



# Risk Management as a Tool for Safety Management

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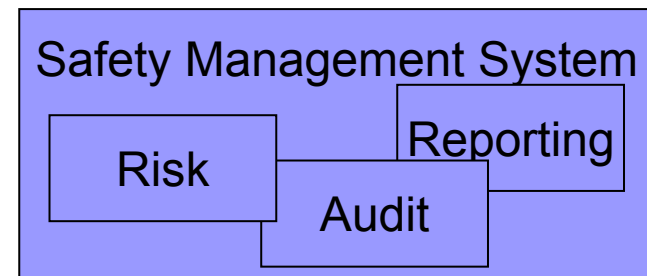
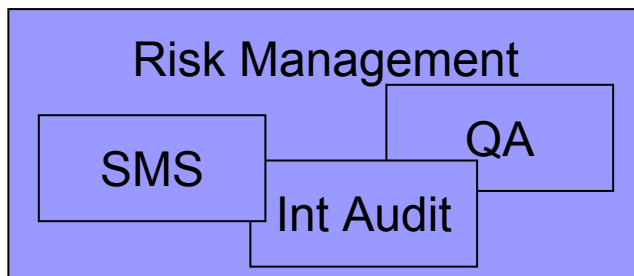
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# Introduction

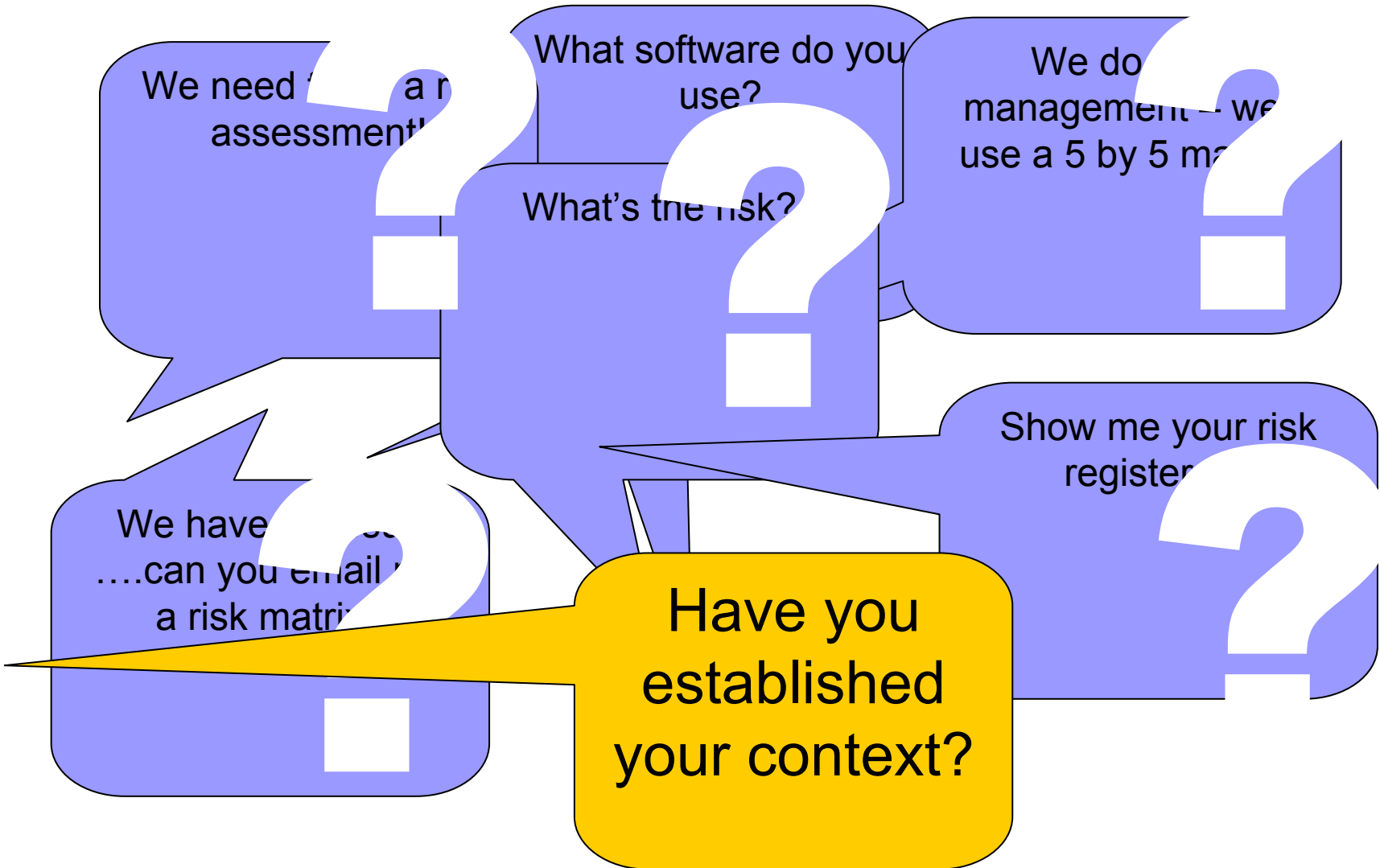
- Risk management as a perceived solution
- Applying risk management – 3 problems
  1. Are the principles understood?
  2. How useful is the source data?
  3. Does one size fits all?
    1. Analysis
    2. Mitigation
- Conclusion

# Risk management as a perceived solution .....

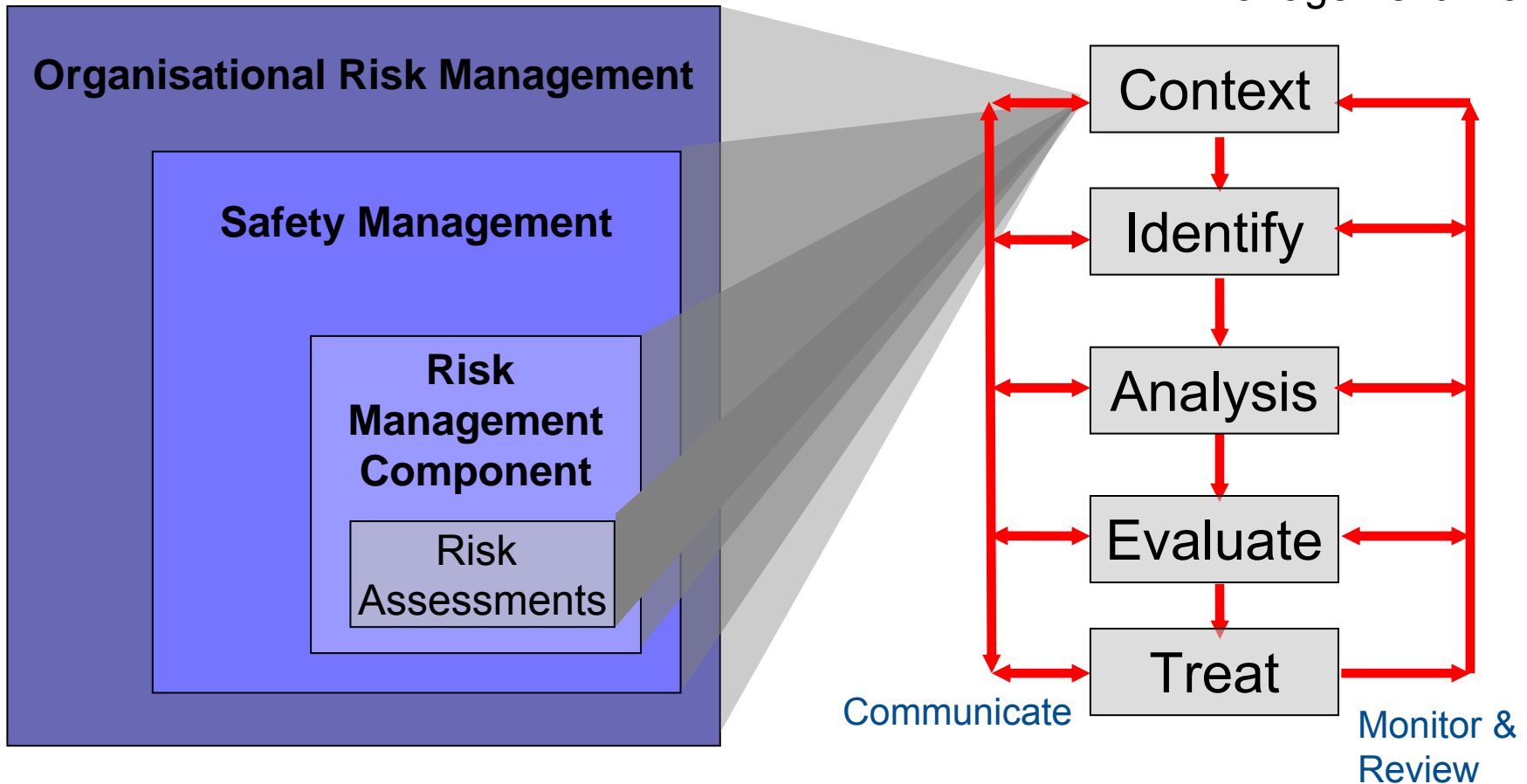
- Safety management is about assuring a state of safety exists into the future....
- Risk management is about making decisions now - based on possible future states.....
- The aims are consistent .....
- Each can be seen within the context of the other



# 1. Are the principles understood?



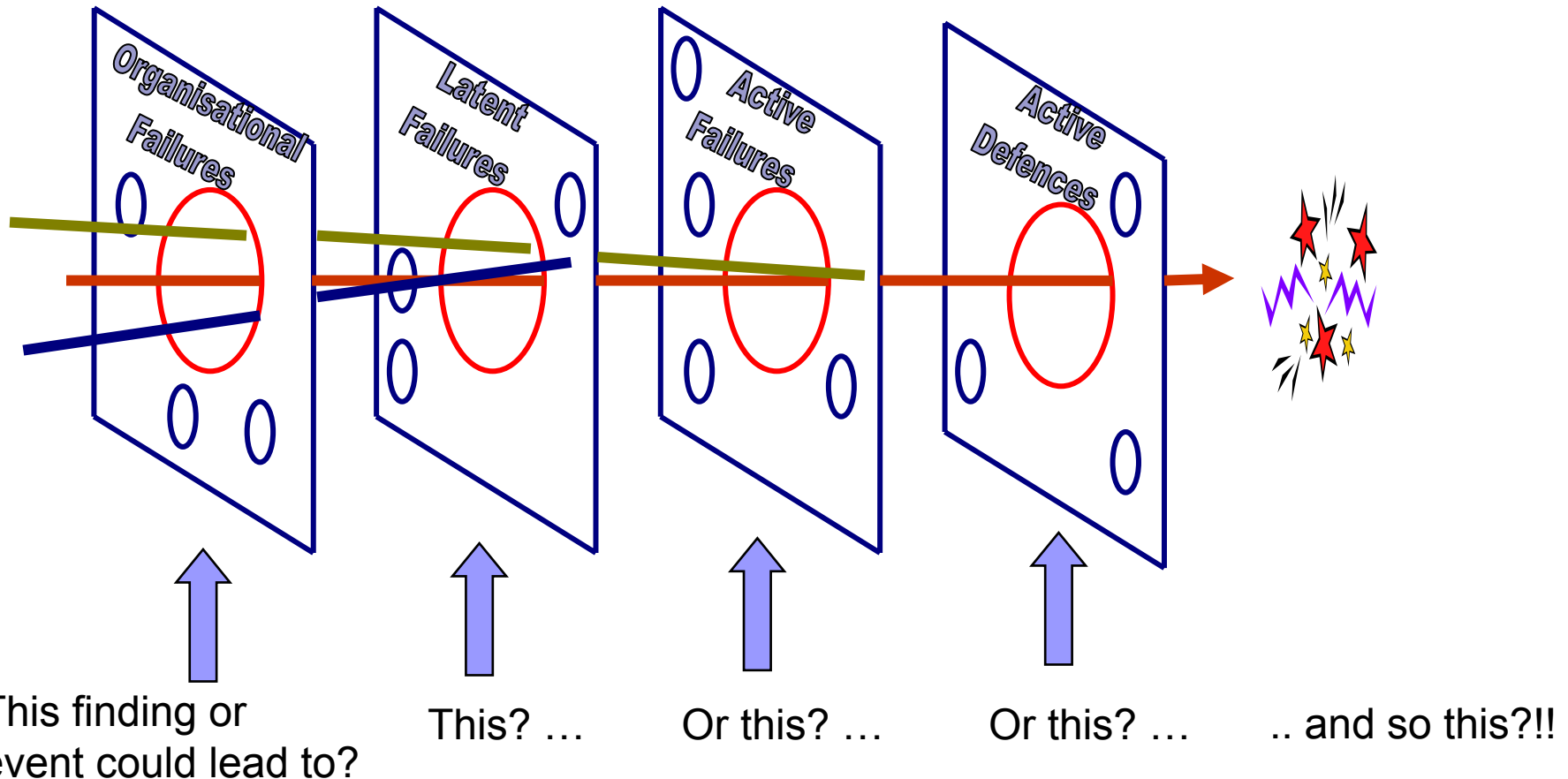
# Context is key.....



## 2. How useful is the source data?

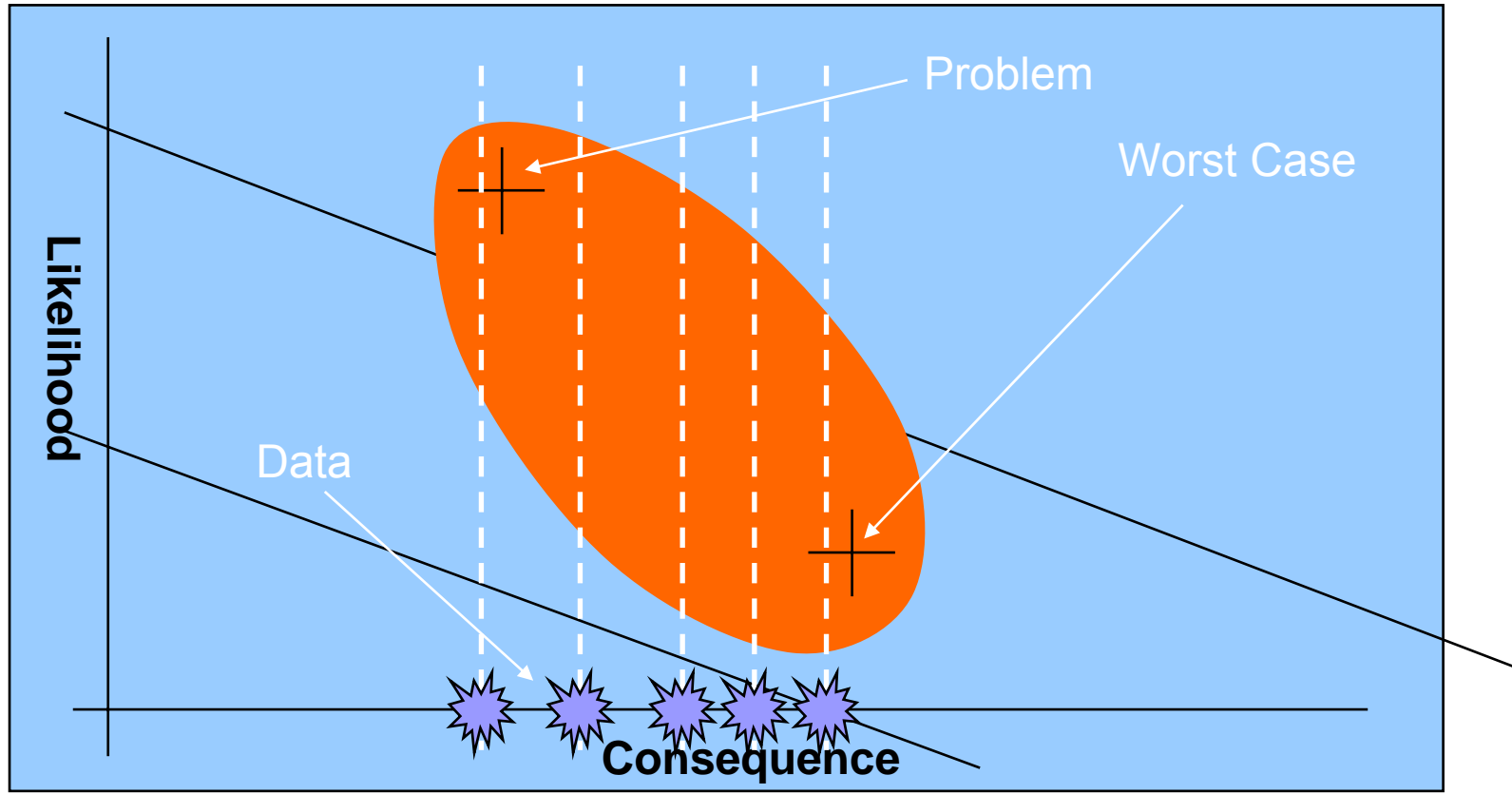
- The risk of what?
- Limited data
- Cause and effect

# The risk of what exactly?



*So which likelihood should we be using????*

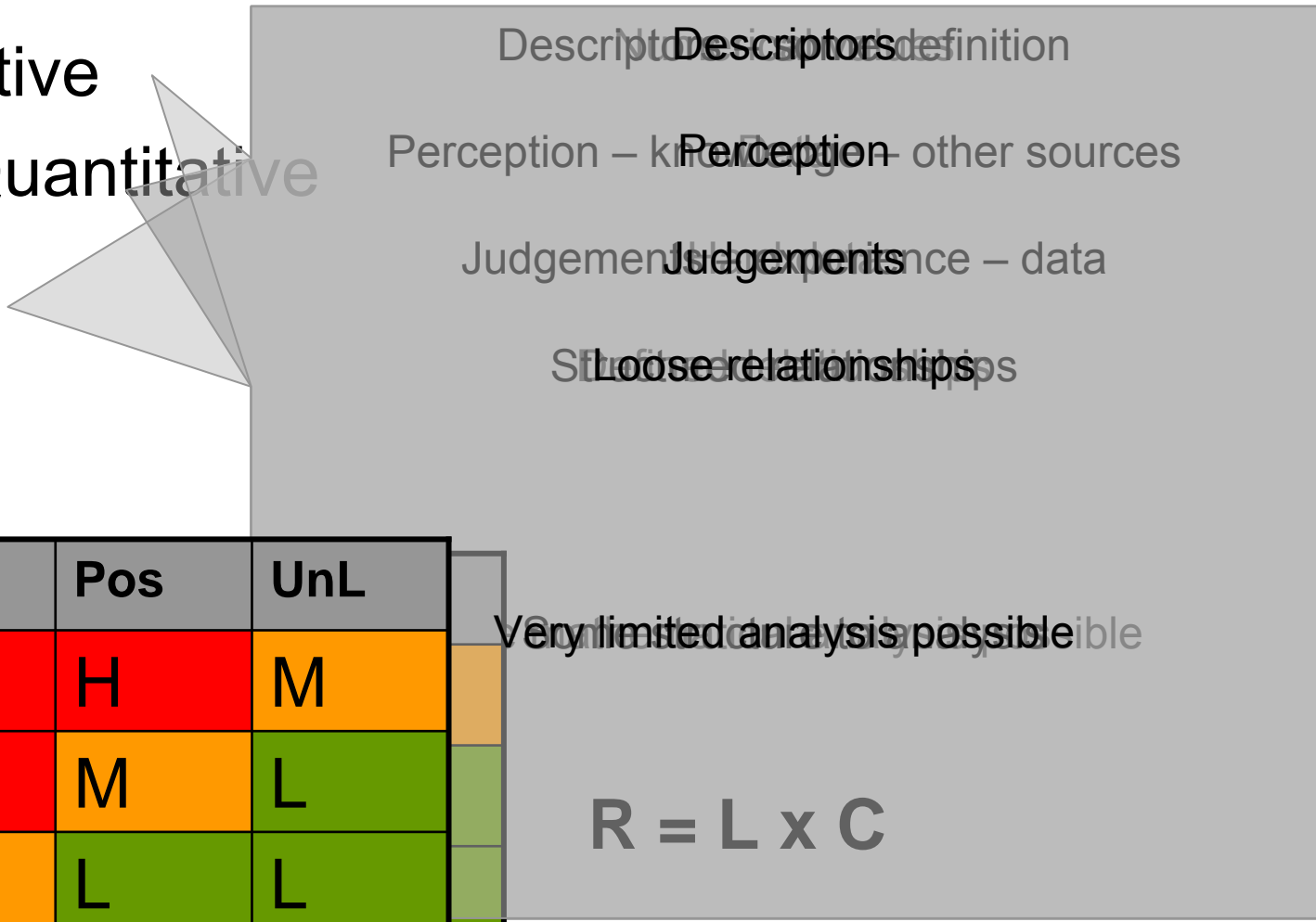
# From data to understanding ....





# 3. One size fits all? – Analysis

- Qualitative
- Semi Quantitative
- QRA



	L	Pos	UnL
High	H	H	M
Med	H	M	L
Low	M	L	L

# Analysis – numerical rules

Type of scale	Description	Maths	Example
Nominal	Assigns data into categories	No mathematical operation valid	Classifications (technical, procedural, skill)
Ordinal	Comparative scales. Can be judged more or less than ...	Summation is arbitrary	Rankings such as, High, Low, Medium
Interval	Constant quantitative intervals between units	Can integrate add/subtract or multiply/divide by a constant only	A scale such as 1, 2, 3 ...9, 10 with some meaning
Ratio	Quantitative as above but with set point	Can be mathematically combined given units are same	A measure of effect such as \$1 loss, \$2 loss

## 3. One size fits all? – Mitigation

- You know the risk – now what?
- Typically:
  - Procedures and standards
  - Good practice
  - Professional judgement
  - Analysis
  - Values

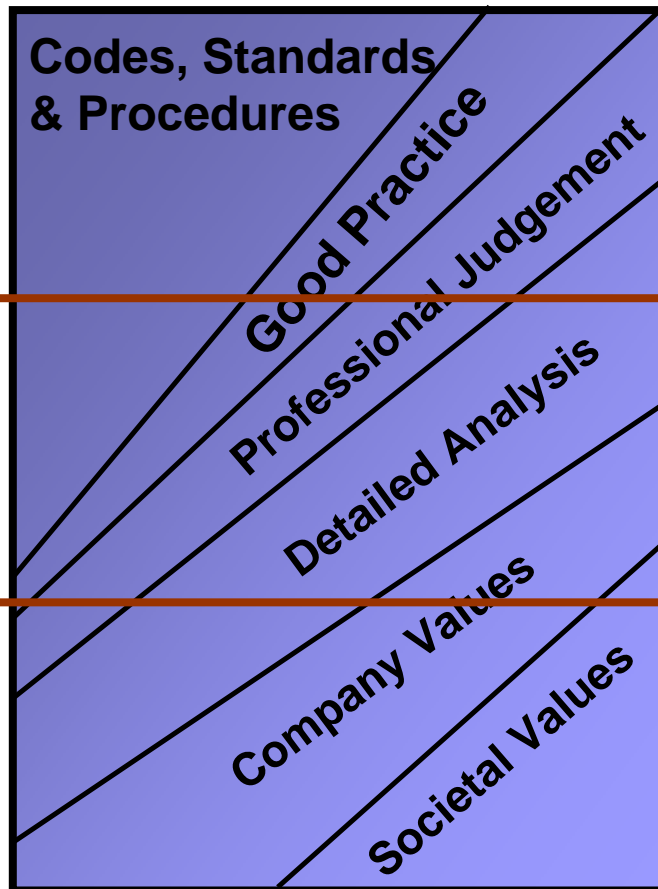
# Treatment options

**Decision  
Complexity**

Simple

Difficult

Complex



**Decision Context Type**

1

Nothing new or unusual  
Well understood risks  
Established practice  
No major stakeholder implications

2

Lifecycle implications  
Some risk trade-offs/ transfers  
Some uncertainty or deviation from  
standard or best practice  
Significant economic implications

3

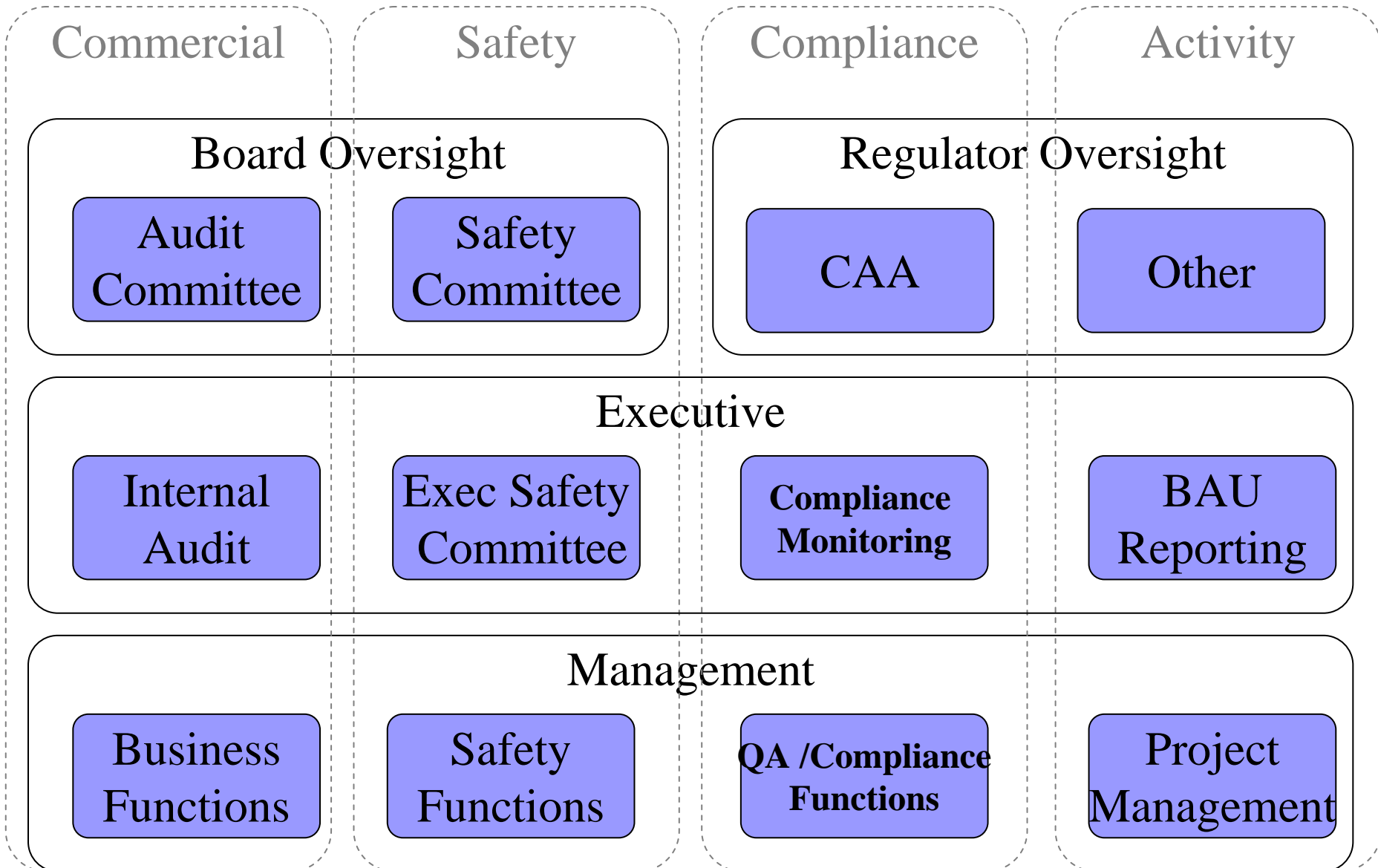
Very novel or challenging  
Strong stakeholder views and  
perceptions  
Significant risk trade-offs/  
transfer  
Significant uncertainties  
Perceived lowering of  
standards

# Conclusion

- Risk management as a perceived solution
- Applying risk management – 3 problems
  1. Are the principles understood?
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# Questions?

# Context in an organisation



# Measuring risk

