

# Management structures to support safety and health management systems

Presented by:

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# Presentation outline

1. Management structures – **legislative basis**
2. Why effective management structures are critical for better safety and health outcomes
3. Issues with existing management structures
4. Introduction of DNRM management structure guideline
5. How to develop a management structure
6. DNRM inspection program for management structures

# Management structures – legislative basis

## Mining safety and health Acts (the Acts):

- require operators to ensure risk is at an acceptable level
- outline a framework of minimum requirements for risk management
- impose obligations on Site Senior Executives (SSE) to:  
**develop, implement and maintain a management structure that helps ensure the safety and health of persons at the mine.**



# Management structures – legislative basis

The Acts outline elements of framework:

- Safety and Health Management systems (SHMS)
- Management structure
- Mines inspectorate

Mining Advisory Committee (MAC)

Board of Examiners (BOE)



# Why effective management structures are critical for better safety and health outcomes?

- Disaster investigations have identified **lack of knowledge** as the prime reason for risk control failures
- Coroner's and commission inquiries highlight individuals need to be **competent to undertake their roles**
  - Moura No. 2 Mine disaster
  - Foxleigh tyre fatality
  - Aberfan October 1966



# Aberfan disaster - 21 October 1966



# Aberfan disaster inquiry



*“However well qualified and diligent the higher ranks of officials may be, the ultimate control and management of coal tips must rest upon the shoulders of those employed at Unit level. Never again must there be **officials** and men in a colliery as ignorant of the basic elements of tip stability ...”*



# Aberfan inquiry recommendations on competence:

An aerial black and white photograph of the Aberfan disaster site. A massive, dark, jagged rockslide has descended from a steep hillside, partially burying the town of Aberfan below. The town consists of numerous small, white buildings with dark roofs. A road and a bridge are visible in the lower right quadrant of the image. The background shows more hills and a valley.

- *the mechanical engineer and charge-hand should be instructed in the significance of tip deformation and of the appearance or disappearance of water-courses*

- *managers and surveyors should receive training in ground-water conditions and the rudiments of soil mechanics*

- *statutory qualifications for managers and surveyors should include elements of soil mechanics and hydrogeology*

# Principles of the management structure

- The management structure is a:
  - framework used to plan, communicate, develop and achieve goals
  - hierarchy of reporting relationships - a chain of command
  - determines who must answer to whom
  - establishes accountability and line of authority
  - identifies who is responsible for what
- Identify risks and controls
- Establish risk managers and allocate responsibility and accountability
- Identify the competency required to control the risks

# Issues with existing management structures

Poor management structures in reports to Inspectorate

Common issues are:

- do not allocate responsibility for hazards
- do not identify technical competencies
- competencies held by persons are often excluded
- responsibilities are often generic
- no chain of command
- supervisory roles are often generic
- responsibilities of each role is not stated



# In Summary

- To effectively implement the SHMS the SSE must:
  - have a team of competent people
  - allocate an appropriate chain of command

# Introduction of DNRM management Structure guideline

The guidance note will outline how to:

- meet Act requirements
- achieve effective management structures
- develop and implement the SHMS

Guidance note focuses on coal, but principles can be applied across the mining industry

# How to develop a management structure

1. Principles of the management structure
2. Documenting an effective management structure
3. Developing a management structure
4. Implementation
5. Competency
6. Determining competency
7. Examples of competency

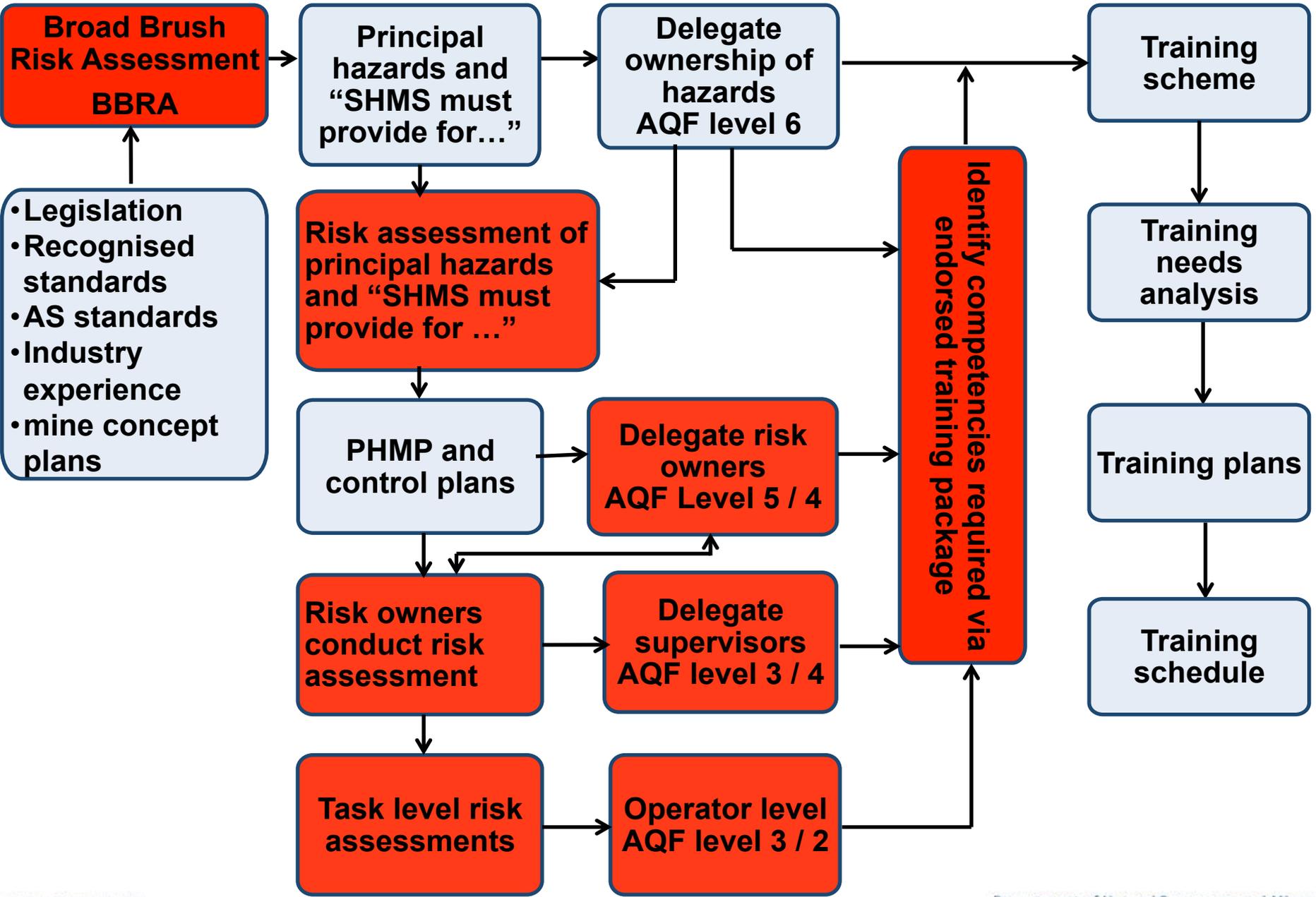
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# Documenting an effective management structure

1. Name, roles, responsibilities and competencies of Site Senior Executive (SSE), senior management positions and supervisors
2. Competency requirements including technical competencies.
3. The names of persons undertaking the roles
4. The competencies of the persons delegated the roles





# Developing a management structure

- Do a broad brush risk assessment review
- Identify all multiple and single fatality risks
- Identify legislative requirements (PHMPs, recognised standards and SHMS)
- Assign hazard ownership to positions (Chain of command)
- Consider place position sits in hierarchy and their interaction with other departments
- Consider the technical skill requirements
- Appoint individuals to the positions



# Implementation

- Appoint risk owners to implement the plan
- Risk owners undertake risk analysis to develop risk management controls at task level
- Identify monitoring supervision, reporting and training requirements for each task
- Identify skill requirements for supervision (AQF 4-5)
- Carry out TNA gap analysis
- Develop training plans under the mine training scheme



# Competency

## Legislation

- Regulation 82e of the Coal Mines safety and Health Regulations
- Resource Infrastructure Industry training package (RII) which are developed to meet the requirements of Australian Training and Quality framework
- The Australian Qualifications Framework (AQF) defines the level of study or training required commensurate with the corresponding level of responsibility for the management of the risk



# Determining competency

Competency means,

*“Competence for a task at a coal mine is the demonstrated skill and knowledge required to carry out the task to a standard necessary for the safety and health of persons.”*

Ask these questions to help determine the management structure:

1. What is the hazard to be controlled?
2. What level of responsibility is required to manage it?
3. What technical knowledge to manage the hazard is required?
4. Are there any prescribed competencies?
5. Are there any RII competencies?
6. What level of the structure is the role required?

# Examples of competency

Guidance note lists the following table as an example

<b>AQF level</b>	<b>Example of workforce role</b>	<b>SHMS role</b>
AQF 6	Manager/Superintendent	Establish and Maintain
AQF 5	Superintendent	Implement Plans
AQF 4	Supervisor/Deputy	Supervise, apply and monitor
AQF 3	Tradesman/Skilled Miner	Conduct work /advise
AQF 2	Operator of Plant	Operate Plant

# Examples of competency

## Strata management plan

Position	Responsibility	AQF Level	Unit descriptor
Senior Person	Establish the system	AQF 6+	RIIMCU606A Establish and maintain the mining method and strata management systems
Superintendent	Implement the plan	AQF 5	RIIMCU506A Implement strata management plan
Supervisor	Apply and Monitor the Plan	AQF 4	RIIMCU407A Apply and monitor the strata management plan
Worker	Do the job	AQF 3	RIIMCU301A Conduct specialised strata control operations
Inexperienced worker	Assist or do basic tasks	AQF 2	RIIMCU208A Conduct basic strata control operations

# Let's recap

- Commence with the broad brush risk assessment
- Identify all multiple and single fatality risks
- Assign risk ownership to positions within the structure (Chain of command)
- Review competency levels required to manage the task assigned
- Assign AQF competencies commensurate with risk ownership and organisational level to the positions
- Assign people to positions
- Do a gap analysis of existing competencies compared to the required competencies
- Develop a training plan and program

# DNRM inspection program for management structures



The Mines inspectorate will:

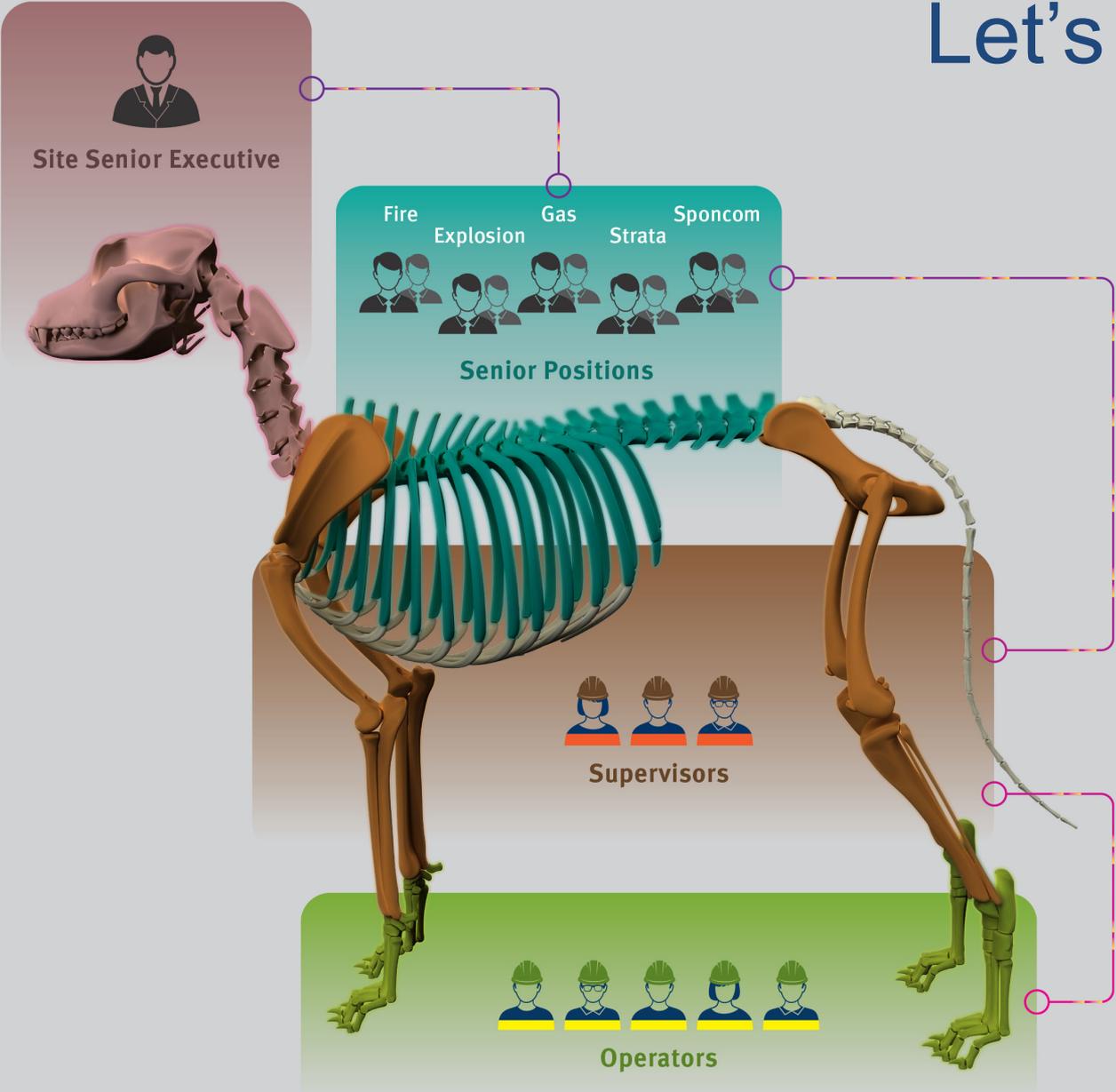
- Promote the guidance note with SSEs
- Review submitted management structures against the guideline

Let's recap

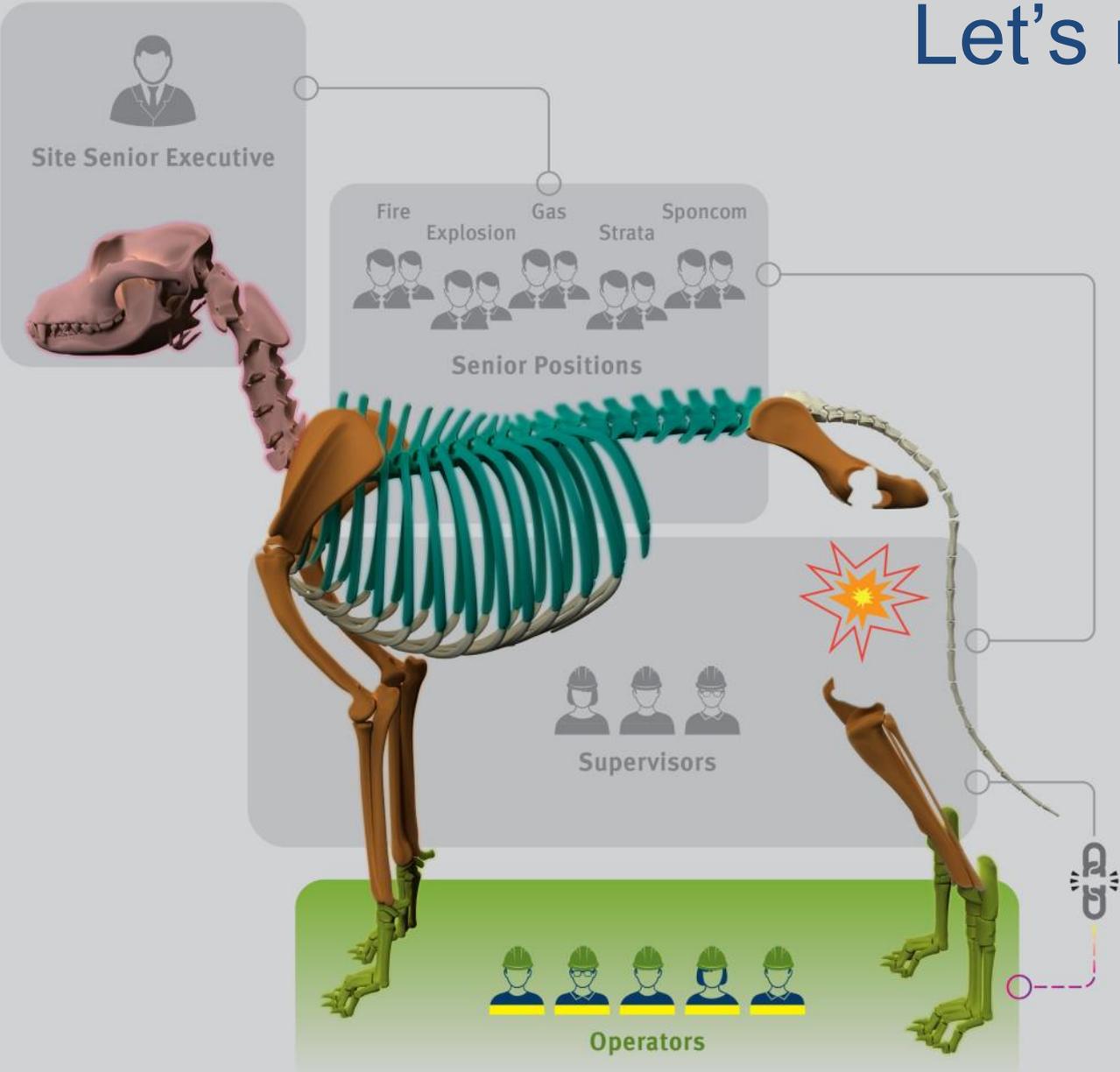


A dog is known as  
"Man's best friend"  
like wise  
an effective management  
structure is  
"your mines best friend."

# Let's recap



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