APPLY RISK MANAGEMENT PROCESSES (S1)

RIIRIS301E

Welcome

- Introductions
- Walk Around
  - Emergencies
  - Toilets
  - Phones
  - Crib area
  - Common room
  - Smoking
- Course Outline
- Outstanding course administration

Introduction

The training course you will complete today is based on the unit of competency RIIRIS301E Apply risk management processes.

Training will cover:

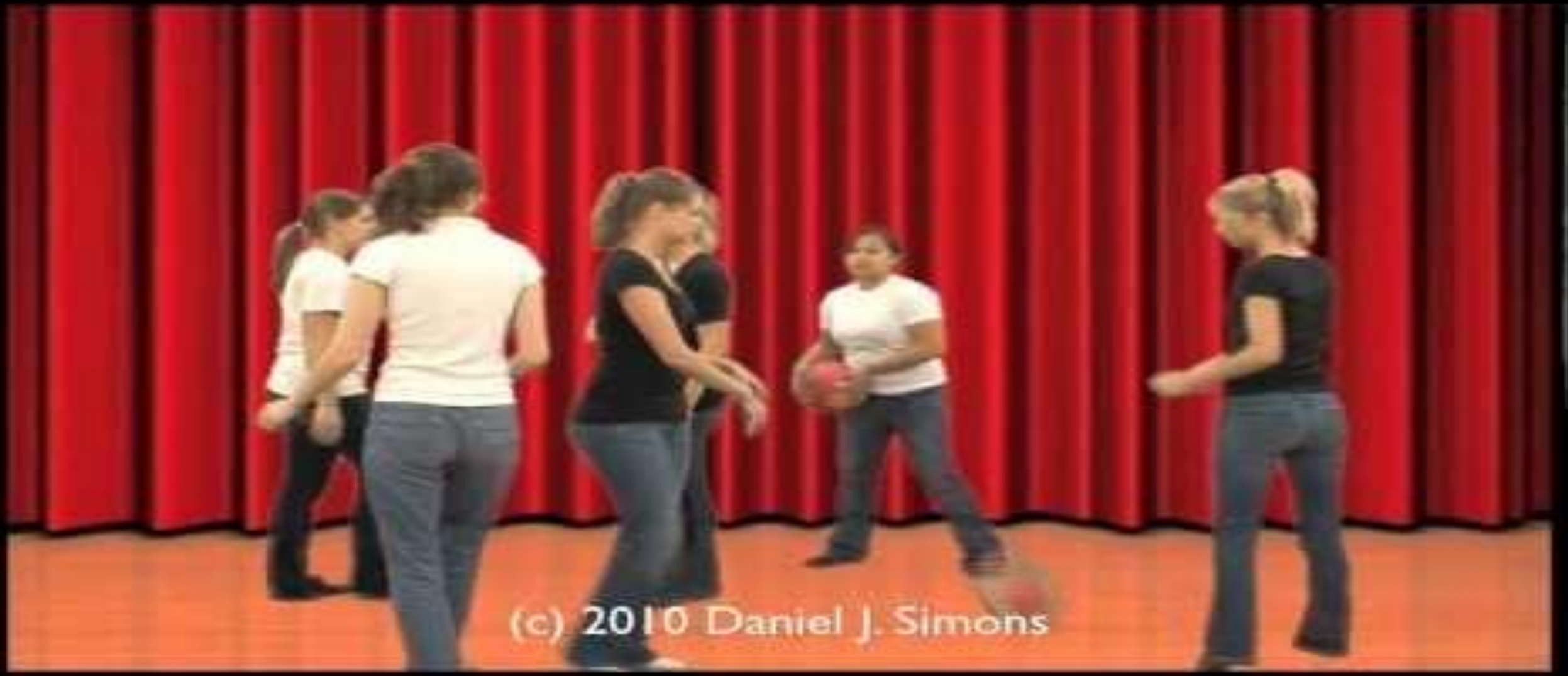
- Plan and prepare for risk management
- Identify and assess unacceptable risk
- Identify and recommend risk controls
- Contribute to the implementation of risk controls
- Review risk management documentation

Assessment:

- Theory
- Practical - JSEA

Introduction

- How well do you rate your abilities for risk management, spotting hazards, controls????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Introduction

- What is ‘Risk Management’

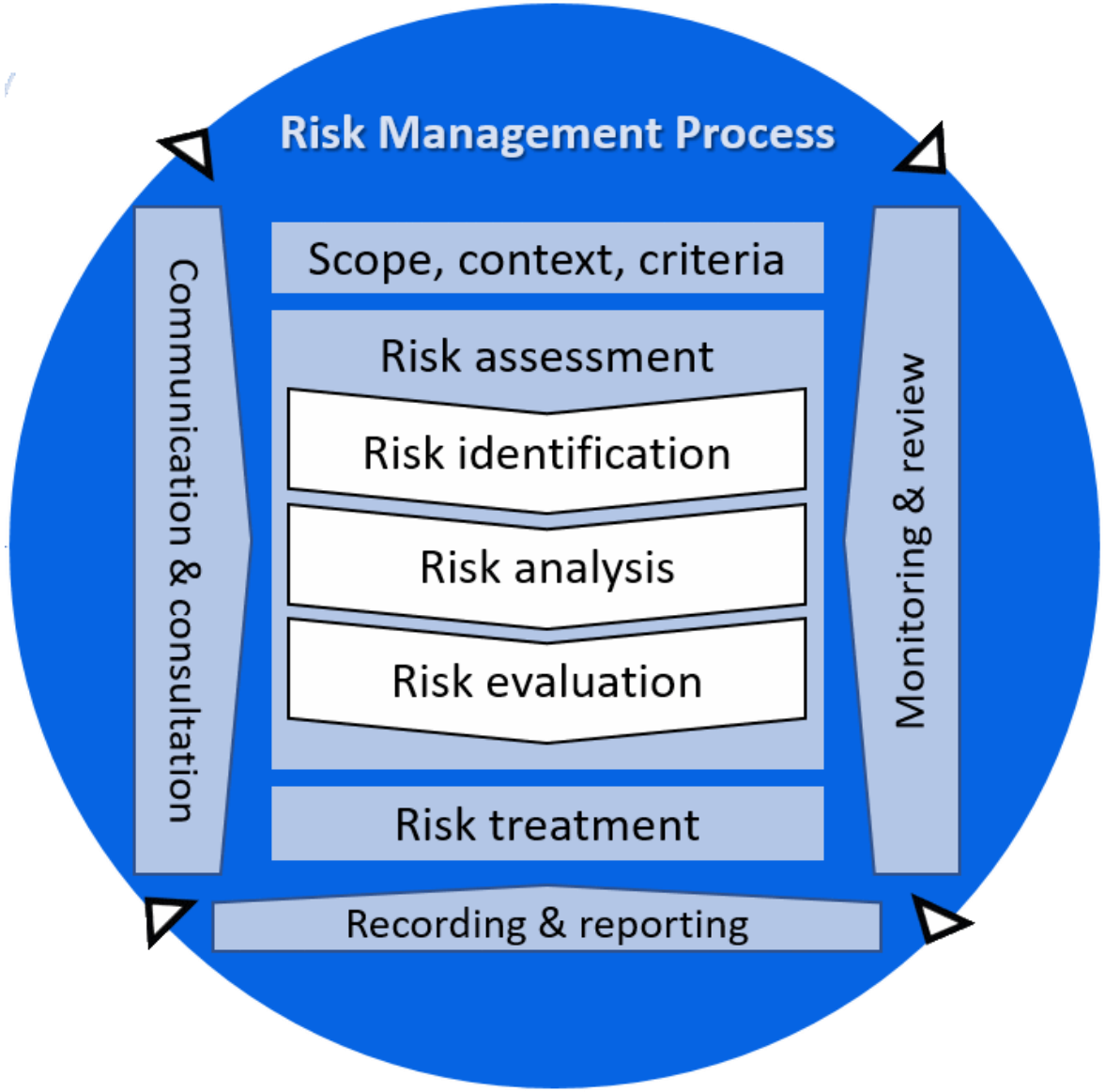
Risk management refers to a coordinated set of activities and methods that is used to direct an organization and to control the many risks that can affect its ability to achieve objectives.

The term *risk management* also refers to the programme that is used to manage risk. This programme includes risk management principles, a risk management framework, and a risk management process.

Ref: ISO 31000

Introduction

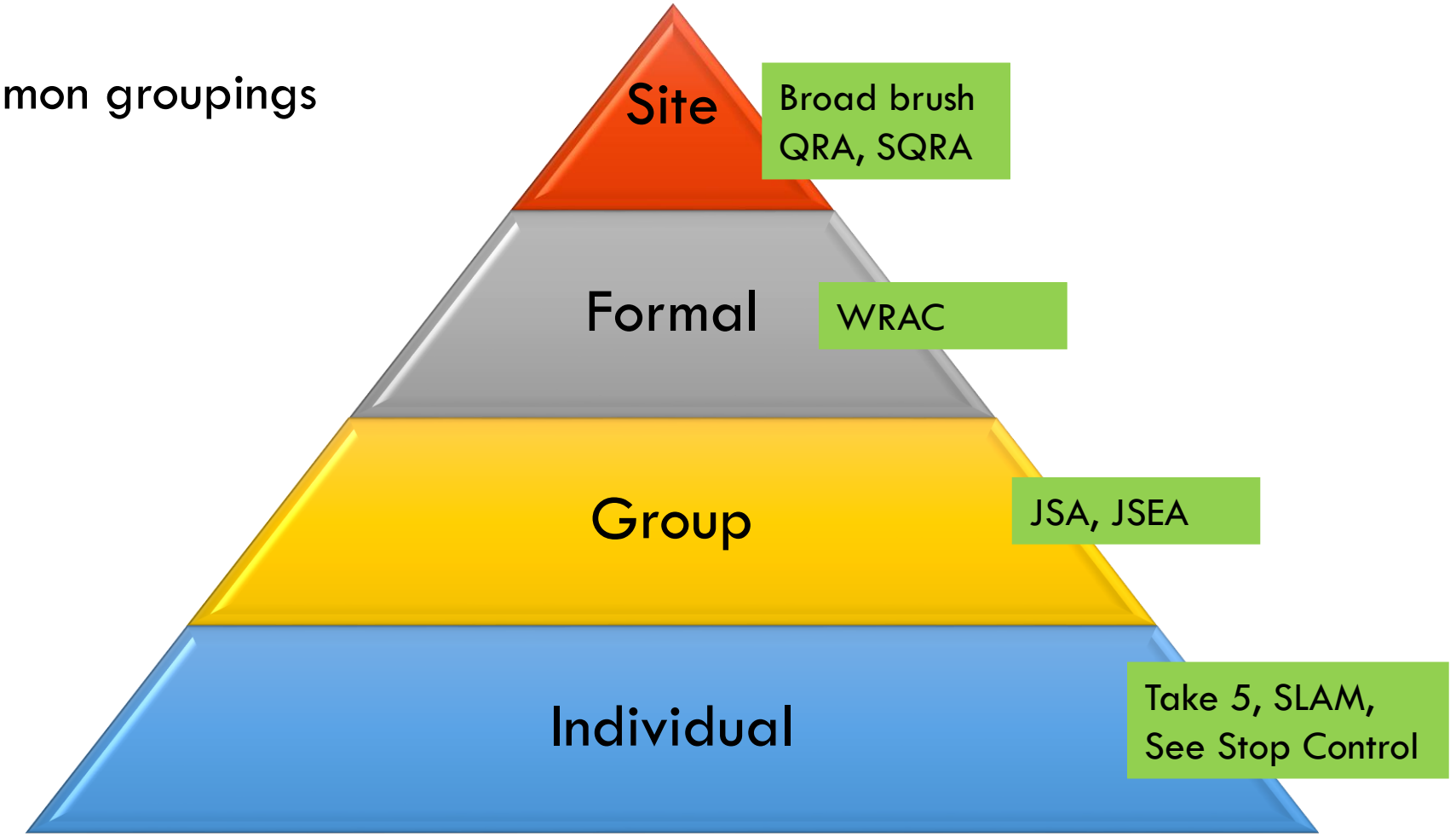
- Risk Management Process



Ref: ISO 31000

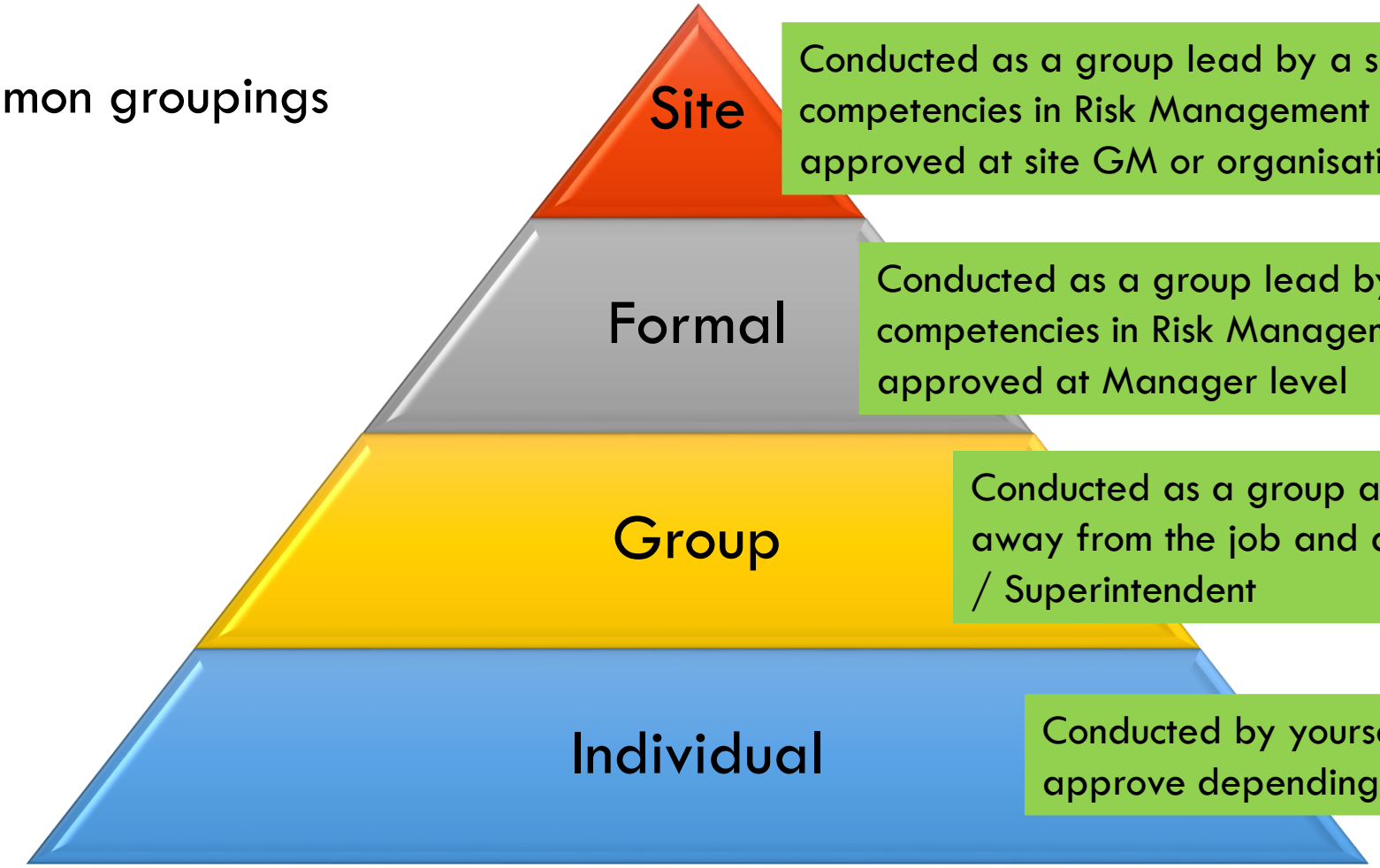
Introduction

- Common groupings



Introduction

- Common groupings



Conducted as a group lead by a specialist with appropriate competencies in Risk Management conducted off the job and approved at site GM or organisational level

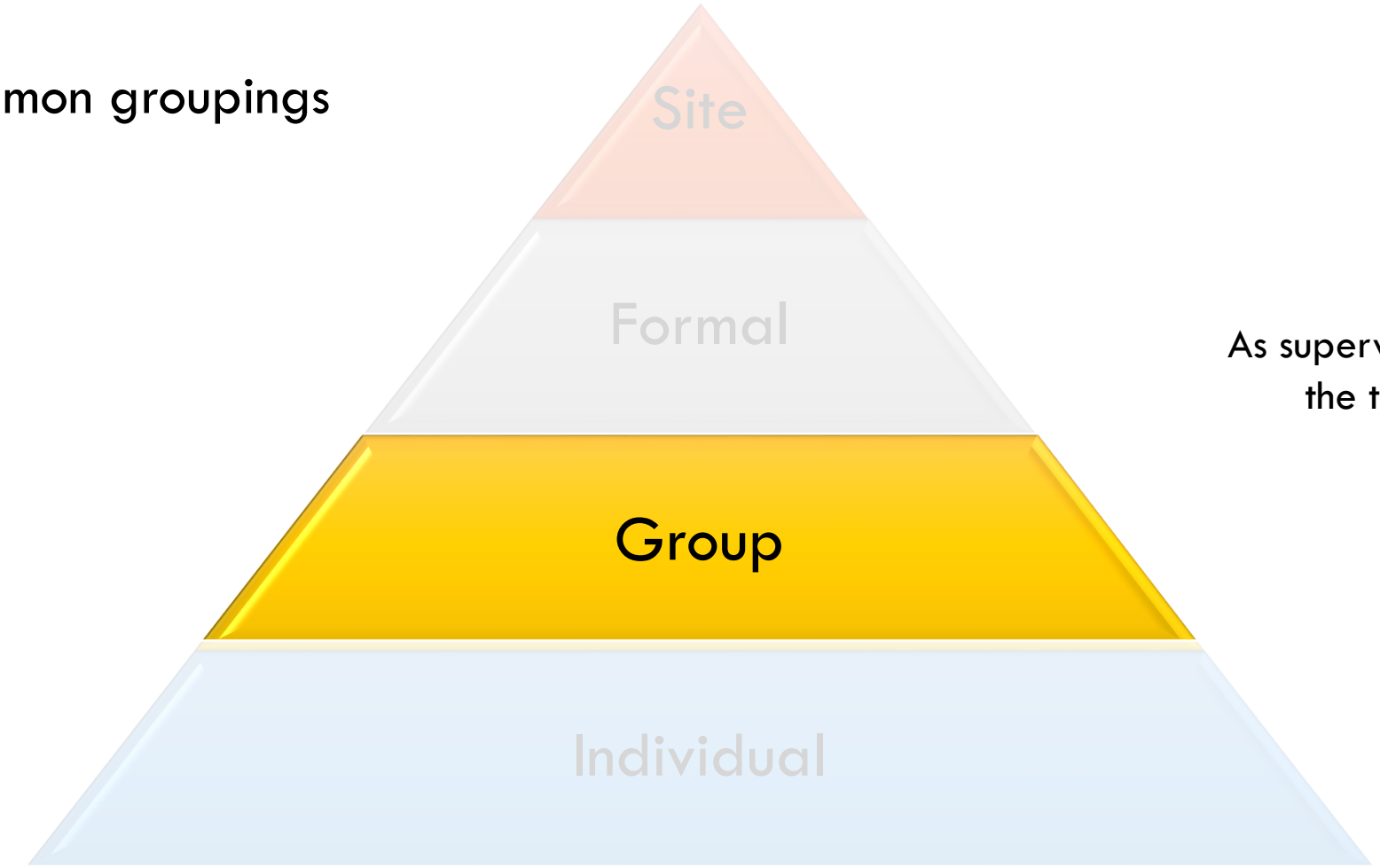
Conducted as a group lead by a specialist with appropriate competencies in Risk Management conducted off the job and approved at Manager level

Conducted as a group and usually starts off away from the job and approval is by Supervisor / Superintendent

Conducted by yourself on the job and you can approve depending on the residual risk

Introduction

- Common groupings



As supervisors we will be concentrating the training at the group level

Plan and prepare for risk management

- Access and Interpret Documentation
- Access and apply procedures and documented controls
- Inspect work area to identify risks and potential hazards
- Identify risks and hazards not identified
- Communicate hazards to duty holders

Plan and prepare for risk management

Access and Interpret Documentation

Legislation / Acts	Acts of Parliament and laws to protect the health, safety and welfare of people at work.
Regulations	More details or information on particular parts of the Act.
Standards	The minimum levels of performance or quality for a hazard, work process or product.
Codes of Practice / Guidelines	Practical instructions on how to meet the terms of the law.
Site Policies and Procedures	Rules which must be followed on site, usually developed as a way of working safely and to meet legal obligations
Manufacture Specifications	These may be operator and maintenance manuals (OMM) that contain specifications and specific ways of using and maintaining a particular piece of equipment

Plan and prepare for risk management

Access and Interpret Documentation

Legislation / Acts	i.e. Work Health and Safety Act 2011 No 10, Environmentally Hazardous Chemicals Act 1985 No 14 NSW Legislation
Regulations	i.e. Work Health and Safety regulation 2017, Environmentally Hazardous Chemicals Regulation 2017 NSW Legislation
Standards	ISO 3100:2018 Risk Management Standards web Site
Codes of Practice / Guidelines	i.e. Confined Space, Abrasive blasting, MDG 1010 Guideline for minerals Industry Safety and Health Risk Management NSW Codes of Practice
Site Policies and Procedures	i.e. SWI's, SOP's, Policies
Manufacture Specifications	These may be operator and maintenance manuals (OMM) that contain specifications and specific ways of using and maintaining a particular piece of equipment

Plan and prepare for risk management

Access and Interpret Documentation

- The main documents the training will focus on/around are:
  - NSW Work Health and Safety Act 2011 No 10
  - NSW Work Health and Safety regulation 2017
  - ISO 3100:2018 Risk Management
  - MDG 1010 Guideline for minerals Industry Safety and Health Risk Management

Plan and prepare for risk management

New South Wales

Access and Interpret Documentation

- NSW Work Health and Safety Act 2011 No 10

17 Management of risks

A duty imposed on a person to ensure health and safety requires the person:

(a) to eliminate risks to health and safety, so far as is reasonably practicable, and

(b) if it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable

Plan and prepare for risk management

New South Wales

Access and Interpret Documentation

- NSW Work Health and Safety regulation 2017

35 Managing risks to health and safety

A duty holder, in managing risks to health and safety, must:

(a) eliminate risks to health and safety so far as is reasonably practicable, and

(b) if it is not reasonably practicable to eliminate risks to health and safety— minimise those risks so far as is reasonably practicable

Plan and prepare for risk management

Access and Interpret Documentation

- ISO 3100:2018 Risk Management
- MDG 1010 Guideline for minerals Industry Safety and Health Risk Management
- Risk Management - Leading Practice Sustainable Development program for the Mining Industry

International Organization for Standardization
ISO 31000 Risk-Management

NSW GOVERNMENT Trade & Investment Mine Safety

GUIDELINES
MDG 1010

Australian Government
RISK MANAGEMENT
Leading Practice Sustainable Development Program for the Mining Industry

Plan and prepare for risk management

Access and apply procedures and documented controls

- Safety Management System (SMS), Safety and Health Management System (SHMS)
  - Procedures / Policies
  - Standard Operating Procedures (SOP)
  - Safe Working Instruction (SWI)
- Other sources where you may find information about tasks and hazards
  - SafeWork Common Hazards A-Z
  - SafeWork Safety Alerts
  - Resources and Geoscience Incidents, alerts and Investigations
  - Mining Industry Hazard Data Base (QLD)

Learner Assessment Record

COMPLETE ASSESSMENT QUESTIONS

1 to 5

Plan and prepare for risk management

Inspect work area to identify risks and potential hazards

- What is ‘Risk’ ?
  - The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood. (AS/NZS ISO 31000:2009)

- What is a ‘Hazard’ ?
  - A source of potential harm. (MDG 1010 Minerals industry safety and health risk management guideline)

Plan and prepare for risk management

Inspect work area to identify risks and potential hazards

- Hazards
  - Look for energy sources
  - Most hazards can be linked to an energy source
  - Not all hazards are visible, some are invisible or hidden
  - When looking for hazards, break the work area up:
    - Underground
    - Ground Level
    - Eye level
    - Above

Plan and prepare for risk management

Inspect work area to identify risks and potential hazards

- Even though there may be procedures/SWI's for a task, there is still a requirement to inspect the work area for any unidentified risks or hazards prior to commencement, during and regularly.
- Policies, Procedures, SWI's, SOP's only identify the known or common hazards. They don't include all hazards.
- Some reasons include:
  - Change in conditions - environmental
  - Task is being conducted in a different location i.e. in the field not in the workshop
  - Other activities being conducted in proximity
  - Time of day
  - Have had a break in the job
  - Scope of work has changed

Plan and prepare for risk management

Identify risks and hazards not identified

- Most workplaces will have as part of their Risk Management System a tool/process for individual risk management which is used when inspecting the work area as per the previous slide:
  - Take 5
  - SLAM's
  - See Stop Control etc

Plan and prepare for risk management

Communicate hazards to duty holders

- Everyone has a duty to report hazards (Section 28 WHS Act – Duties of workers)

28 Duties of workers

While at work, a worker must:

(a) take reasonable care for his or her own health and safety, and

(b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons, and

(c) comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with this Act, and

(d) co-operate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers.

Plan and prepare for risk management

Communicate hazards to duty holders

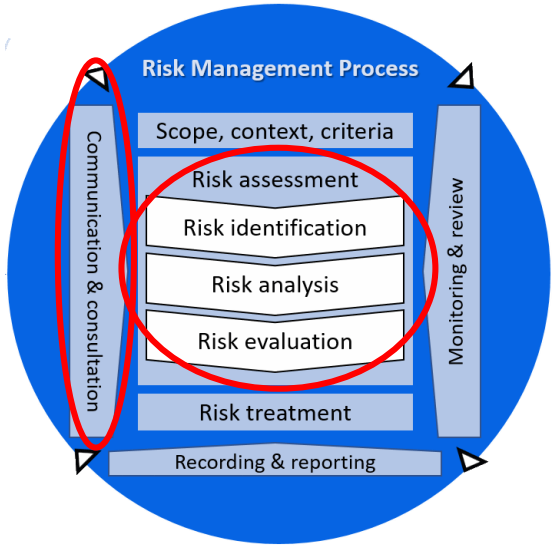
- Who needs to know about potential hazards?
  - Your work team
  - Nearby work teams/workers
  - Supervisor
  - Site safety rep
- Can be communicated:
  - Verbally
  - Written
    - Hazard report
    - Risk Assessment (JSEA etc)
    - Signs
- Must follow site/organisation procedures and policies

Learner Assessment Record

COMPLETE ASSESSMENT QUESTIONS

6 to 13

Identify and assess unacceptable risk



- Consider and determine Likelihood of an incident
- Evaluate and determine the consequence of an incident
- Consider and determine the risk level of an incident
- Identify and evaluate criteria for determining Acceptable and Unacceptable risk

Identify and assess unacceptable risk

Consider and determine Likelihood of an incident

- **Likelihood** - is the chance that something might happen. Likelihood can be defined, determined, or measured objectively or subjectively and can be expressed either qualitatively or quantitatively (using mathematics).
- A common example:

LIKELIHOOD	DESCRIPTION
5. Almost Certain	More than once per month
4. Likely	More than once per year
3. Possible	More than once every two years
2. Unlikely	Less than once every two years
1. Rare	Less than once every five years

Identify and assess unacceptable risk

Consider and determine Likelihood of an incident

- **Hazard** – Falling down a set of 3 stairs
  - Using the description column
  - Select the likely frequency

LIKELIHOOD	DESCRIPTION
5. Almost Certain	More than once per month
4. Likely	More than once per year
3. Possible	More than once every two years
2. Unlikely	Less than once every two years
1. Rare	Less than once every five years

Identify and assess unacceptable risk

Evaluate and determine the consequence of an incident

- **Consequence -** The outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event.
- Common example:

CONSEQUENCE	Injury	Illness	Environment	Property Damage/Process Loss
1. Insignificant	Minor Injury	Minor Illness e.g. Headache, Nausea	Little or no environmental impact	Low financial loss (<$5,000)
2. Minor	Medical Treatment Injury	Medical Treatment illness e.g. Skin rashes	Small and/or localised impact	Medium financial lass ($5,000 - $20,000)
3. Moderate	Alternate Duties Injury & Lost Time Injury (>2 weeks)	Lost time illness (>2 weeks) e.g. asthma	Substantial environmental impact	High financial loss ($20,000 - $50,000)
4. Major	Lost time injury (>2 weeks)	Lost time illness (>2 weeks) e.g. permanent hearing loss	Serious environmental impact	Major financial loss ($50,000 - $500,000)
5. Catastrophic	Fatality or Permanent Disabling Injury	Fatal disease or permanently disabling disease	Disastrous and/or widespread environmental impact	Huge financial loss (>$500,000)

Identify and assess unacceptable risk

Evaluate and determine the consequence of an incident

1. select a column to work in
2. Select the most likely outcome -looking at the descriptors

Example - falling down 3 stairs = Possible Broken arm

CONSEQUENCE	Injury	Illness	Environment	Property Damage/Process Loss
1. Insignificant	Minor Injury	Minor Illness e.g. Headache, Nausea	Little or no environmental impact	Low financial loss (<$5,000)
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5. Catastrophic	Fatality or Permanent Disabling Injury	Fatal disease or permanently disabling disease	Disastrous and/or widespread environmental impact	Huge financial loss (>$500,000)

Identify and assess unacceptable risk

Consider and determine the risk level of an incident

- This is done by putting the two together on a matrix

LIKELIHOOD	CONSEQUENCES				
	1.Insignificant	2.Minor	3.Moderate	4.Major	5.Catastrophic
5.Almost Certain	H(15)	H(10)	E(6)	E(3)	E(1)
4.Likely	M(19)	H(14)	H(9)	E(5)	E(2)
3.Possible	L(22)	M(18)	H(13)	E(8)	E(4)
2.Unlikely	L(24)	L(21)	M(17)	H(12)	E(7)
1.Rare	L(25)	L(23)	M(20)	H(16)	H(11)

Identify and assess unacceptable risk

Identify and evaluate criteria for determining Acceptable and Unacceptable risk

(NSW WHS Reg)

35 Managing risks to health and safety

A duty holder, in managing risks to health and safety, must:

(a) eliminate risks to health and safety so far as is reasonably practicable, and

(b) if it is not reasonably practicable to eliminate risks to health and safety— minimise those risks so far as is reasonably practicable.

Identify and assess unacceptable risk

Identify and evaluate criteria for determining Acceptable and Unacceptable risk

(MDG 1010 Minerals industry safety and health risk management guideline)

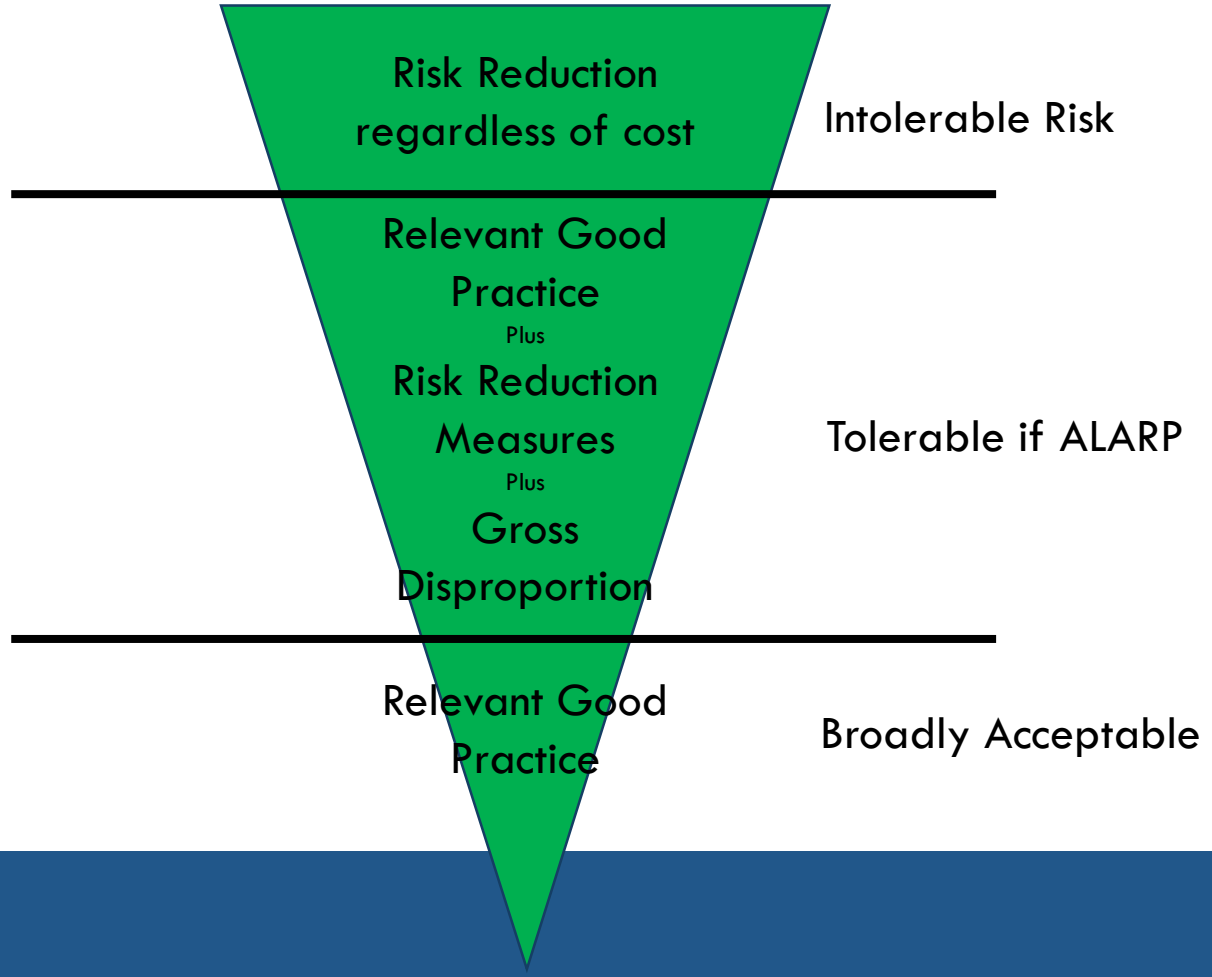
- **Acceptable risk** - The residual risk remaining after controls have been applied to associated hazards that have been identified, quantified to the maximum extent practicable, analysed, communicated to the proper level of management and accepted after proper evaluation (Stephenson, 1991)
- **ALARP** – As low as reasonably practical

LIKELIHOOD	CONSEQUENCES				
	1.Insignificant	2.Minor	3.Moderate	4.Major	5.Catastrophic
5.Almost Certain	H(15)	H(10)	E(6)	E(3)	E(1)
4.Likely	M(19)	H(14)	H(9)		
3.Possible	L(22)	M(18)	H(13)		
2.Unlikely	L(24)	L(21)	M(17)		
1.Rare	L(25)	L(23)	M(20)	H(16)	H(11)

Unacceptable Risk

Identify and assess unacceptable risk

Identify and evaluate criteria for determining Acceptable and Unacceptable risk



Identify and assess unacceptable risk

Identify and evaluate criteria for determining Acceptable and Unacceptable risk

- Not a defined line in the sand.
- Acceptable/unacceptable risk will vary between organisations and even individuals depending on their Risk Appetite and Risk Tolerance.
- This is why organisations have Risk Management Processes, to assist in determining what is/is not an acceptable risk i.e. Risk Matrix (as previous).
- Acceptable risk is determined from the Residual Risk – the remaining risk or risk score after all controls have been put in place.
- Depending on the organisations risk management process, the scoring or ranking of risks may not come into effect until the Group/JSEA level or higher.
- They may also include a score/rank before and after controls are put in place.

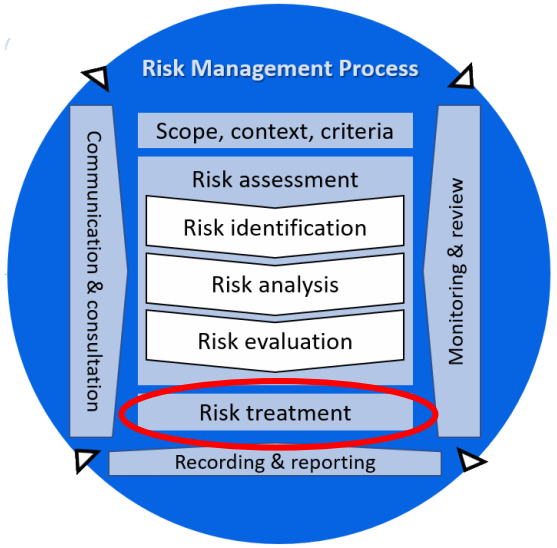
Learner Assessment Record

COMPLETE ASSESSMENT QUESTIONS

14 to 26

Identify and recommend risk controls

- Identify a range of risk controls
  - Risk Controls
  - Analyse feasible risk controls
  - Select risk controls



Identify and recommend risk controls

Identify a range of risk controls

- What is a 'Control' ?

    - A control is an object or human action that of *itself* will arrest or mitigate an unwanted event or sequence.

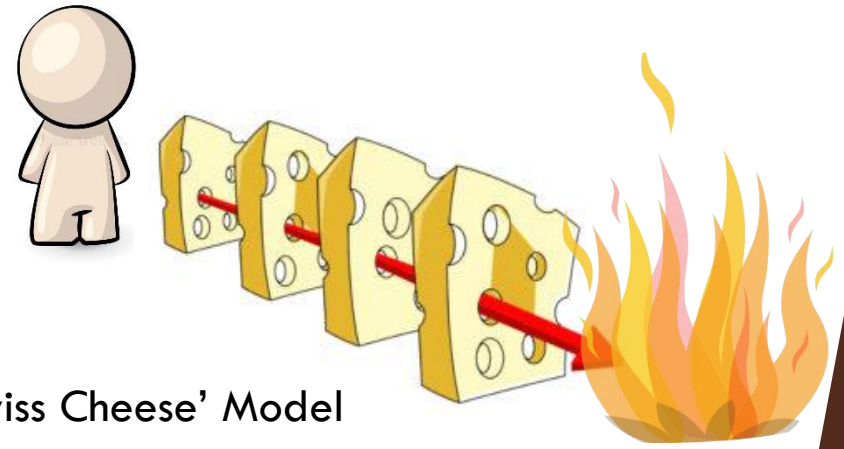
(RISK MANAGEMENT Leading Practice Sustainable Development Program for the Mining Industry)

Identify and recommend risk controls

Identify a range of risk controls

- What is a 'Control' ?
  - Arresting Controls – are layers or barriers that are put in place between you and the hazard/unwanted event
  - Mitigating controls – are the same as Arresting but come into play after the unwanted event has happened i.e. Fire Extinguisher
  - Each control can be rated using the Hierarchy of Controls

(WHS Reg Sect 36)

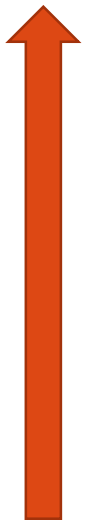


Reasons 'Swiss Cheese' Model

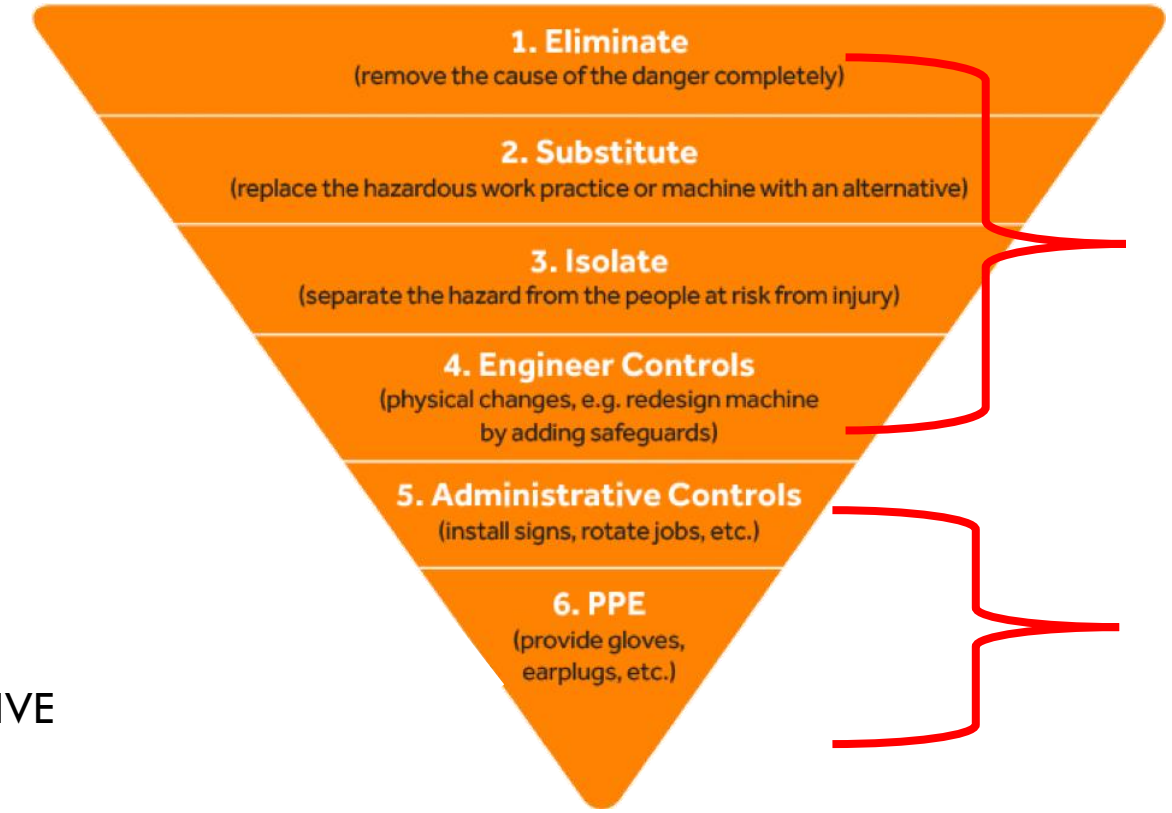
Identify and recommend risk controls

Identify a range of risk controls

MOST EFFECTIVE

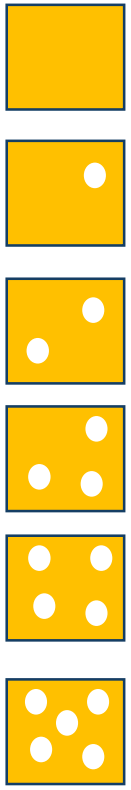


LEAST EFFECTIVE



HARD

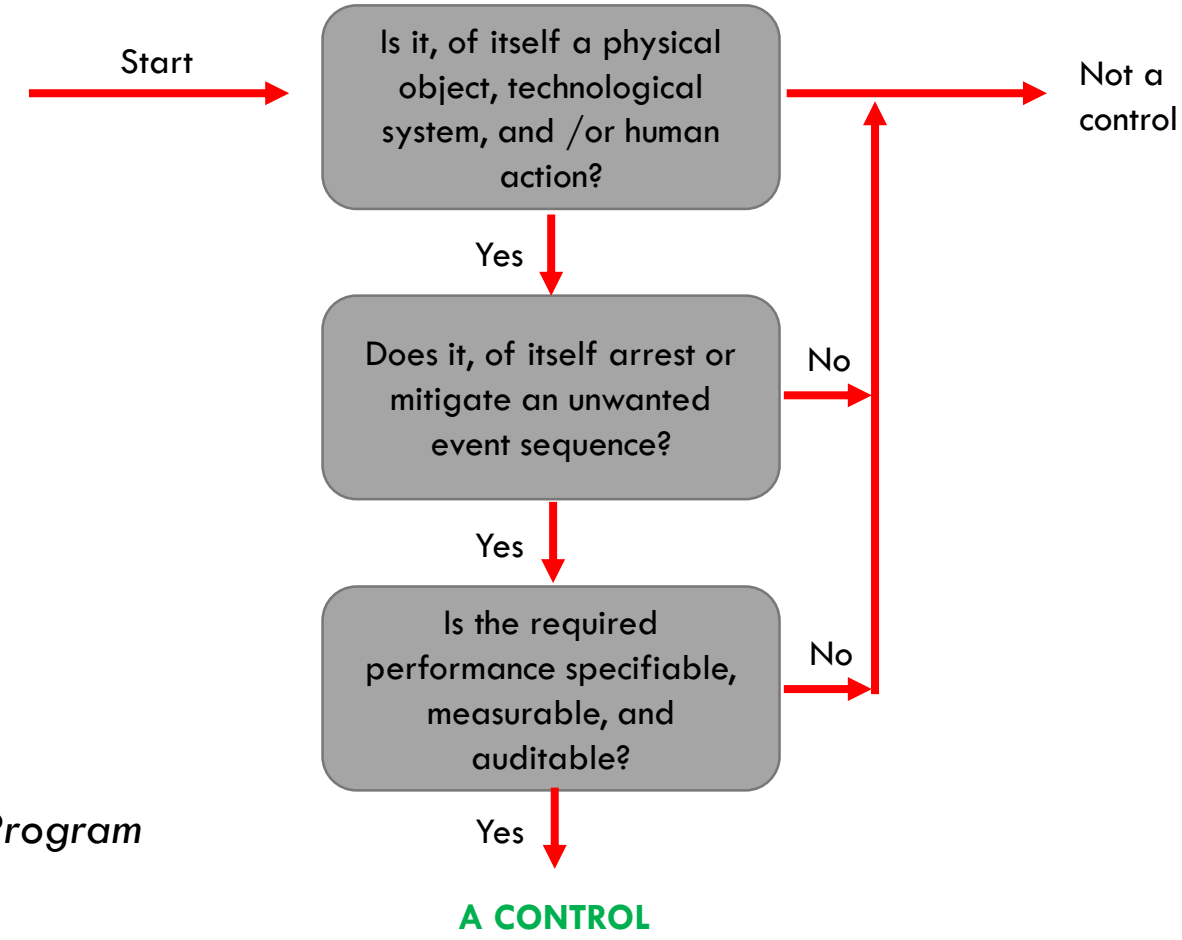
SOFT



Identify and recommend risk controls

Identify a range of risk controls

- Decision Tree for determining risk controls



(RISK MANAGEMENT Leading Practice Sustainable Development Program for the Mining Industry)

Identify and recommend risk controls

Identify a range of risk controls

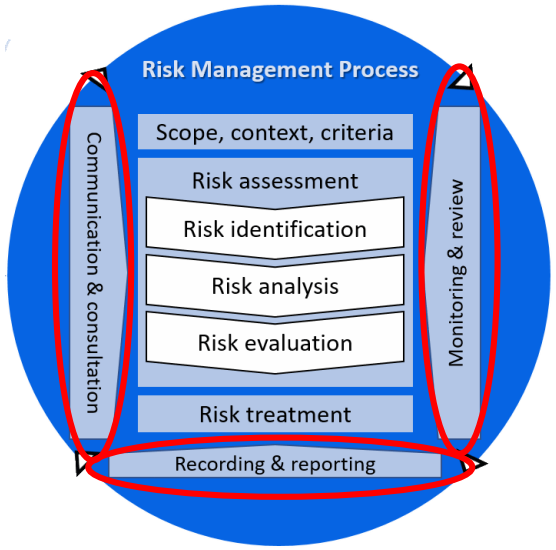
- All controls identified and selected must be:
  - Appropriate
  - Achievable
  - Measurable
  - Implemented
  - Documented
  - Auditable
  - Checked regularly – controls erode over time

Learner Assessment Record

COMPLETE ASSESSMENT QUESTIONS

27 to 31

Review risk management documentation



- Monitor and Review Risk Management Documentation
- Amendments
  - Seek approval in writing for amendments
  - Seek approval to action amendments
- Recording

Review risk management documentation

Monitor and Review Risk Management Documentation

- Constant
- Can be broken into two parts
  - Monitor and review of the Risk Management Process, and
    - Overarching Risk Assessments
      - Broad-brush
      - WRAC's
    - Policies and procedures
  - Monitor and review of the Risk Management Task – JSEA etc
    - JSEA
    - TAKE 5
    - Etc

Review risk management documentation

Amendments

- **Seek approval in writing for amendments**
- **Seek approval to action amendments**

- You are not allowed to amend the risk management process without following the appropriate process which will be defined as part of the Organisations 'Risk Management Process'
  - i.e. Change Management
- The process is designed to achieve predictable and measurable outcomes (common way of working) that fits with other systems and process.
- Changing without approval will result in unpredictable outcomes which may have catastrophic consequence.

Review risk management documentation

Amendments

- **Seek approval in writing for amendments**
- **Seek approval to action amendments**

- At the Task level you can add additional controls but you can not subtract controls.
  - If the SWI mentions controls that must in place prior to performing the task – they must happen
  - The individual Risk Assessment (Take 5 etc) may identify additional controls – these may be added in line with the risk management process and residual risk.
- Any amendments (change in process/way of working) must be approved in writing at the appropriate level (as identified in eth organisations Risk Management Process).

Review risk management documentation

Amendments

- **Seek approval in writing for amendments**
- **Seek approval to action amendments**

- Amendments to the Risk Management process or SWI may be triggered by:
  - Feedback from workforce
  - Incidents – within the organisation or industry
  - Technology
  - Supply – availability

Review risk management documentation

Amendments

- **Seek approval in writing for amendments**
- **Seek approval to action amendments**

- Amendments in process will usually be conducted via the change management process which may include:
  - Facilitated by a competent person
  - Review of procedures / SWWI's
  - Use of a cross section of the workforce, including subject matter experts
  - Approval/sign off at the appropriate level dependant on the change

Review risk management documentation

Amendments

- **Seek approval in writing for amendments**
- **Seek approval to action amendments**

- Amendments in the completed Risk Management tool i.e. JSEA which has been completed on the job.
  - May be triggered by change in scope or introduction of additional hazards
  - Sometimes this will require a new JSEA if the change is significant enough
  - Changes will need to be communicated
  - May also require re-authorisation, dependant on organisational processes

Review risk management documentation

Recording

- The Risk Management process and its outcomes should be documented and reported through appropriate mechanisms.
- Recording and reporting aims to:
  - Communicate risk management activities and outcomes across organisations
  - Provide information for decision-making
  - Improve risk management activities
  - Assist with stakeholders, including those with responsibility and accountability for risk management activities

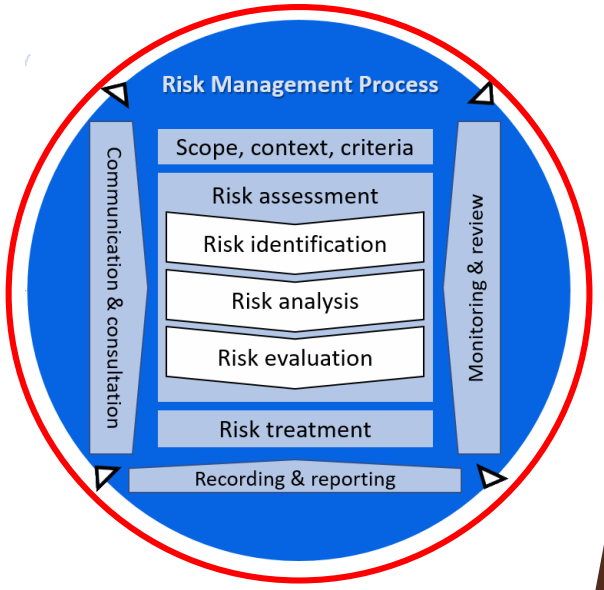
Learner Assessment Record

COMPLETE ASSESSMENT QUESTIONS

32 to 36

Contribute to the implementation of risk controls

- Document risk management plan
- Obtain authorisation
- Document, verify and review controls
- Apply procedures and other applicable measures
- Communicate information on the controls



Learner Assessment Record

COMPLETE ASSESSMENT - JSEA

Summary

- HAS YOUR SCORE CHANGED ?

QUESTIONS