

PROJECT PLANNING, MONITORING AND CONTROL

RISK MANAGEMENT



RISK IN CONSTRUCTION

Construction is a risky business due to:

- Poor record of cost and time certainty for clients
- High levels of disputes and litigation
- Intense competition for work
- Low margins for profit risk
- High rate of accidents
- Pressure from management and shareholders to produce a high return on funds invested
- Pressure on teams to save time and money
- Pressure on health and safety provision



RISK IN CONSTRUCTION

(Smith, 1999)

Distinguishes 3 categories for risk:

Known risks. Risks that are an everyday feature of construction

Known unknown. Risks that can be predicted or foreseen

Unknown unknown. Due to events whose cause and effect cannot be predicted



RISK IN CONSTRUCTION

The Turnbull Report

First issued in 1999 by the Institute of Chartered Accountants (ICA)

Updated in 2005 by the Financial Reporting Council (FRC)

Not a mandatory requirement, but equivalent to standards

It suggests that risk management is an “ongoing process for identifying, evaluating and managing significant risks”

- Market
- Credit
- Liquidity
- Technological
- Legal
- Health, safety and environment
- Reputation
- Business probity



RISK MANAGEMENT

Objective: to control risk

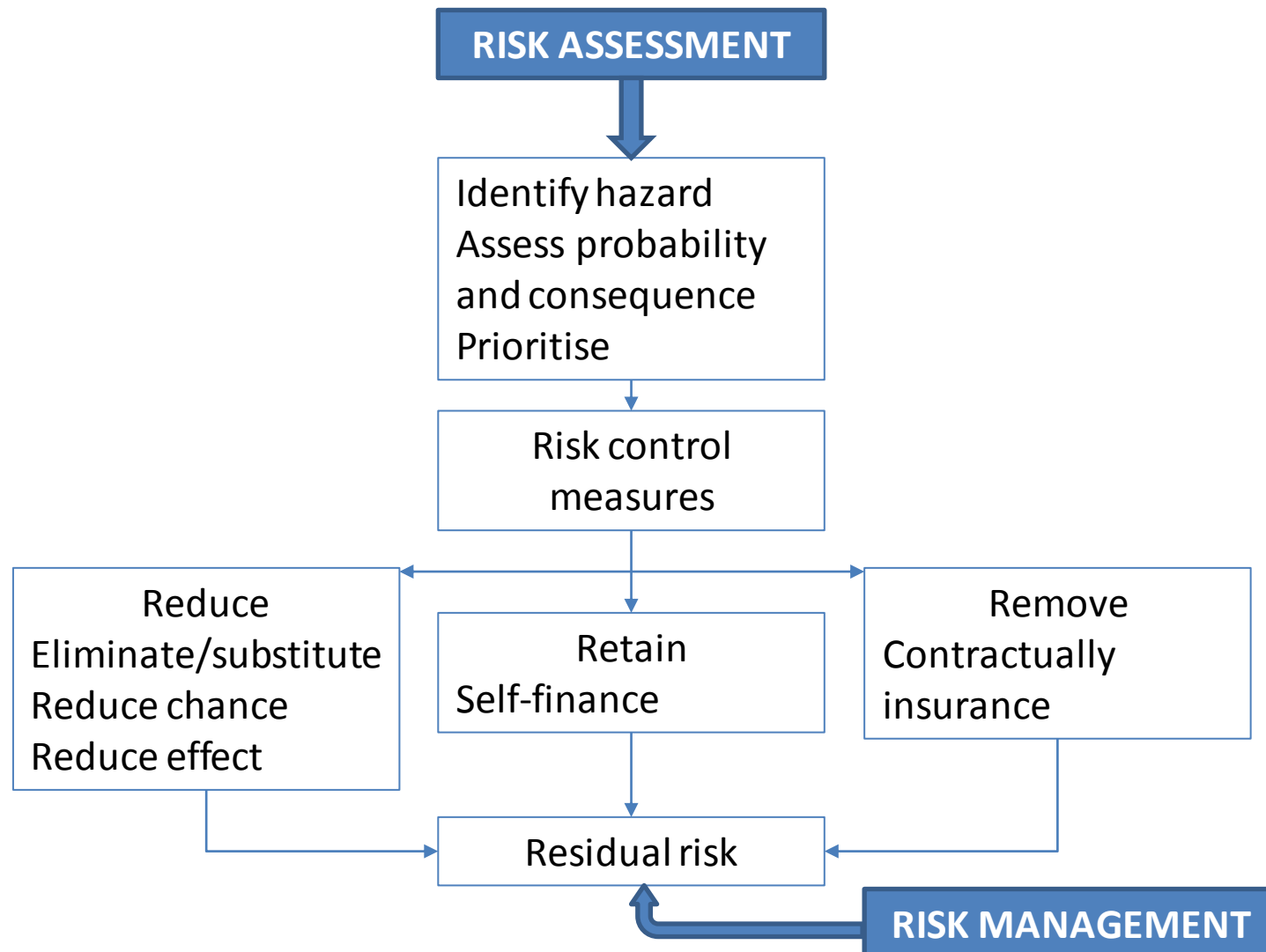
If we don't, we can have losses due to:

- Accidents to workers
- Accidents to the general public
- Loss of skill and experience
- Damage to property
- Loss of time and production
- Loss of money on contracts
- Loss of reputation and future business



THE PROJECT RISK

Risk Management Process





RISK MANAGEMENT

UNCERTAINTY

Not always risk can be under control

There are unforeseen situations that happen

This is residual risk or uncertainty

The objective of risk management is to reduce uncertainty as much as possible



RISK MANAGEMENT

Step	Example
1 Identify the hazard	Deep drainage excavation in bad ground
2 Identify who or what might be harmed	Pipe layers in trench
3 Evaluate the risks arising from the hazard	High risk of collapse
4 Determine the control measures required	Use steel trench drag box
5 Evaluate remaining risks	Risk of crushing/injury from excavator bucket Risk of falling materials
6 Record the findings of the risk assessment	Fill in risk assessment sheet
7 Make contingency plans for the residual risks	Prepare safety method statement based on risk assessment Supervisor to give task talk Permit to work required Banksman working with excavator
8 Review and revision	Monitor site operations and modify risk assessment where necessary Hold further task talk if method statement is changed



RISK MANAGEMENT

Measurement of risk:

- Chance of happening the hazard (likelihood)
- Severity of consequences

Severity	Likelihood		
	1	2	3
1	low	low	medium
2	low	medium	High
3	medium	high	high



EXERCISE 1

You are the main contractor of one residential planning to develop in Swansea next to the future SA1 Development of UWTSD.

Make a list of possible risks that can happen within this project.

Now think about the risks happening from the side of the client.

Are they the same?

What differences can you find?



EXERCISE 2

Using the following form, try to fill in all cells using some of the risks you identified before and complete the risk assessment for these risks.

Item	Description	Risk			Without controls			Controls	Residual risk	Action
		H	M	L	Cost impact	Time impact	Other			