

WESTMINSTER

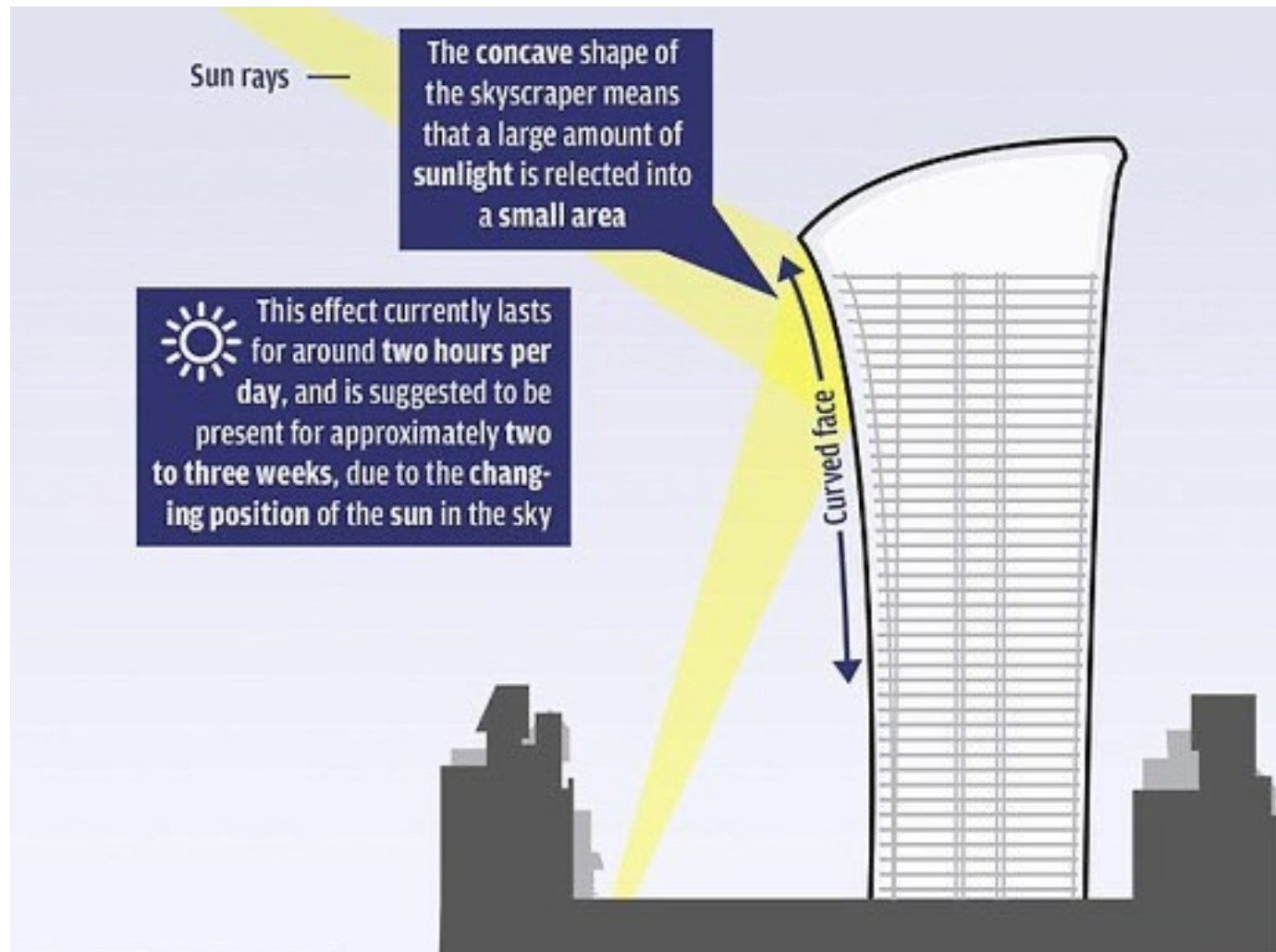
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Roberto Bellasio (2018). Buildings. <https://pixabay.com/photos/london-thames-buildings-gherkin-3663052/>

London's 'Walkie Talkie' skyscraper reflects light hot enough to fry an egg



London's 'Walkie Talkie' skyscraper reflects light hot enough to fry an egg

Project Management

Lecture 10

Project Risk Management

by

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- Risk
- Risk Management Process
 - Risk Identification
 - Risk Assessment
 - Risk Response
 - Risk Control
 - Contingency plan

What is risk?

- an uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objective

Project Management Institute (PMI),

at <https://shorturl.at/lrAE7>

- an uncertain event or set of circumstances that, should it occur, will have an effect on the achievement of the project's objectives

Association for Project Management,

at <https://shorturl.at/jmxlR>.



Arec Socha(2016) Sign warning.<https://pixabay.com/illustrations/sign-warning-warning-sign-danger-1719887/>

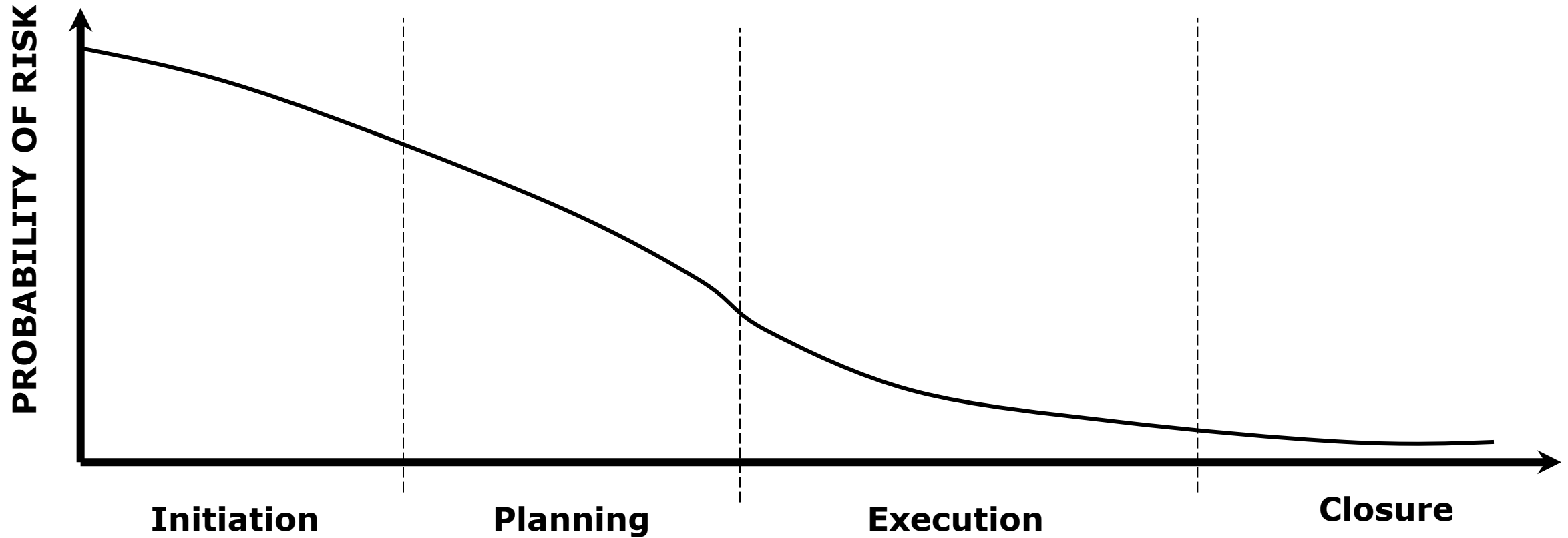
Attempts to recognize and manage potential and unforeseen trouble spots that may occur when the project is implemented.

Larson, Gray (2014)

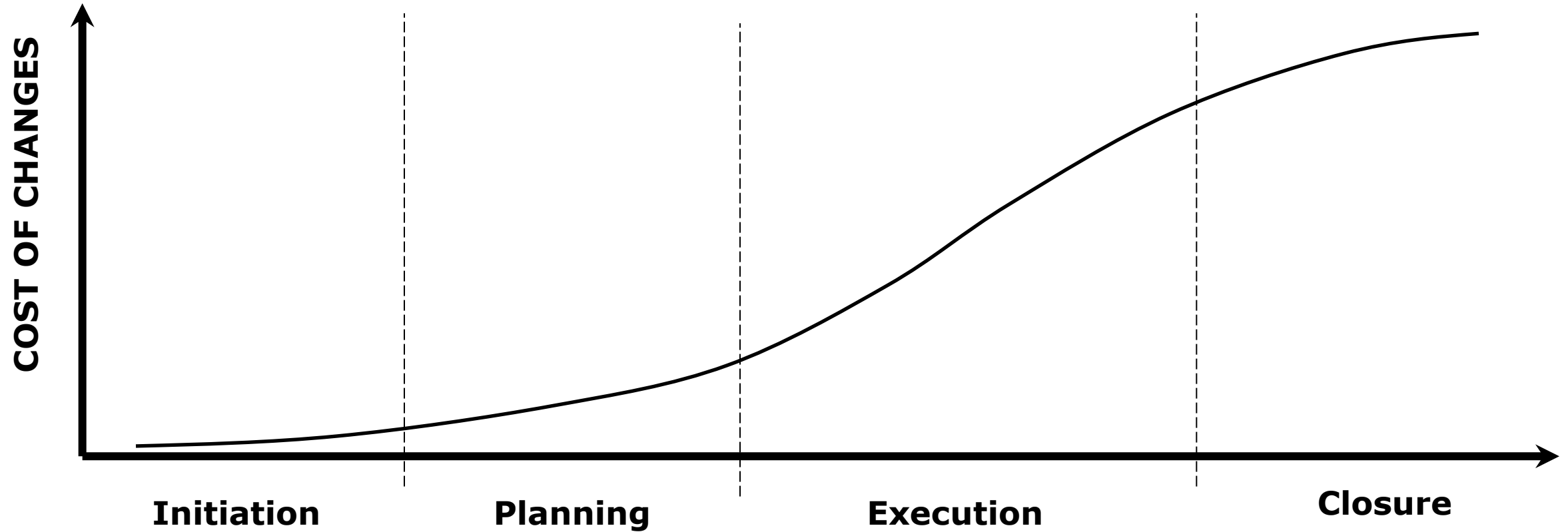


By 12138562 (2021). Balancing person. <https://pixabay.com/photos/balance-bar-shoes-feet-person-6157258/>

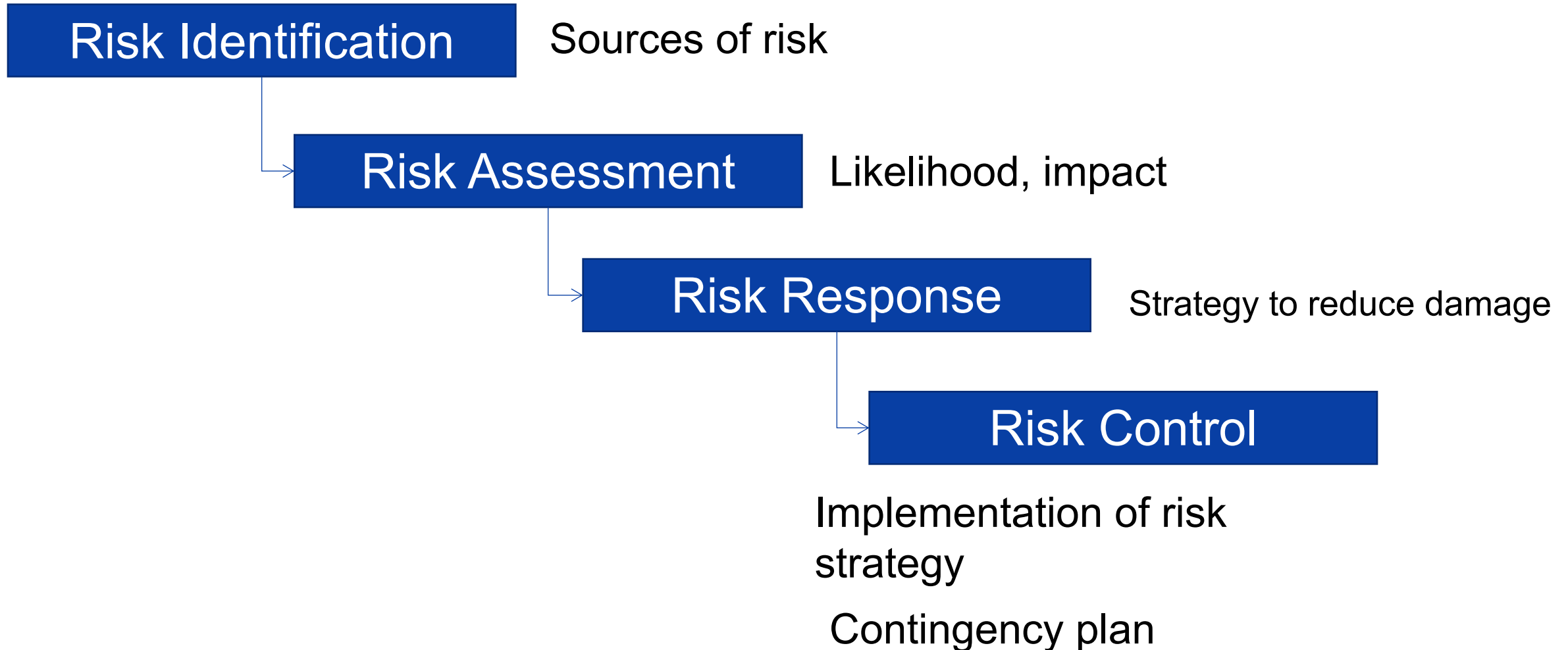
Risk distribution



Cost of change



Risk Management Process



- WBS
- Brainstorming
- 6-3-5 Method (Brainwriting)
- Delphi Technique
- SWOT analysis
- Cause and effect diagram

Risk assessment is the determination of quantitative or qualitative **value of risk**.

Qualitative

Risk assessment matrix (Severity matrix)

Failure Mode and Effect Analysis (FMEA)

Quantitative

Sensitivity analysis

PERT-based analysis

Monte Carlo simulations

Qualitative

- Risk level is subjectively determined in absence of risk data;
- Subject to perceptions and conflicts;
- Low complexity, low cost;
- Effective if widely applied.

Quantitative

- Risk level is calculated from known facts;
- Objective or numerical evaluation;
- High complexity, high cost;
- May not be required for all projects;
- More preferred.

Risk Severity matrix

		Impact		
		Small	Medium	High
Likelihood of occurrence	High	Somewhat significant	Significant	Significant
	Medium	Somewhat significant	Somewhat significant	Significant
	Low	Insignificant	Somewhat significant	Somewhat significant



Significant



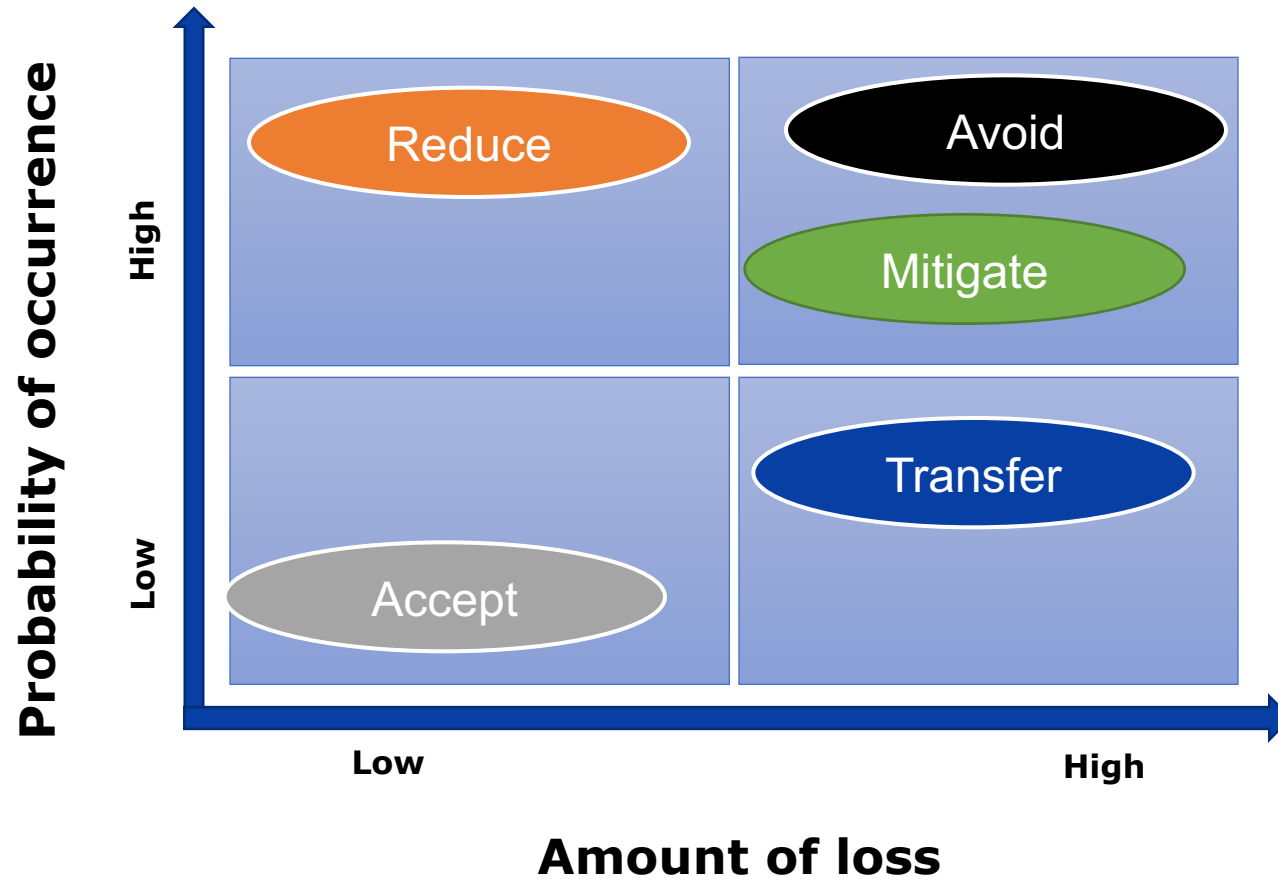
Somewhat significant



Insignificant

- **Avoid risk** – changing the project plan to eliminate the risk.
- **Transfer risk** – does not change risk. By transferring risk, another party will take care of this risk in return for premium payment. Example could be contractor; having insurance.
- **Mitigate by**
 - **Reducing consequences of risk** – occurrence of risk is most likely and the actions are made to reduce the impact
 - **Reducing probability of risk** – taking actions to tackle the risk. To make sure the damage of the risk is minimal
- **Accept risk** – neglect taking actions to prevent the risk from happening. Mostly due to the low impact and probability of occurrence.

Risk Response



Contingency plan

Plan of actions **in case of risk occurrence**.

In contrast to risk response – contingency plan deals with risks which are materialized.

The plan also includes the “trigger” that starts the plan to come into action.

It also includes the responsible people in the project.

Risk Event	Response	Contingency Plan	Trigger	Who Is Responsible
Interface problems	Mitigate: Test prototype	Work around until help comes	Not solved within 24 hours	Nils
System freezing	Mitigate: Test prototype	Reinstall OS	Still frozen after one hour	Emmylou
User backlash	Mitigate: Prototype demonstration	Increase staff support	Call from top management	Eddie
Equipment malfunctions	Mitigate: Select reliable vendor Transfer: Warranty	Order replacement	Equipment fails	Jim

Larson, C. and Grey, E. (2014). *Project Management: The Managerial Process*. 6th edition, McGraw Hill, page 220

Contingency plan (fund)

Not all risks can be identified during project planning and there is a possibility of unknown risk occurrence during the execution of the project.

In order to be have the opportunity to tackle such risks, the contingency plan in terms of costs (additional budget) is common for many projects.

In most cases contingency plan is useful as the conditions of projects can change once the project starts.

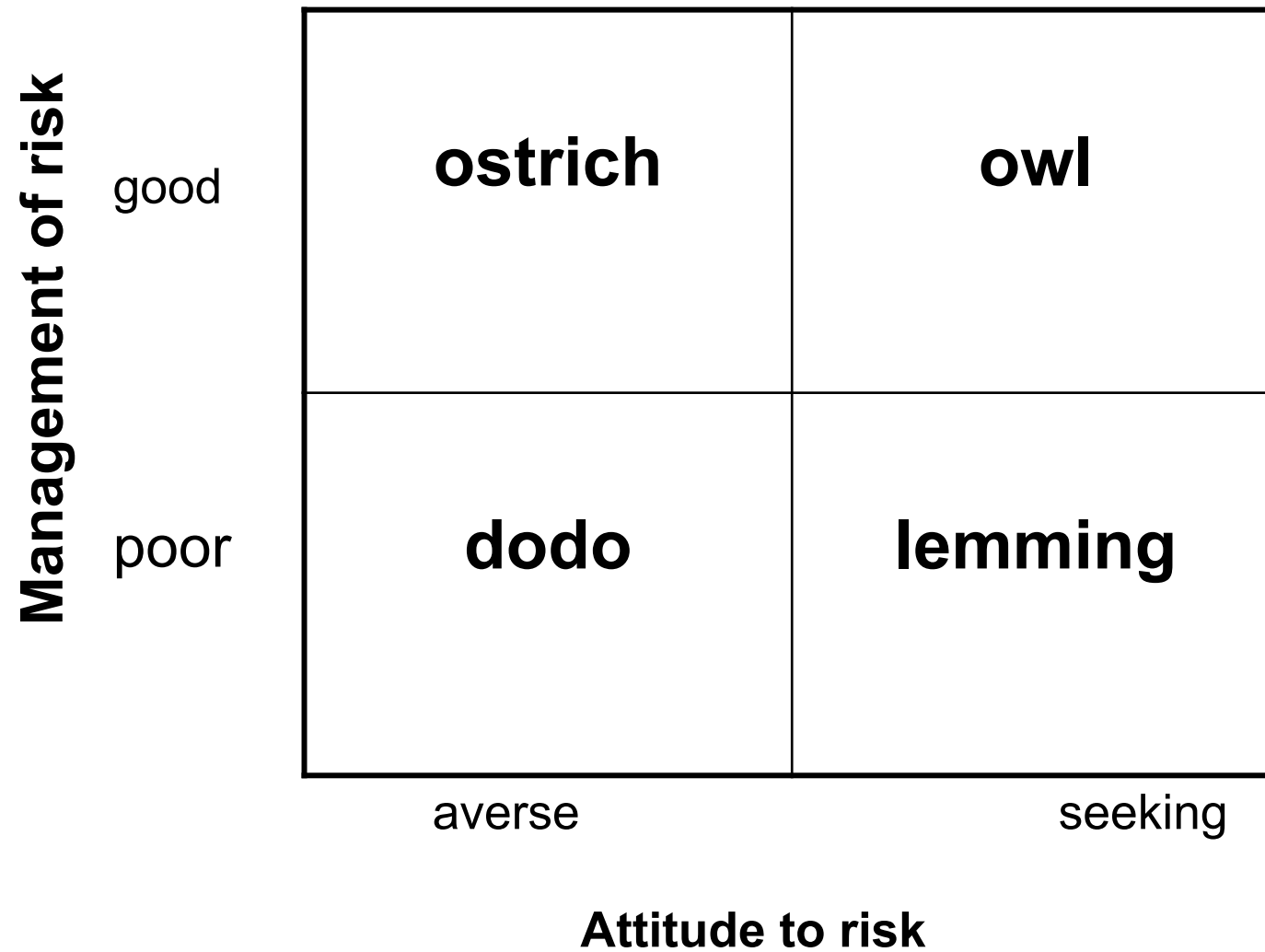
- Carrying out the responses to the identified risks
- Monitoring risks and assessing the results of the responses that have been carried out
- Watching out for the triggers and new risks
- Updating/revising the risk analysis and the risk response plan (as appropriate)
- Implementing contingency plans (if needed)

In order to have a better project risk management – there should be an appropriate organizational culture towards risks.

As the risks are not always negative – there is also a positive risk.

What can go right in the project? So called – Positive Risk.

Risk classification of organizations



QUESTIONS?

- Holmes, A. (2004). *Smart risk*. John Wiley & Sons.
- Larson, C. and Grey, E. (2014). *Project Management: The Managerial Process*. 6th edition, McGraw Hill.
- Pinto, J. K. (2007). *Project management: achieving competitive advantage*. Upper Saddle River, NJ, USA: Pearson/Prentice Hall.