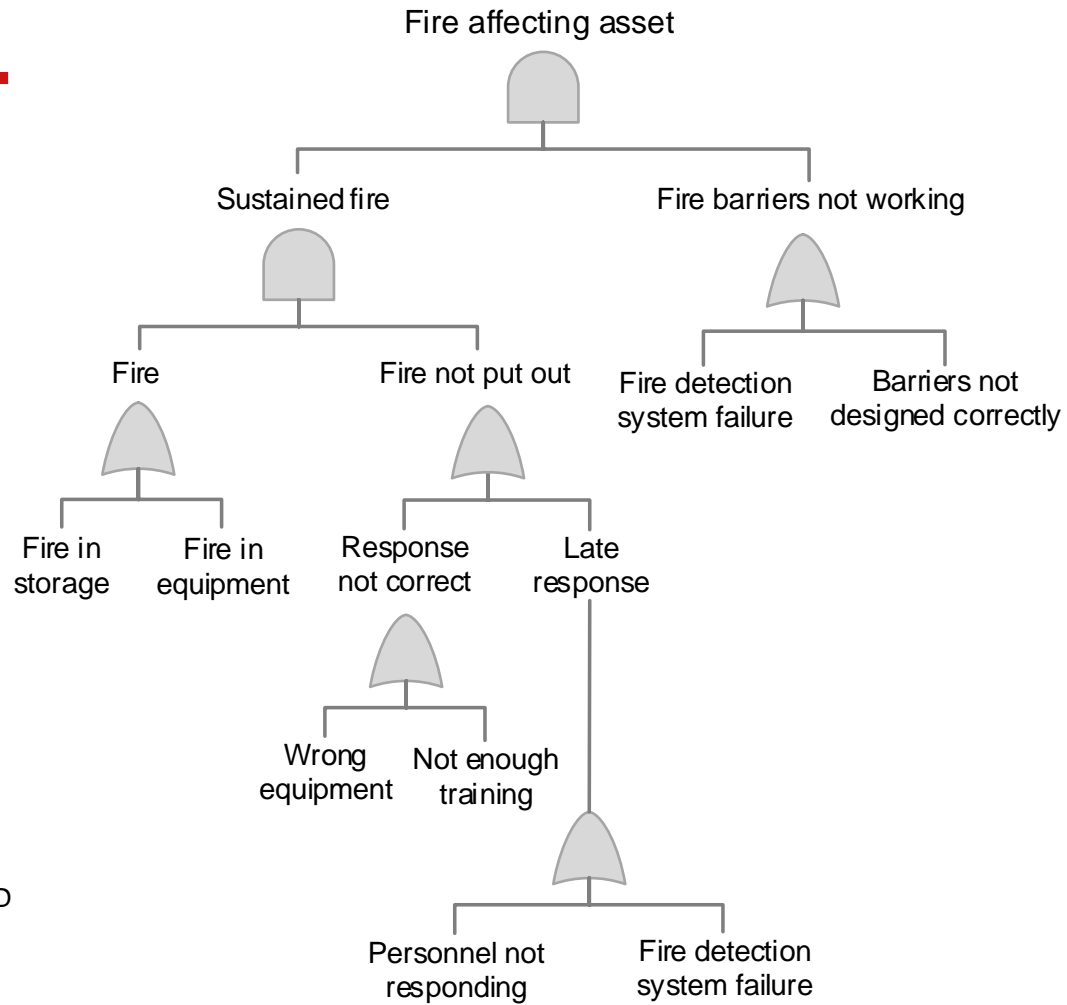


FAULT trees

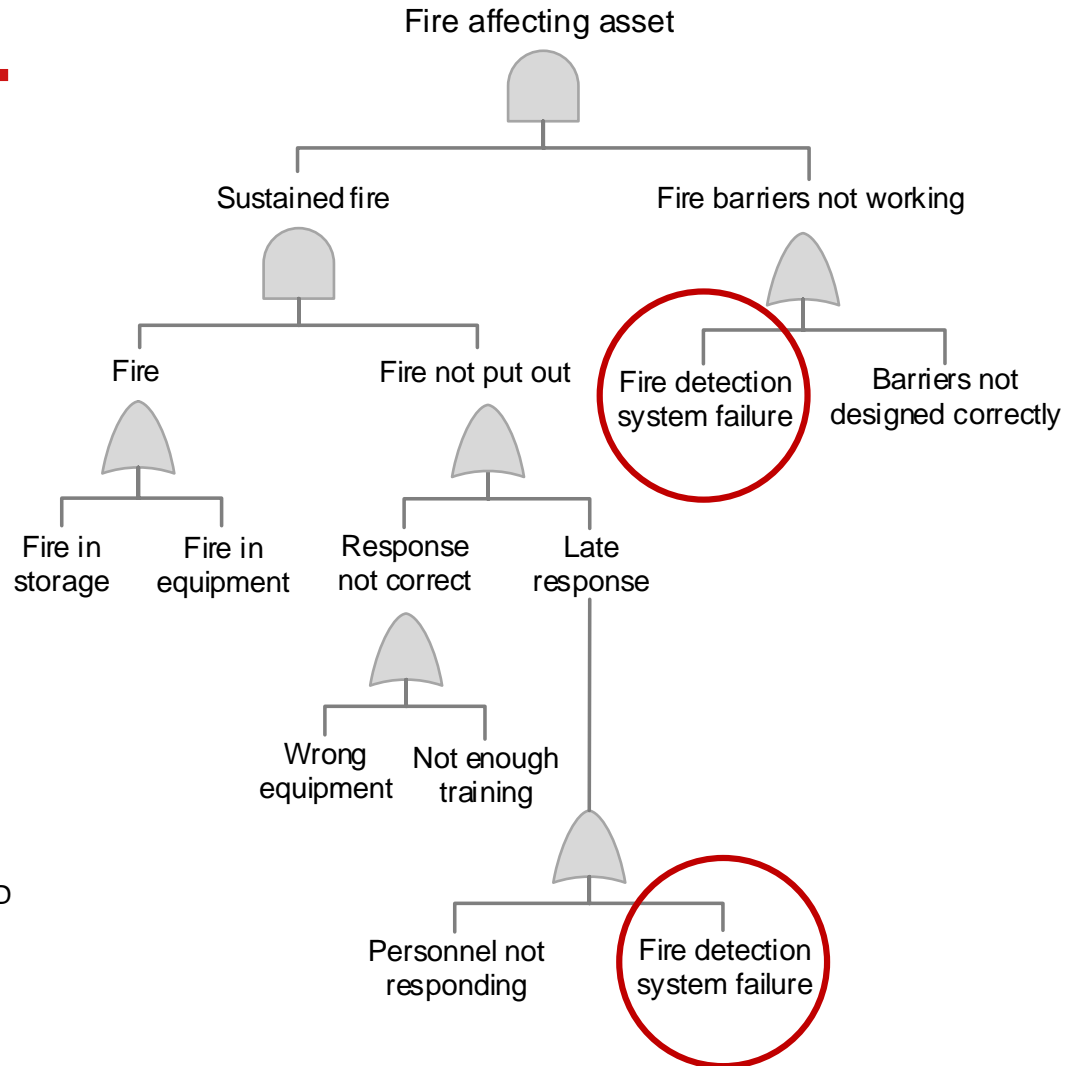
- Security objective failure
- Overview of elements comprising protection
- Probability of failures for all protective layers
- Connection between failures, horizontal / vertical
- Connection between different security objectives



FAULT trees



FAULT trees



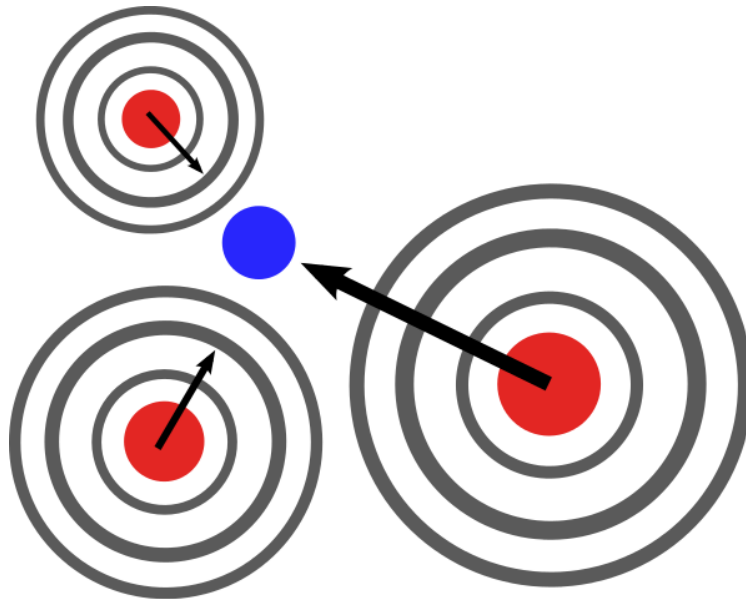


CASE study

- Exhibition of old Icelandic manuscripts
- Clear critical asset
- Oldest manuscripts in the Nordic countries
- History of the Nordic countries and Kings

THREAT

assessment



- Theft
 - Internal / External actors
- Damage
 - People / Explosion
- Fire
 - Heat / Fire / Smoke
- Water
 - Water / moist
- Natural hazards
 - Earthquakes
 - Ash

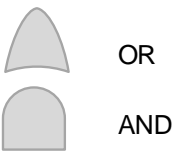
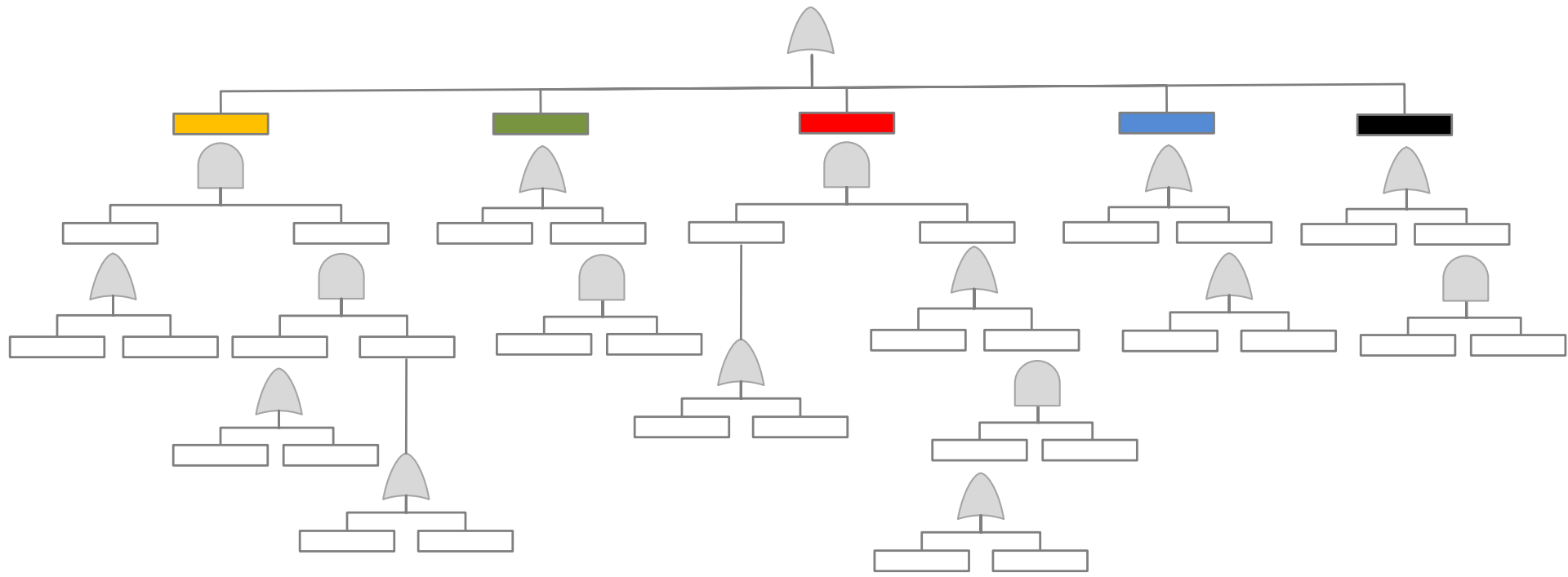
Theft

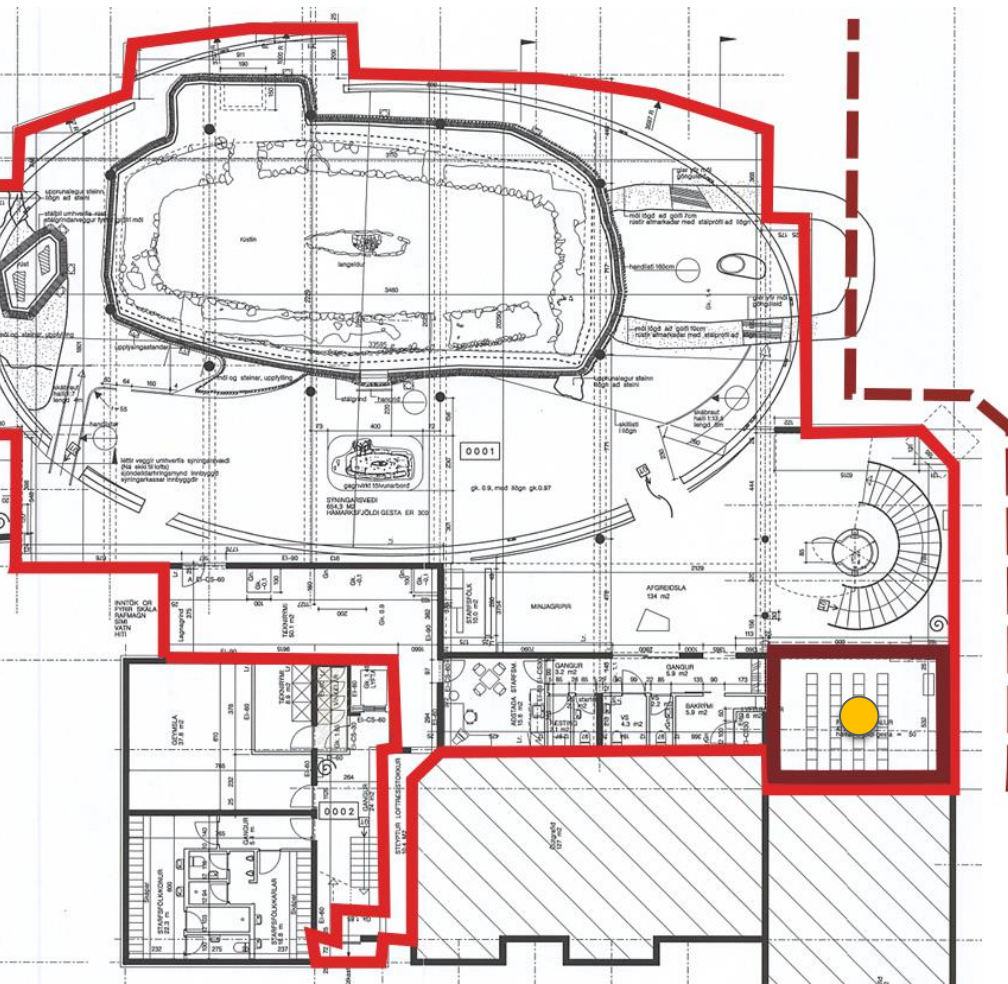
Damage

Fire

Water

Earthquake





CASE study

- Holistic approach
- Layered protection
- Incident management
- Risk treatment
 - Reduce,
 - Avoid
 - Share
 - Retain

LESSONS

- Think about the objectives in wide perspective
- Security risk management as a part of general risk management
- Combine risk assessment for all risks
- Analyze the connectivity and dependability
- Balance the protection for cost effective solutions



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