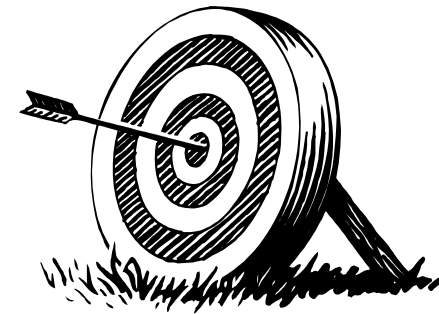
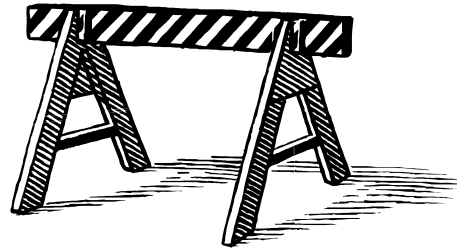
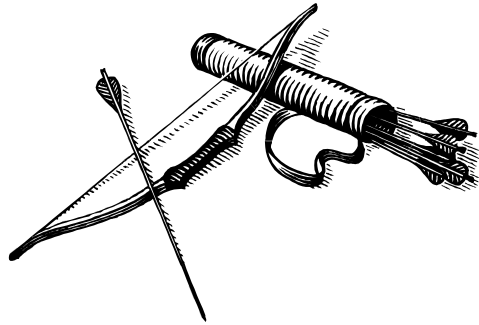


Safety en Security

Overeenkomsten, verschillen, synergie?



TBM/Safety Science Group

Coen van Gulijk

Jan. 21, 2010

1

Safety & Security

- Ontstaan safety en security
- Bindende factoren
- Complicerende factoren
- Safety modellen in Security
- Conclusies

- Deze lezing: perspectief van de onderzoeker

Ontstaan Safety

- Serieuze modelontwikkeling start begin 20^e eeuw.
 - Aanleiding: doden en productieverlies
 - Doel: terugdringen onopzettelijke ongevallen
 - sociaal: 19^e eeuw arbeidsomstandigheden
 - doden/gewonden: 1906 Safety First
 - veiligheidsmanagement: Begin 20^e eeuw

Ontstaan Security

- Modelontwikkeling op verschillende plaatsen/tijden
 - Aanleiding: bescherming staat/waarde/personen/info
 - doel: bescherming tegen opzettelijke 'ongevallen'

 - militair: eeuwenoud (Sun Tzu 4^e eeuw vC.)
 - 'modern' militair: 19^e eeuw: von Clausewitz
 - politie: Scotland Yard 1802 => criminologie
 - na WWII: strikte scheiding leger en ordehandhaving
 - Beveiliging?

Safety en Security samen?

- Lang onafhankelijk van elkaar ontwikkeld
- Blauwe koker
- Witte koker
- Rode koker
- Groene koker
- Safety koker??
- 'Integrale veiligheid' is relatief nieuw begrip

Wat zijn bindende factoren?

- Ongewenst effect
- Complexe kwetsbaarheden moderne samenleving
- Complexe uitkomsten van incidenten op samenleving
- Verlaagd acceptatieniveau van schade/doden
- Risico: methode en wiskunde

Wat zijn complicerende factoren?

- Security gesloten karakter (informatie!)
- Safety gaat juist om bekendheid
- Security heeft imago van 'sterke arm' (007)
- Safety gaat al heel lang over 'bij de arm memen'
- Security van oorsprong sterke band natie/staat
- Safety van oorsprong sterke band bedrijven

- Lang geen gesprekspartners
- Zeer verschillende type werkers

Vergelijking op basis van modellen

- Dilemma:
 - Verzamelen van modellen voor safety is veel werk
 - Verzamelen van modellen voor security is veel werk
-
- Maar gelukkig heeft iemand dat al voor me gedaan (op gebied van security)

Zoek naar veiligheidsmodellen in SRMBOK

Security Risk Management Body of Knowledge

- Talbot, J., Jakeman, M. (2008) SRMBOK, Risk management institution of Australasia limited, Australia.
- “Provides an overview of those area’s or Security Risk Management that are generally recognized as better practice”

SRM resilience model...

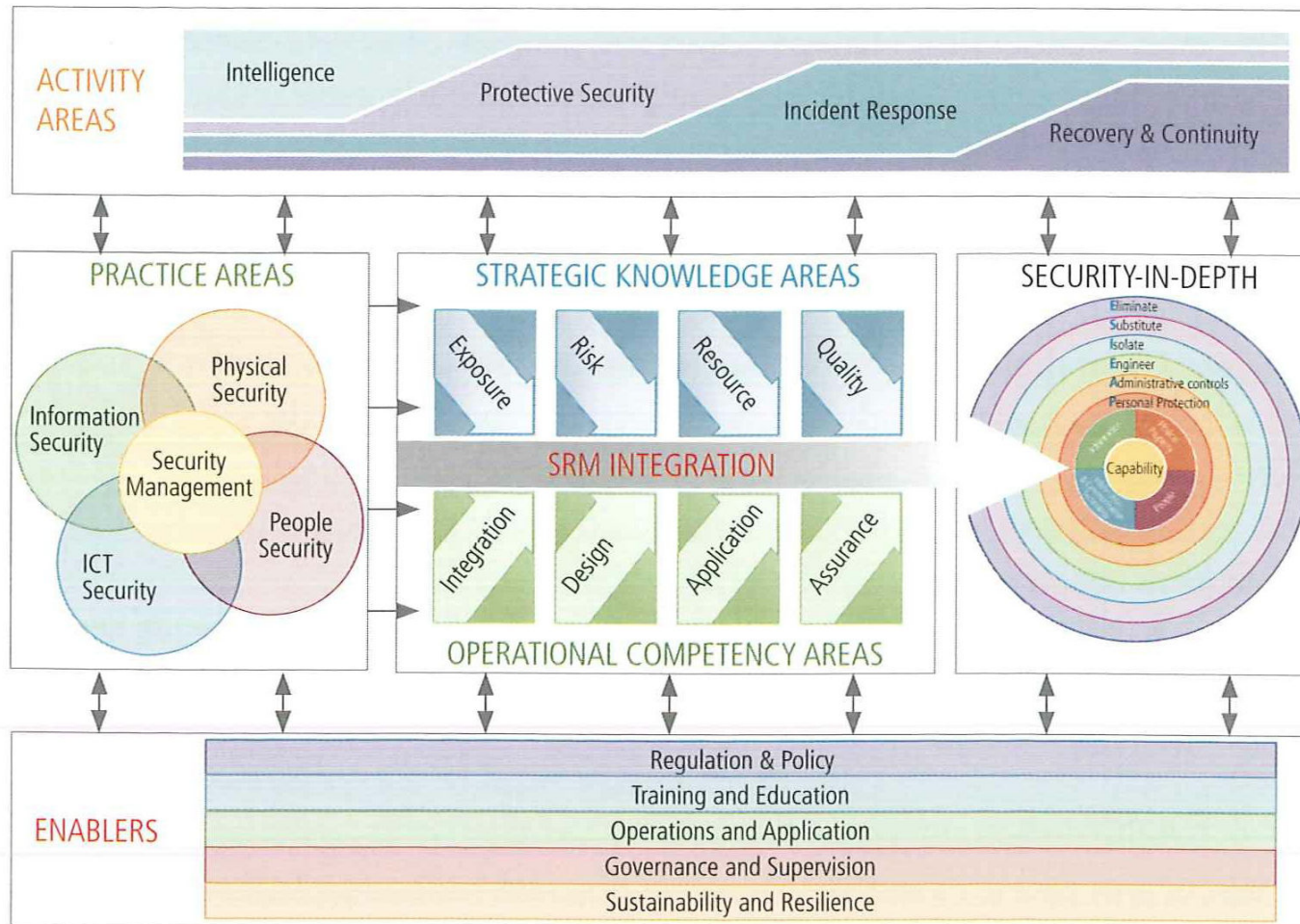
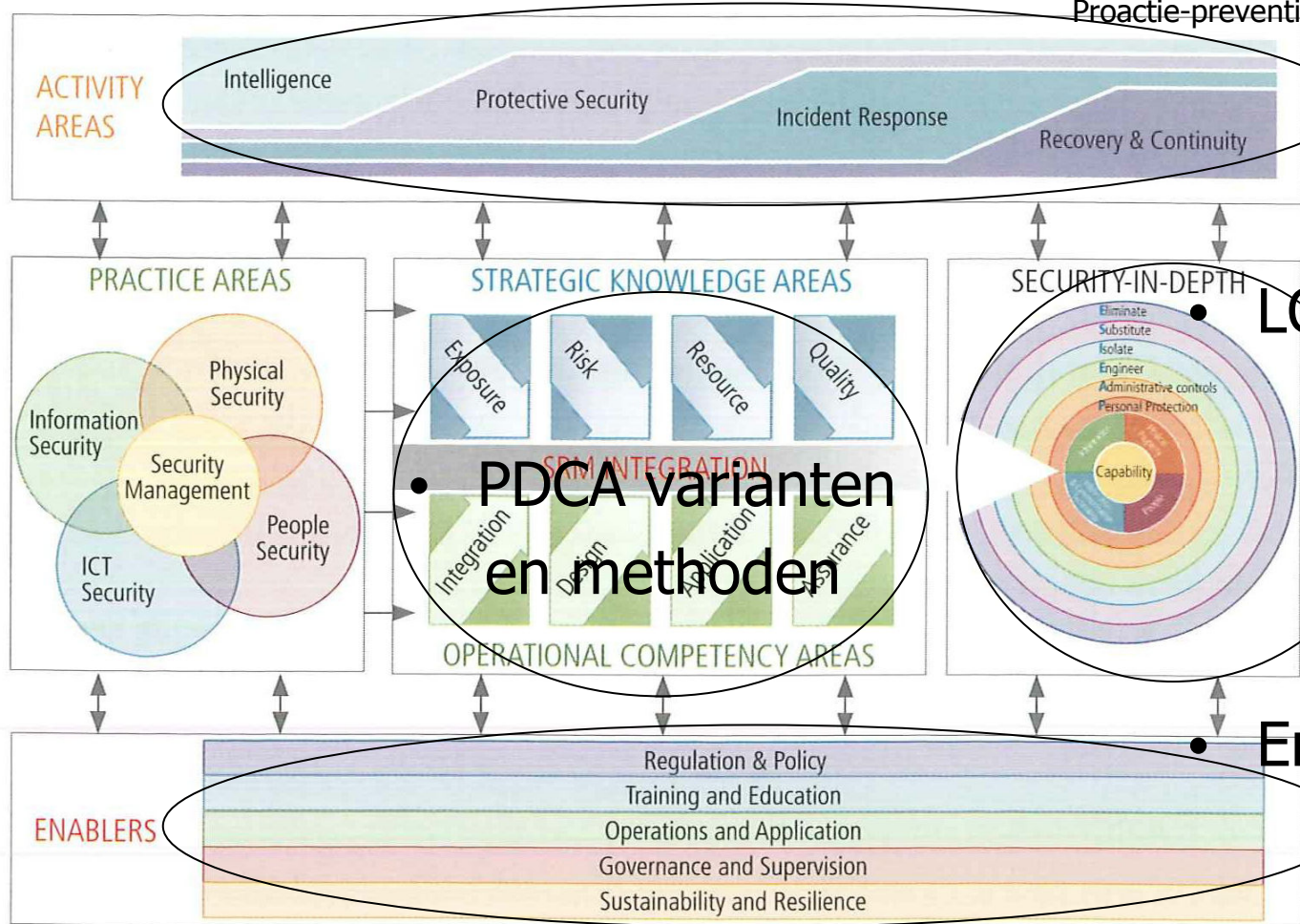


Figure 1: Overview of SRM Resilience Model

SRM resilience model...

- Veiligheidsketen

Proactie-preventie-preparatie-repressie-nazorg



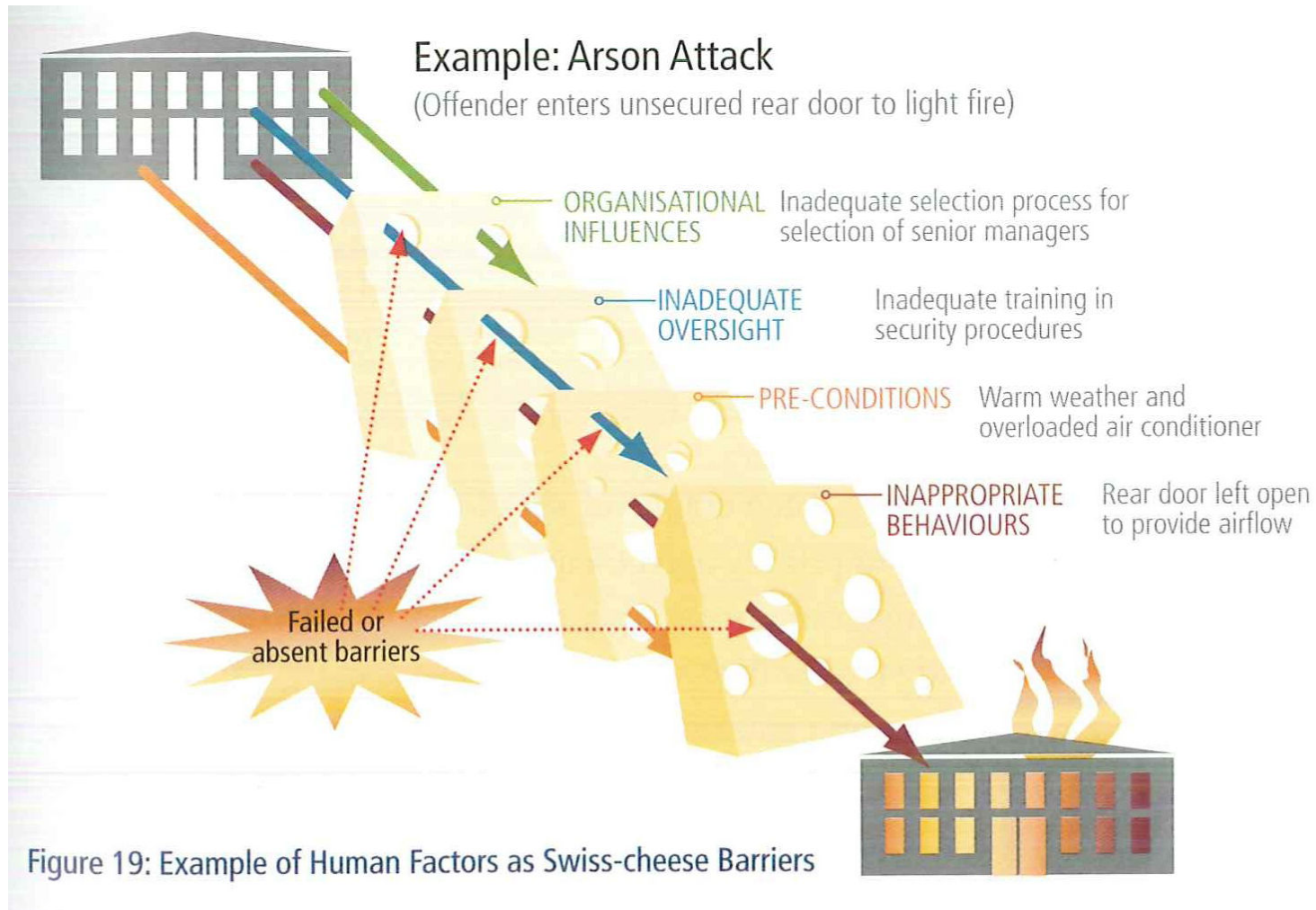
- LOPA-structuur

- Enablers...

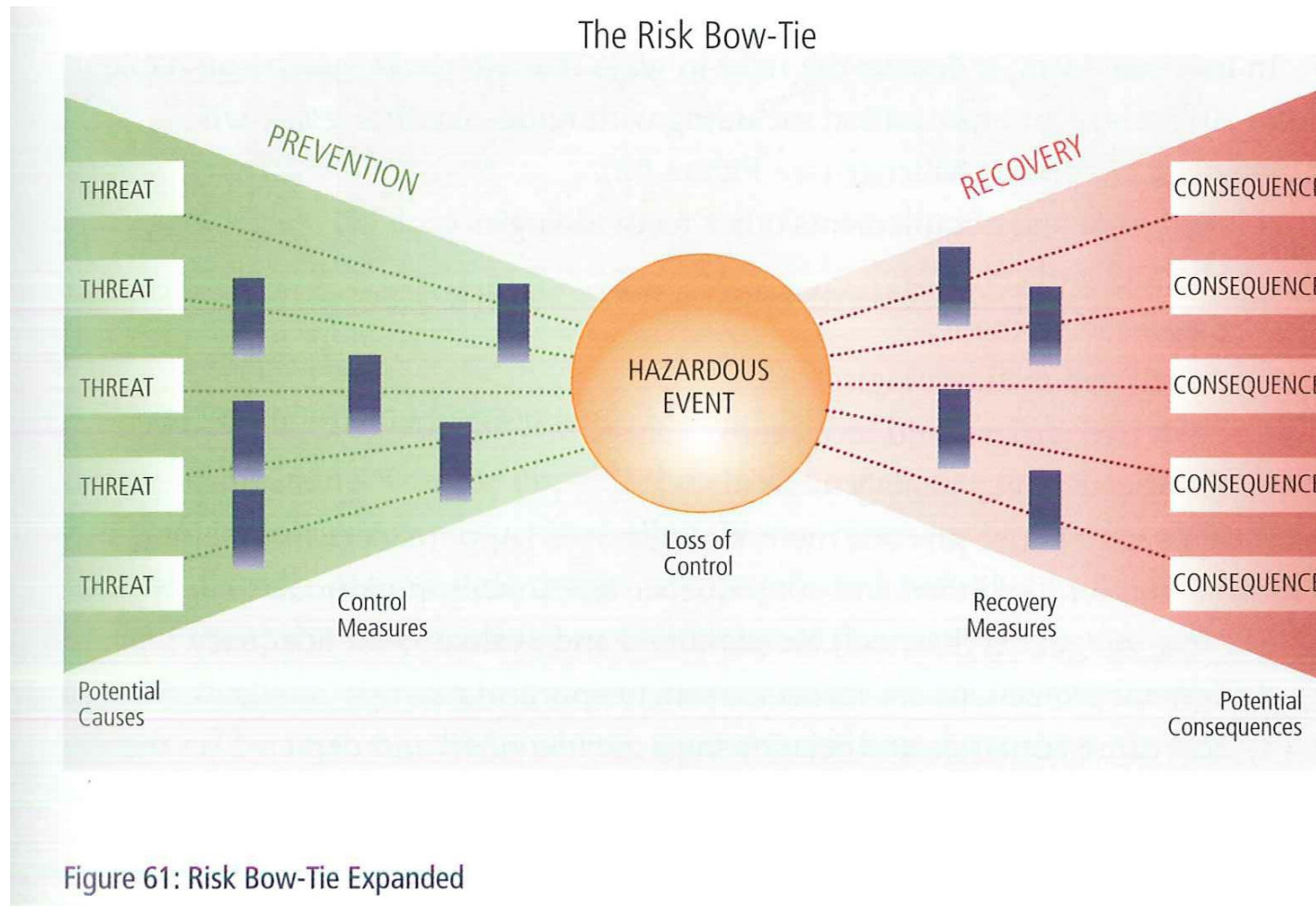
Figure 1: Overview of SRM Resilience Model

Maar er is meer...

KAAS!



VLINDERDAS!



February 15, 2010

14

En kleurrijke combinaties...

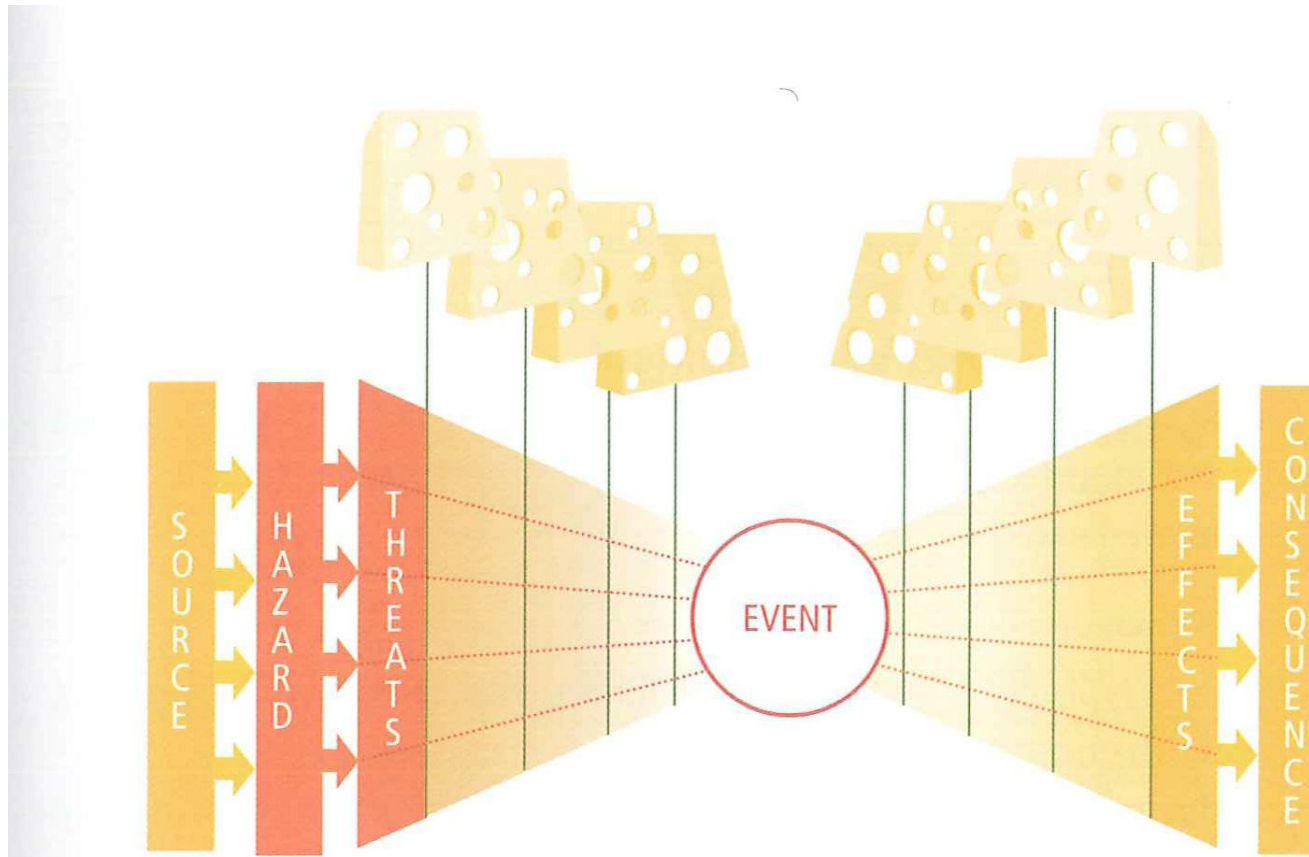


Figure 62: Bow-Tie Relationship of Hazard to Event to Consequence and Swiss-Cheese

LOPA gedachtegoed

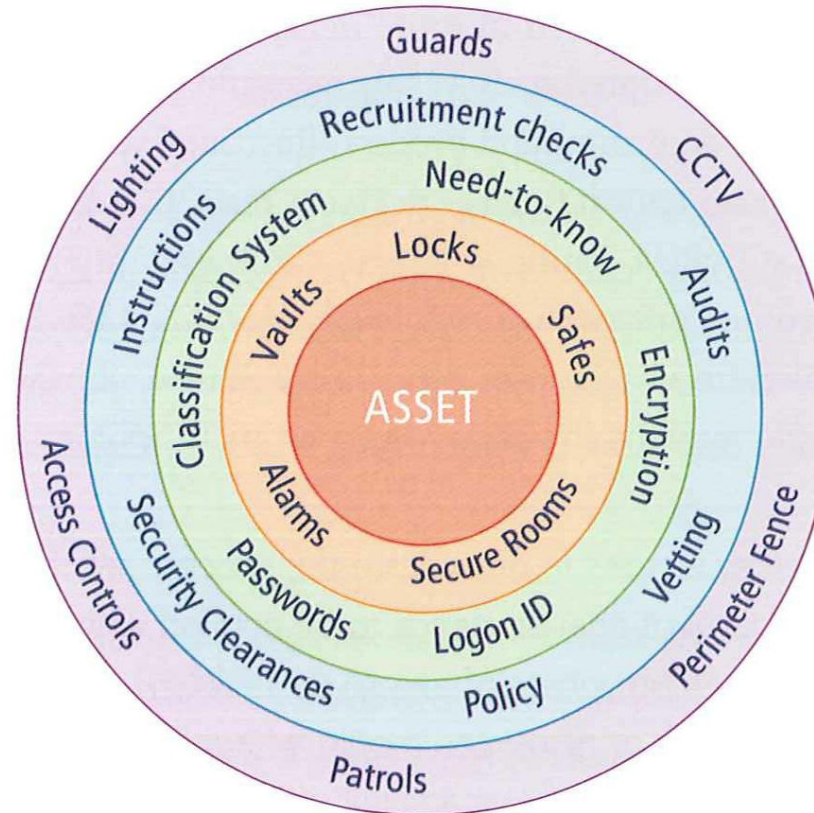


Figure 65: Example of Security-in-Depth

Fault tree - methodologie

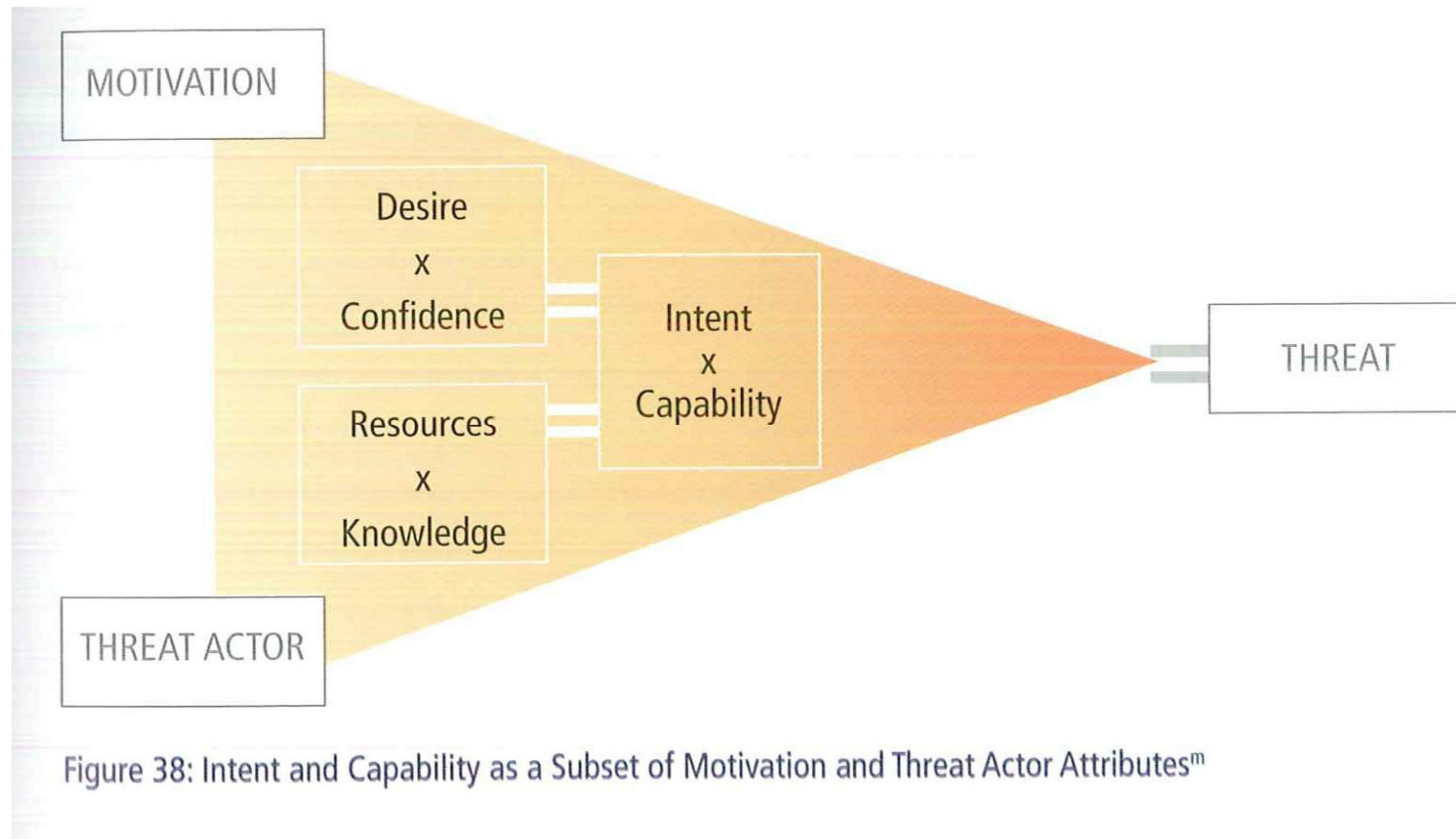


Figure 38: Intent and Capability as a Subset of Motivation and Threat Actor Attributes^m

System analyse principes

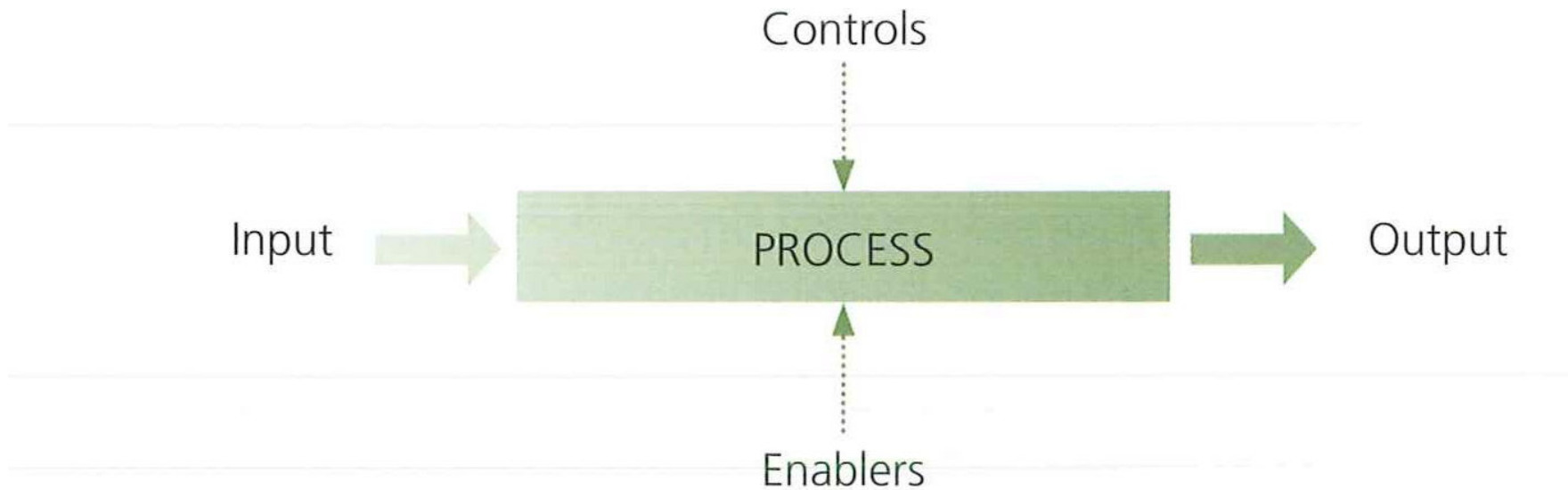


Figure 74: Generic Business Process Example

Verdere invulling proces: veiligheidsketen

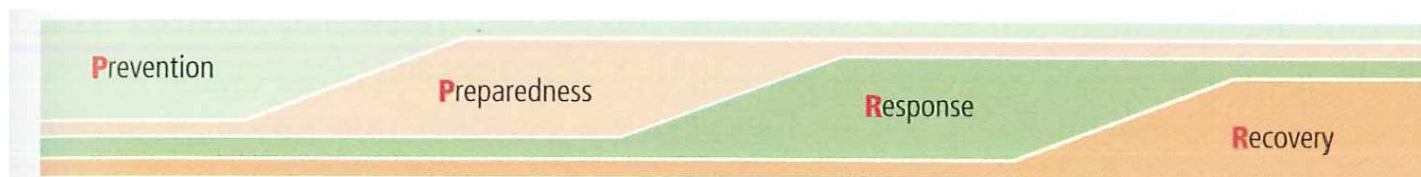


Figure 86: PPRR Emergency Management Model

Skills-Awareness matrix

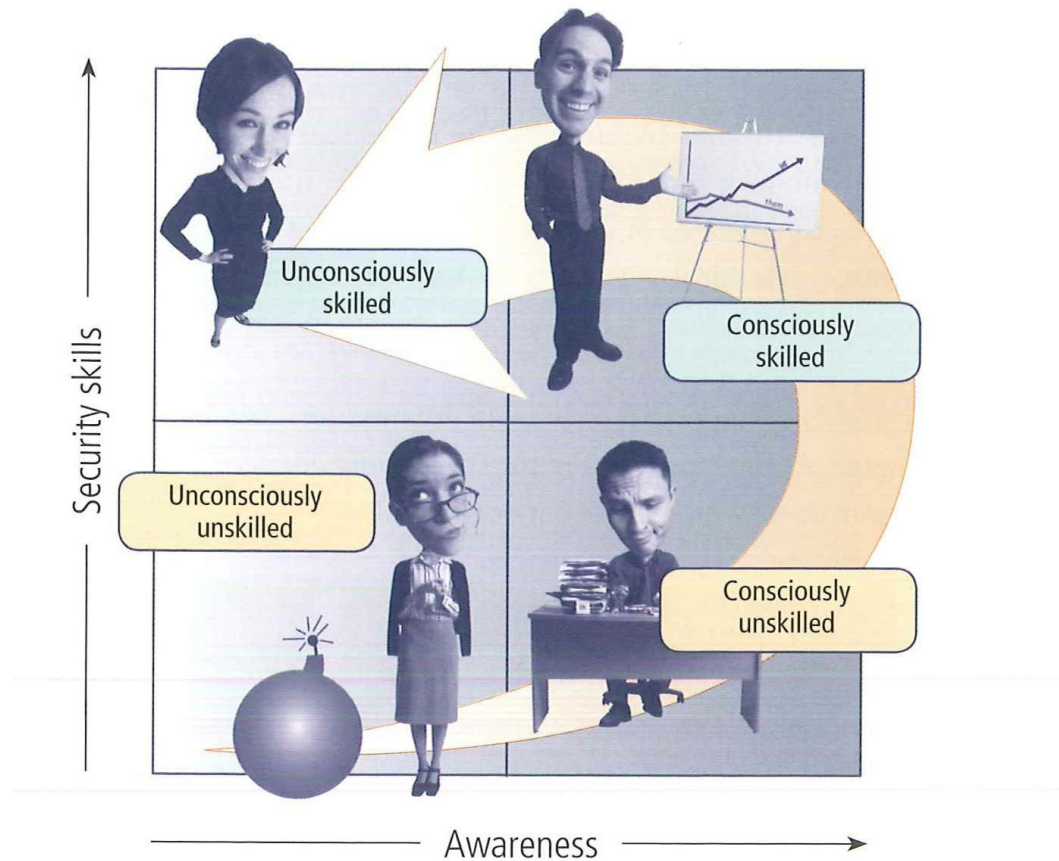


Figure 77: Skill - Awareness Journey

Governance structure

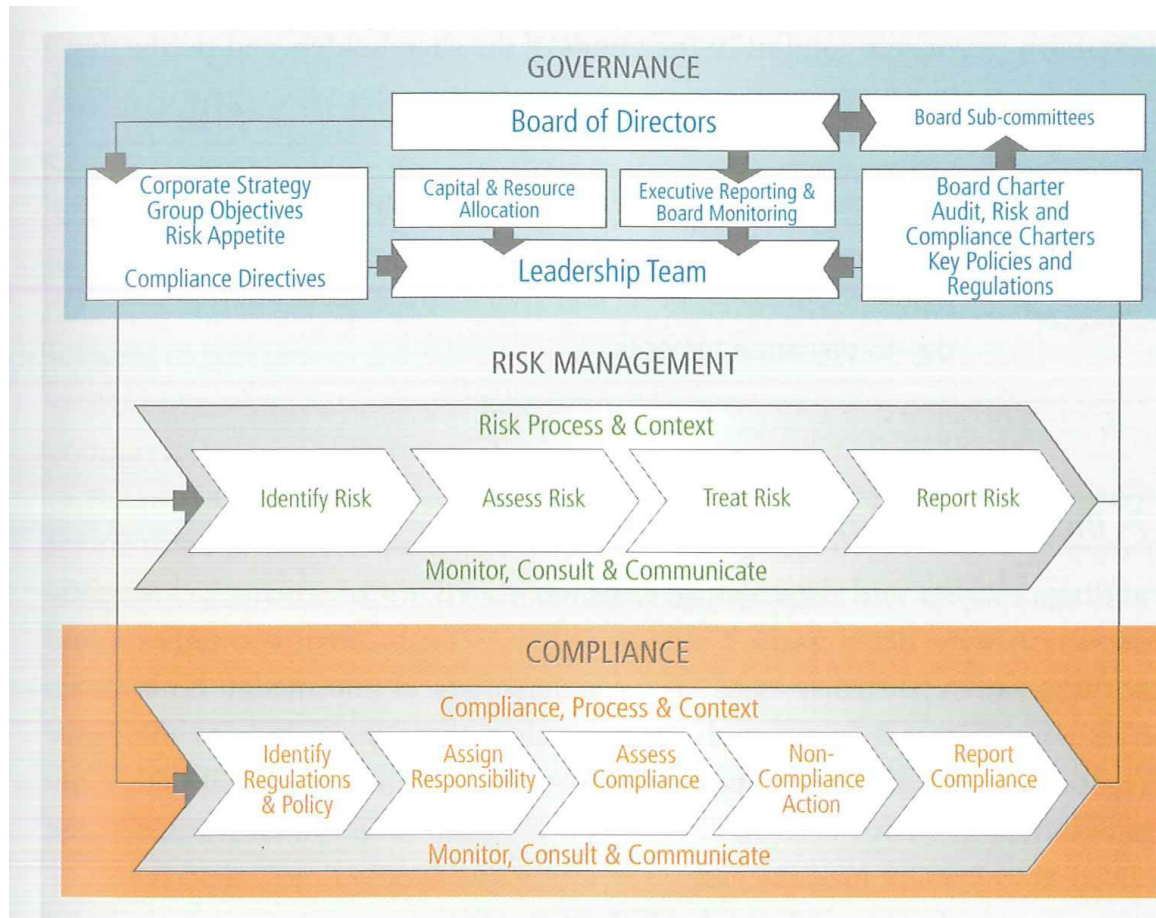


Figure 10: A Sample Governance, Risk and Compliance Operating Model



**Example
Risk Rating
Matrix**

	Qualitative Likelihood	Quantitative Likelihood	Consequence					
			Insignificant	Negligible	Moderate	Extensive	Significant	
Likelihood ↑	Is expected to occur in most circumstances	Has occurred on an annual basis in this organisation in the past or circumstances are in train that will cause it to happen	Almost Certain	6	7	8	9	10
	Will probably occur in most circumstances	Has occurred in the last few years in this organisation or has occurred recently in other similar organisations or circumstances have occurred that will cause it to happen in the next few years	Likely	5	6	7	8	9
	Might occur at some time	Has occurred at least once in the history of this organisation or is considered to have a 5% chance of occurring in the next few years	Possible	4	5	6	7	8
	Could occur at some time	Has never occurred in this organisation but has occurred infrequently in other similar organisations or is considered to have a 1% chance of occurring in the next few years	Unlikely	3	4	5	6	7
	May occur only in exceptional circumstances	Is possible but has not occurred to date in any similar organisation and is considered to have very much less than 1% chance of occurring in the short term	Rare	2	3	4	5	6

Very High (VH)	Immediate action required by the Executive with detailed planning, allocation of resources and regular monitoring
High (H)	High risk, senior management attention needed
Medium (M)	Management responsibility must be specified
Low (L)	Monitor and manage by routine procedures
Very Low (VL)	Managed by routine procedures

Figure 53: Example of a 5x5 Risk Rating Matrix

Risicomatrix

- Deze moet je eigenlijk als 'security' methode bestempelen.
- Komt voort uit US-DoD MIL-STD-882B waarvan begin in 1950 gemaakt is.

SRMBOK onderdeel van RMBOK

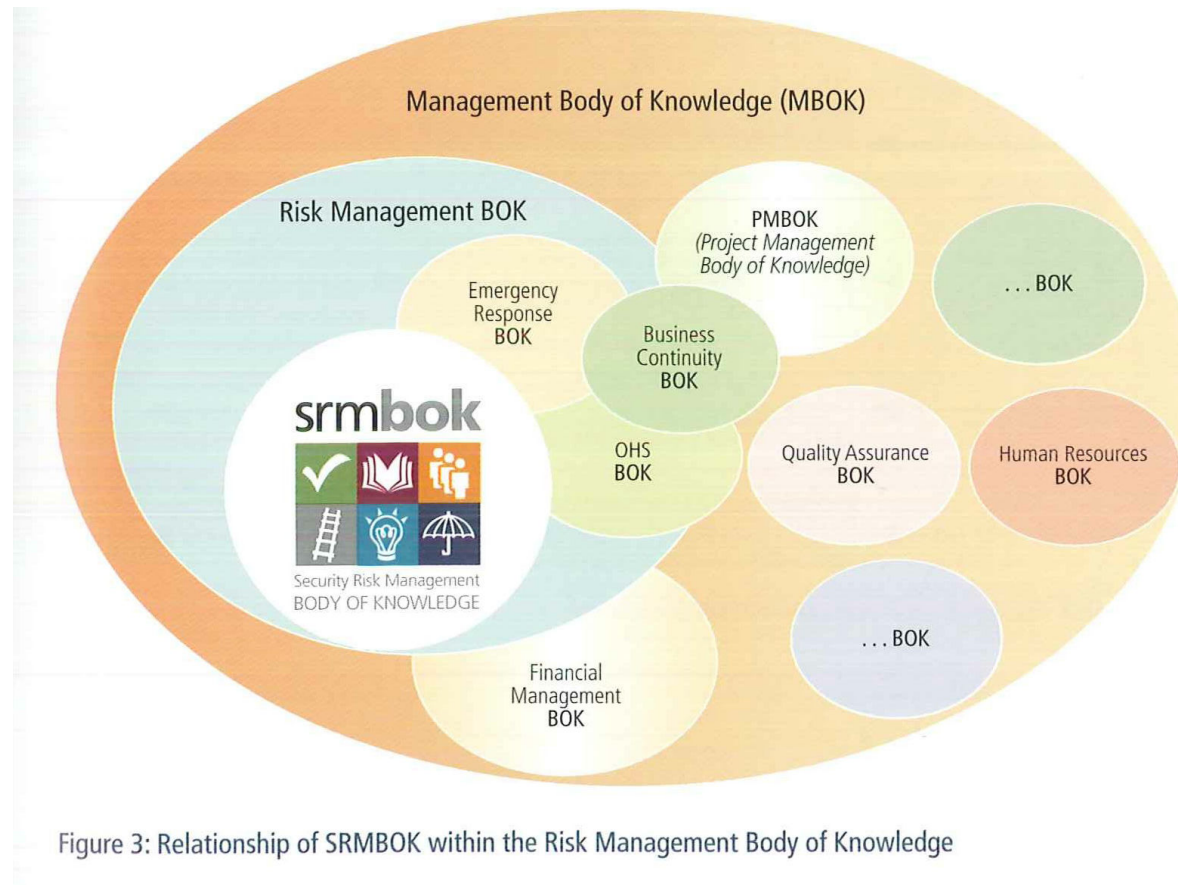


Figure 3: Relationship of SRMBOK within the Risk Management Body of Knowledge

Conclusie: The Bright Side

- Methodologisch gezien is er een kern van methoden die safety en security kunnen samenbrengen
- Beide gebieden hebben (op hoofdlijnen) vergelijkbare problemen: complexe omgeving en ongewenste effecten
- Van het Security SRM Resilience model kan safety ook nog wel wat leren...
- Methodologisch zou synergie Safety en Security best mogelijk kunnen zijn

Conclusie: The Dark Side

- Verschil in openheid (informatie delen) en doelstelling kan samenwerking ernstig belemmeren.
- Safety en Security zijn traditioneel zeer verschillend: personalia; organisatie; technieken.
- Wetenschappelijk bewijs voor transponeren modellen?
- En ik heb in de security praktijk in NL nog niet veel safety modellen gezien en vv... (maar ik ben geen practitioner)
- Synergie voor samenwerking Safety en Security is complexer dan alleen de modellen.