

Mobilising Mines Rescue Teams

A Queensland Perspective

Lindsay Creighton – Operations Manager Queensland
Mines Rescue Service



Mobilising Mines Rescue Teams

Topic Overview

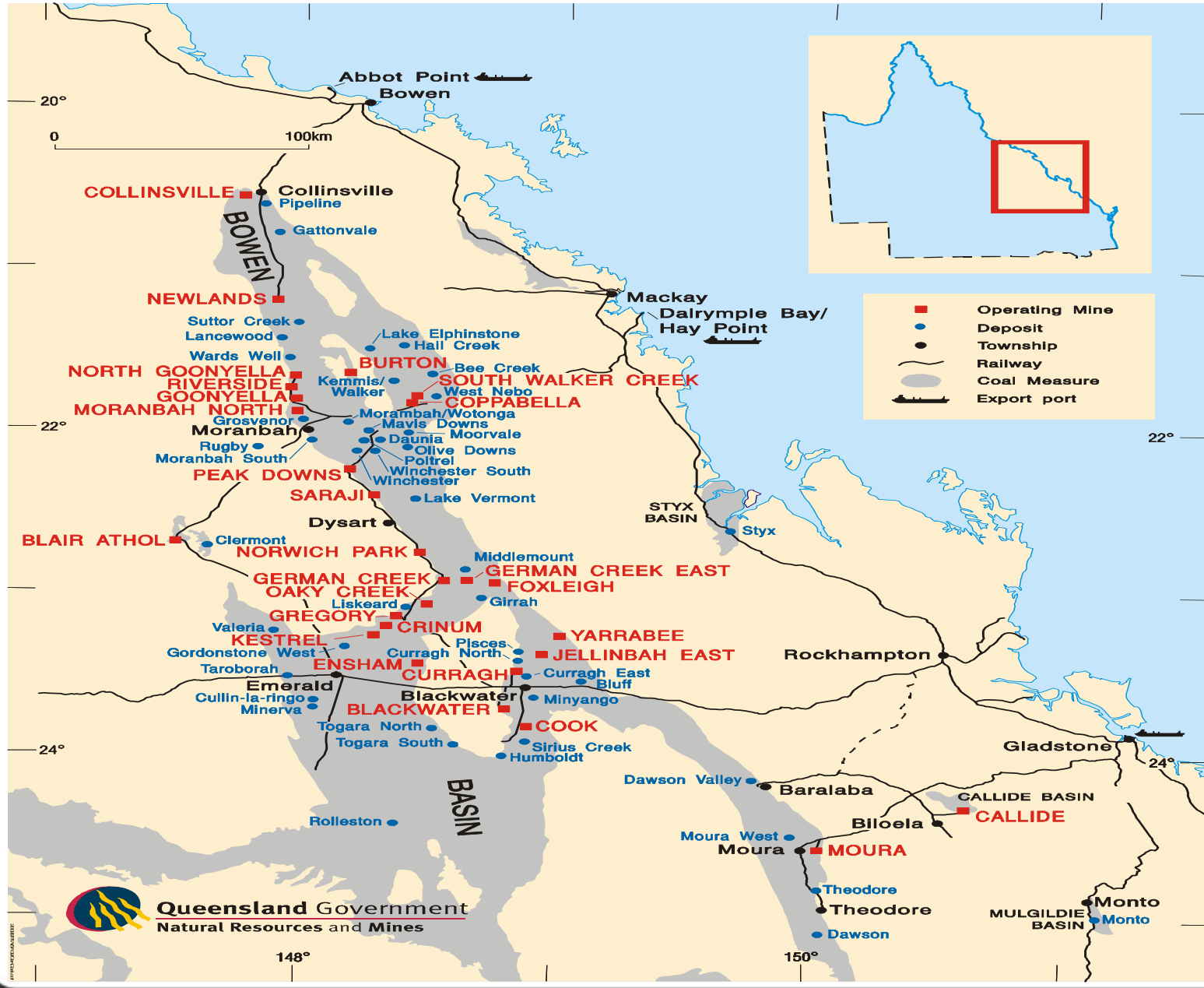
- Queensland Mining Legislation (Mines Rescue Capability).
- Queensland Mines Rescue Service.
- Typical Australian Mine Management structure.
- Mobilisation Hurdles
- Available Mobilisation Strategies.
- QMRS Emergency Notification
- QMRS Mutual Assistance Model
- Mobilising Mines Rescue Teams Conclusions.





QUEENSLAND UNDERGROUND COAL MINES RESCUE TRAINING

Central Queensland coal



Queensland Government
Natural Resources and Mines



QUEENSLAND UNDERGROUND COAL MINES RESCUE TRAINING

Mines Rescue Legislation

- Coal Mines must have Mines Rescue Agreement with approved organisation.
- Mines required to ensure a mines rescue capability is available at the mine site –
5 Members or 5% total workforce whichever is greater.
- All coal Mines must have an agreement with an approved rescue provided that is approved by the Minister for Mines



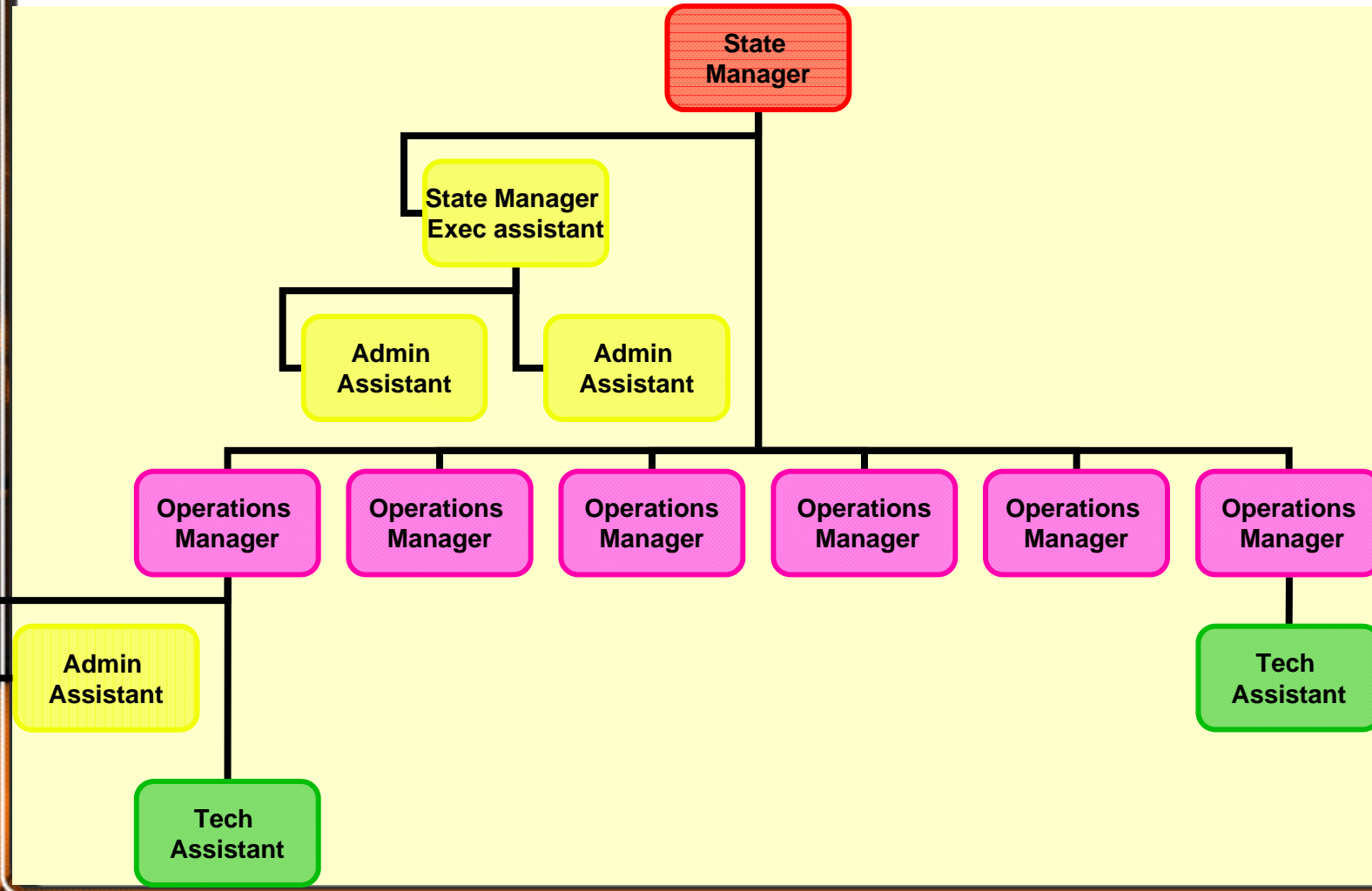
Queensland Mining Legislation – Mines Rescue Capability

- **Mines Rescue Agreement**

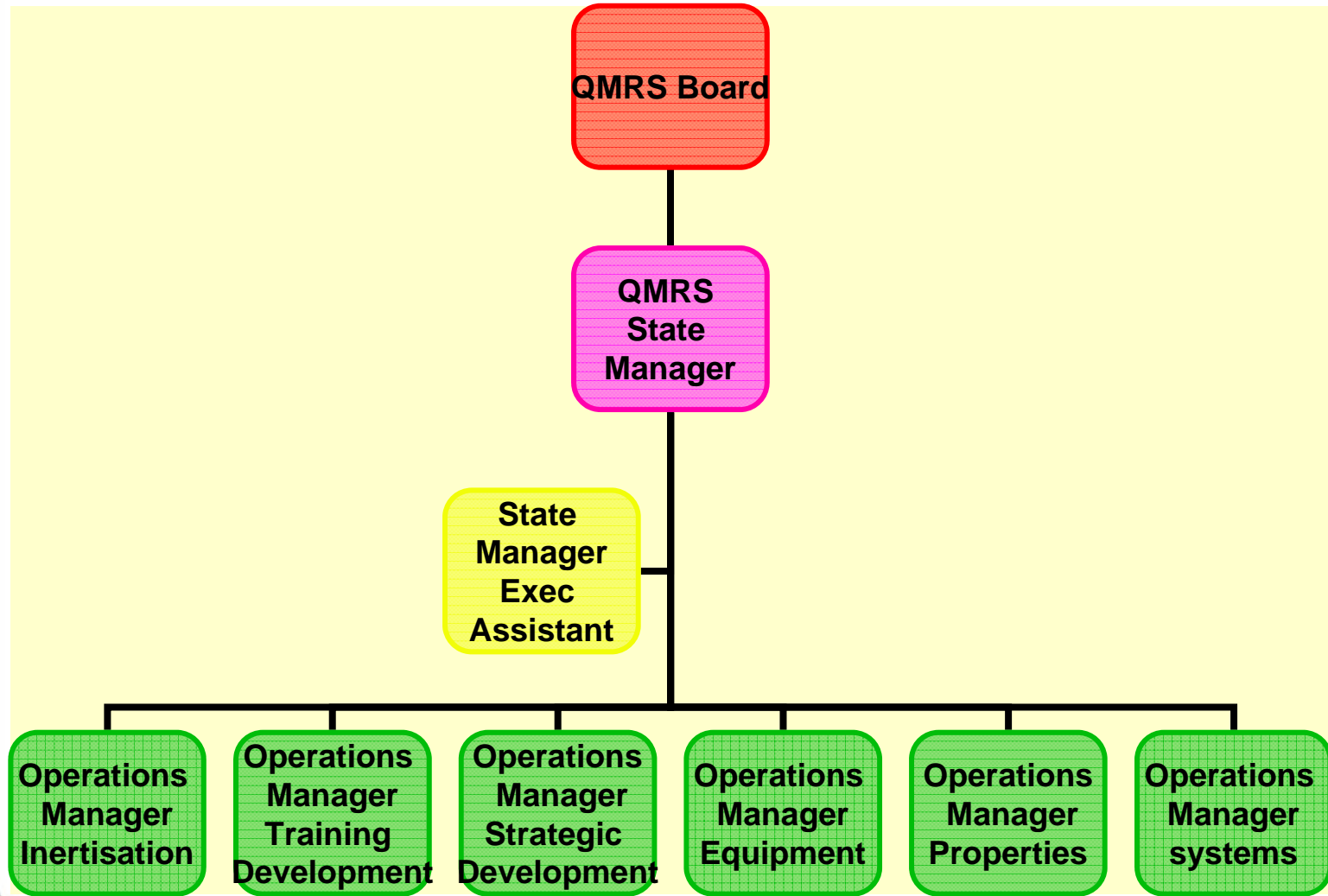
- Training of rescue team members.
- Mutual assistance scheme to assist neighbouring mines – managed by QMRS.
- Payment of Team Members by employer.
- Injury liability ensured by members employer.
- Agreed responsibilities (QMRS and Mining Companies)



Queensland Mines Rescue Service Structural Chart



Queensland Mines Rescue Service Management Team Structure

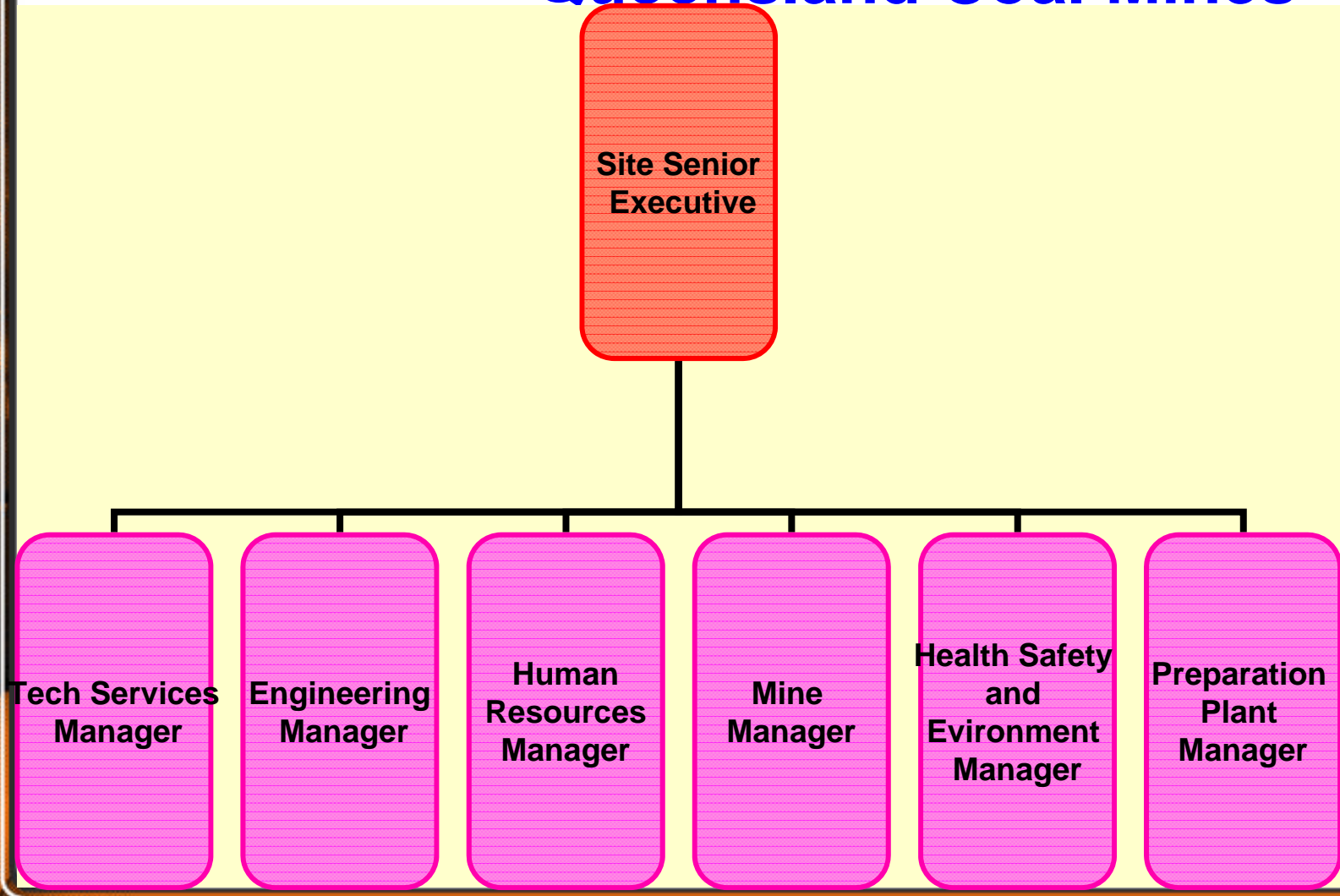


Q.M.R.S. Primary Responsibilities

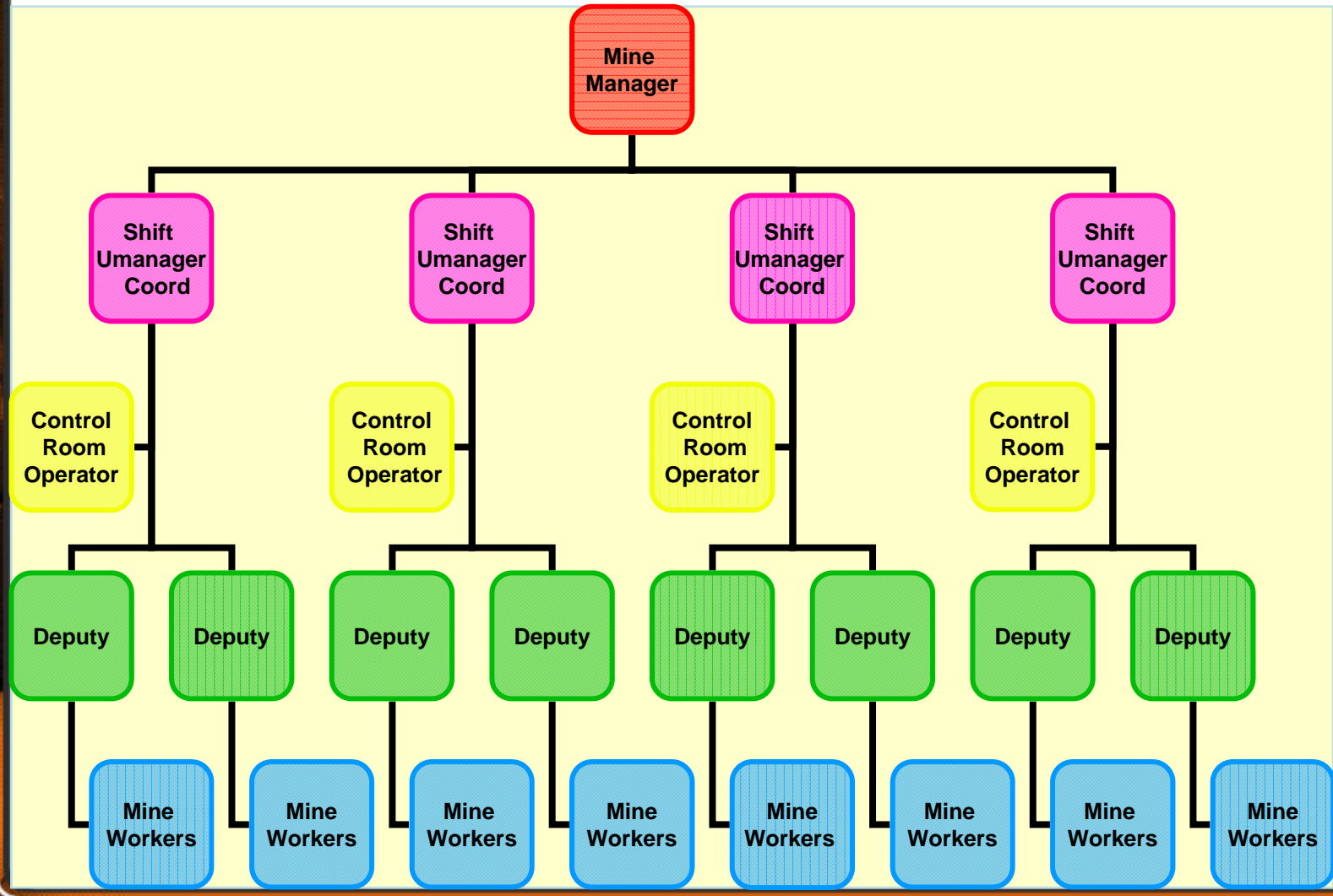
- **Non Profit training Company Owned and funded by the Coal Mining Industry.**
- **Train Underground Volunteer Mines Rescue Members in Qld.**
- **Advise Coal Mines on emergency response initiatives.**
- **Assist Coal Mine operators during Mine Emergencies.**
- **Manage Mines Rescue Team Deployment during Mine Emergencies.**



Senior Management Structure Queensland Coal Mines



Australian Coal Mine Production Team Structure (Simplified)



Mines Rescue Team Mobilisation Hurdles

- **Communications**
- **Team Member Availability**
- **Environmental Constraints**



Mobilisation Hurdles - Communications

- **Members travelling**
 - Domestic travel.
 - International Travel.
- **Member on leave**
 - Annual Leave.
 - Long service leave.
 - Other leave.
- **Location of members – not at listed residence.**
 - Family events, days outing etc.
 - On shift at employer Mine.



Mobilisation Hurdles – Team Members

- **Members are affected by dugs / alcohol.**
- **Members physically incapacitated.**
 - Personal illness.
 - Injury sustained during leisure time
 - Work related injury
- **Member is unavailable due to family Constraints.**
 - Family member ill or injured.
 - Caring for children and unable to arrange sitters.
- **Member already involved in the incident.**
 - As a victim
 - In a recovery operation on site.
 - Member requires rest break before duty – Fatigue



Mobilisation Hurdles - Environmental

- **Weather conditions**
 - Combination of rain and gravel roads
- **Distance to be travelled.**
 - Fly in fly out – living interstate or out of area.
 - Members live at extreme ends of mining areas.
- **Availability of transport.**
 - Members personal vehicles
 - Arranged transport – road (hire car, bus etc)
 - Chartered aircraft
- **Familiarity of route to travel to affected Mine.**
- **Entry to affected site.**
 - No ID as Mines Rescue Member.



Rescue team Mobilisation Strategies

- **On call or standby strategies**
 - Rostered team members on call and restricted in travel and leisure activities.
 - Teams in residence at rescue stations on call
- **Telecommunications systems**
 - Traditional landlines.
 - Mobile phone network.
- **Personal Pager systems**
 - Tone pagers – grouped or non grouped;
 - Alpha numeric pagers
 - Text messaging.
- **Other methods**
 - Messages transmitted through media.
 - Community alarm systems – Sirens.



Mobilisation Result using previous strategies

- **Mine site was required to call from a list of Mobile phone numbers**
 - Contact problems due to no system.
 - Contact problems due to signal coverage.
- **Contacted Manager responsible to carry out call out initiation and mobilisation.**
- **In short – delay in response times and in efficient response.**
- **Confusion due to a lack of a system.**



Change to Improve Efficiency

- Contract Qld fire and Rescue Service Call Centre to Manage QMRS initial callout.
- Implement call out strategy and cascade system.
- Initiate mock call out trials to monitor performance of Staff and members.
- Train Minesite operators in new system
- System audit and review – ongoing.



Queensland Mines Rescue Service – Emergency Mobilisation System

•Dedicated 24 / 7 answering and response call centre.

- 000 call centre for “Qld Fire and Rescue Service”
- QMRS protocols executed by trained operator.
- Call centre operates 24 hrs / day 7 days a week.
- QMRS pays fee for call centre service.

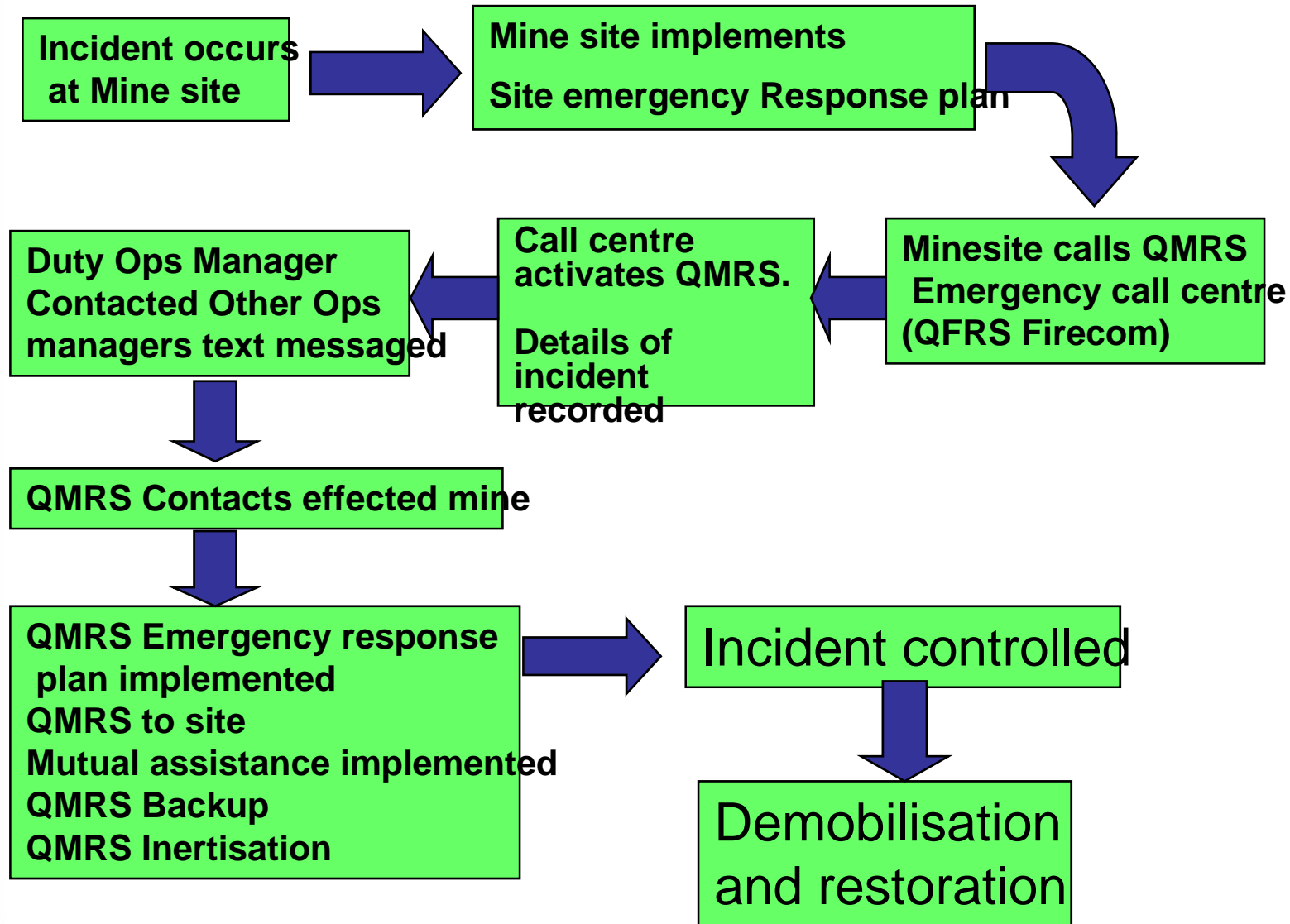
•Rapid notification to QMRS Management.

- Cascade calling until an operations manager is contacted.
- All other QMRS Managers notified by Text message on mobile phone.

•Manager contacted is duty officer and directs other
Managers to duties best suited to assist efficient



Queensland Mines Rescue Response System

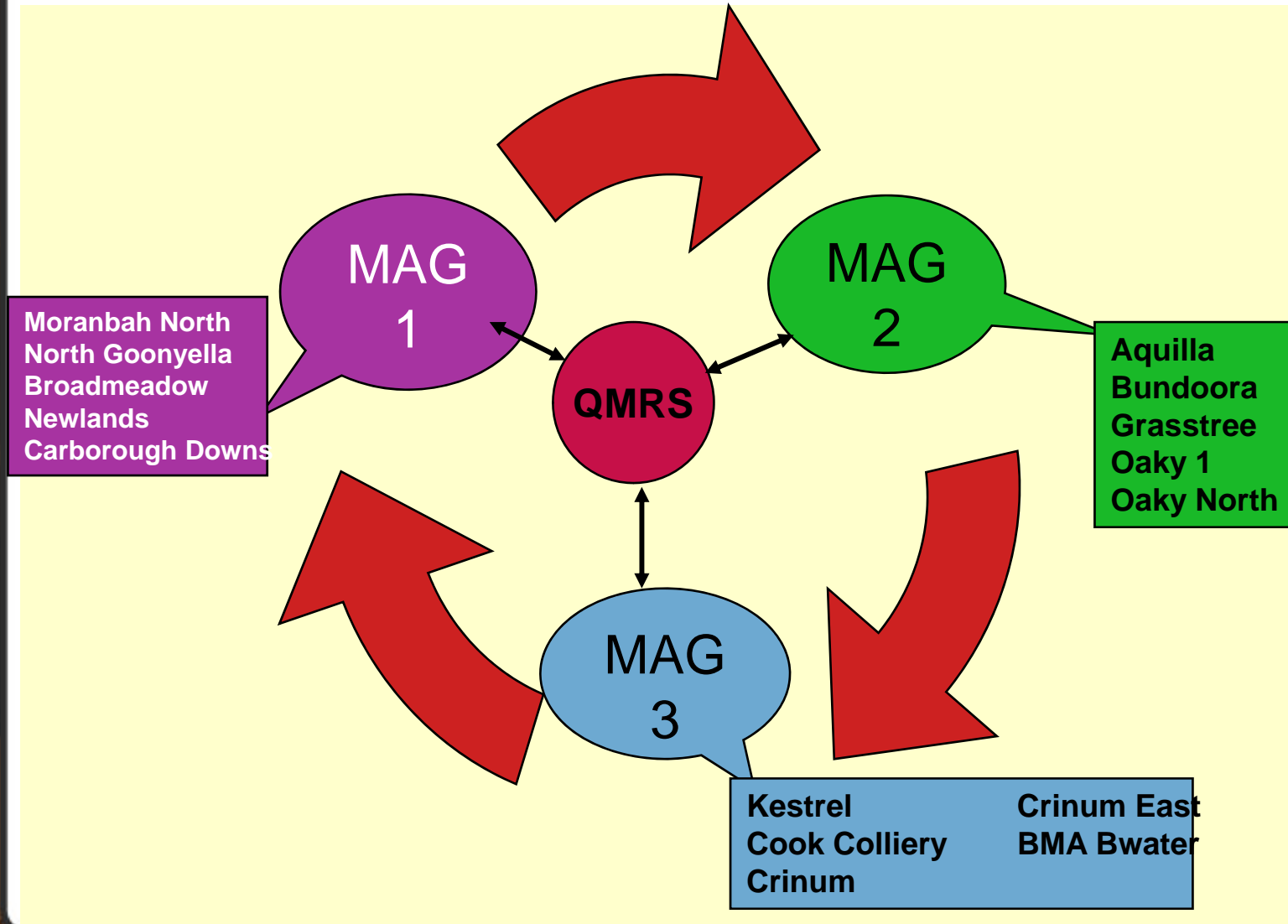


Managing Mutual Assistance.

- All Mines Participate as part of the Mines Rescue Agreement.
- QMRS Manage Mutual Assistance scheme.
- Mines divided into three Mutual Assistance Groups.
- Mutual Assistance Groups are basis for staged mobilisation strategies by QMRS.
- Mutual Assistance System utilised during planned mock emergency exercises.



Mutual Assistance Scheme



Mobilisation example

- **Incident – Moranbah North Mine**
- **1st response minesites are**
 - MAG 1 – Nth Goonyella, Broadmeadow and Newlands Mines.
- **1st Standby and possible 2nd response.**
 - MAG 2 – Carb Downs, Cap Coal and Oaky creek group.
- **2nd standby – Kestrel, Crinum, Crinum East and Cook Colliery**



Mobilisation roles

- **Call centre alerts QMRS.**
- **First manager contacted makes contact with affected mine to determine extent of incident and estimates response.**
- **Allocates responsibility of QMRS staff**
 - Operations managers to site.
 - Duty Officer at rescue station.
- **Implements Mutual Assistance.**
 - Advise mine sites of activation of Mutual assistance.
 - Requests mine sites to mobilise site rescue persons to incident.
 - Increase mutual assistance as required.

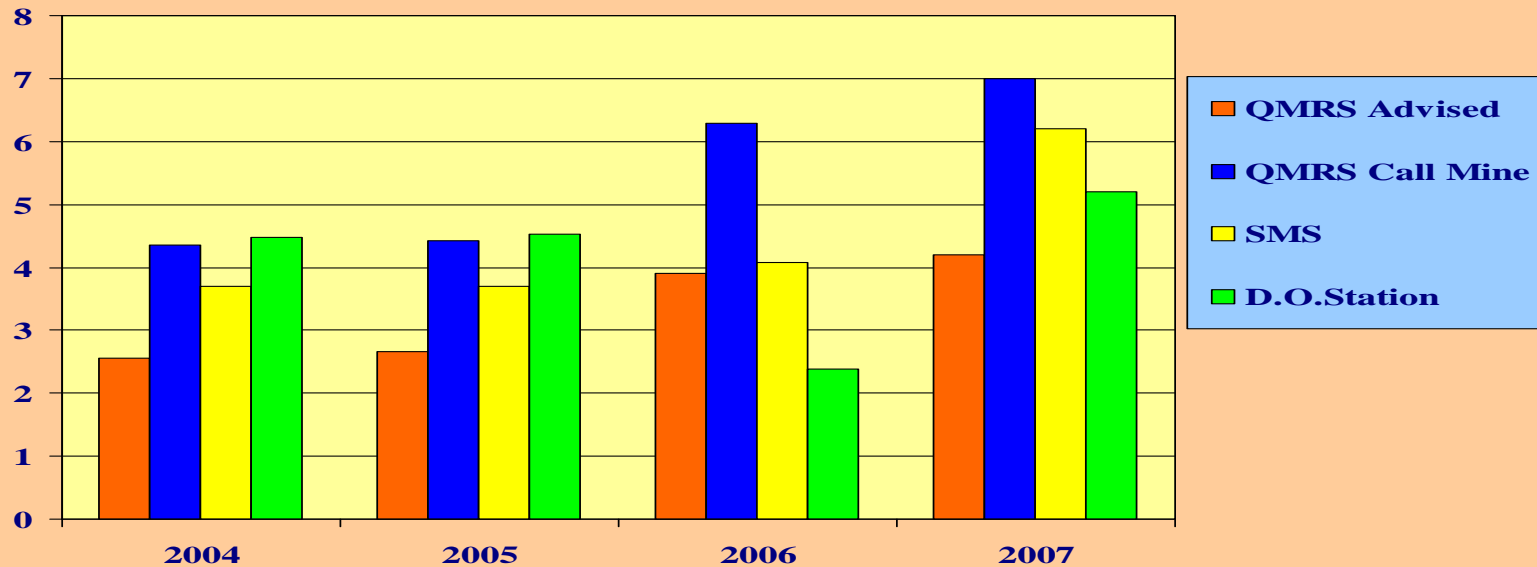


QMRS Staff Response times monitored

- QMRS regularly tests staff member response to call out. We are checking staff member response during:
 - Monthly test of system activated from a targeted mine.
 - Test response of members to planned exercises.
 - Time (in minutes) for call centre to contact Operations Manager 1.
 - Time taken (in minutes) for ops manager 1 to make contact with participating Mine.
 - Time taken (In Minutes) for call centre to Text all other operations Managers.
 - Time Taken (in minutes) to establish duty officer at the nearest Rescue Station to affected Mine



QMRS Callout Response Times (Yearly Average) (Training and Exercises and expressed in minutes)



- **QMRS Advised** – Call centre contacts Operations Manager to advise of call out.
- **QMRS Call mine** – time to response call to affected mine
- **SMS** – Call centre sends SMS Message to all Operations Manager to advise of incident .
- **D.O. Station** – time to establish a duty officer at the nearest Mines rescue Station.

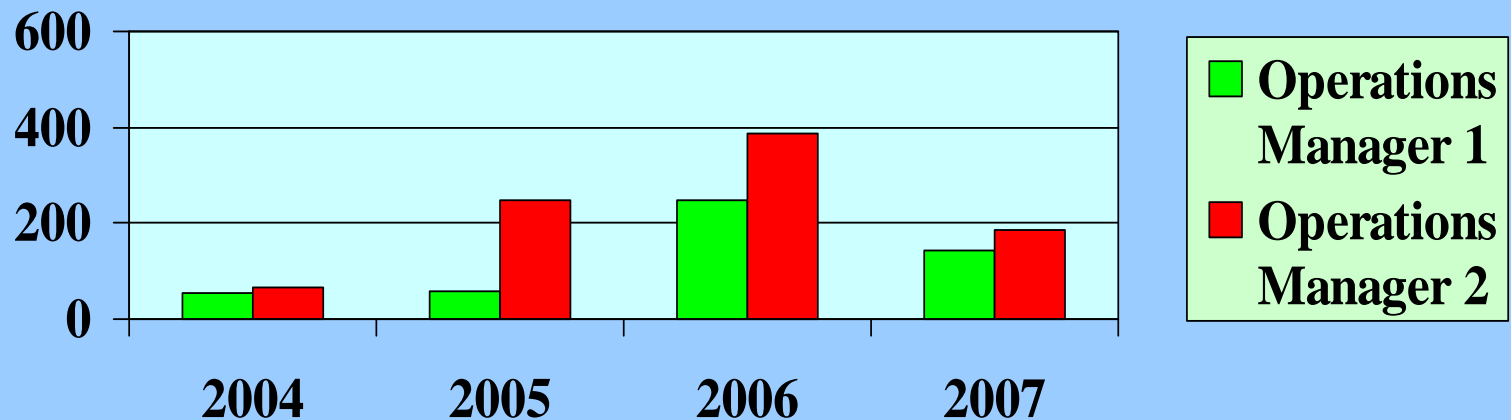


Response times of Operations Managers to site (estimated)

- Regular test of call out system checks.
 - Estimated time (in minutes) of first operations manager to affected Mine site
 - Estimated time (in minutes) of second operations manager to affected site.
 - Estimated on travel time from current location of Manager to get to site using transport at his disposal.
 - Time to site can be affected by call centre efficiency and access to mobile phone coverage.



QMRS Callout Response Times (yearly Average) (Training and Exercises)



- Operations Manager 1 – 1st Manager on site.
- Operations Manager 2 – 2nd Manager on site.
- Team members to site not recorded.

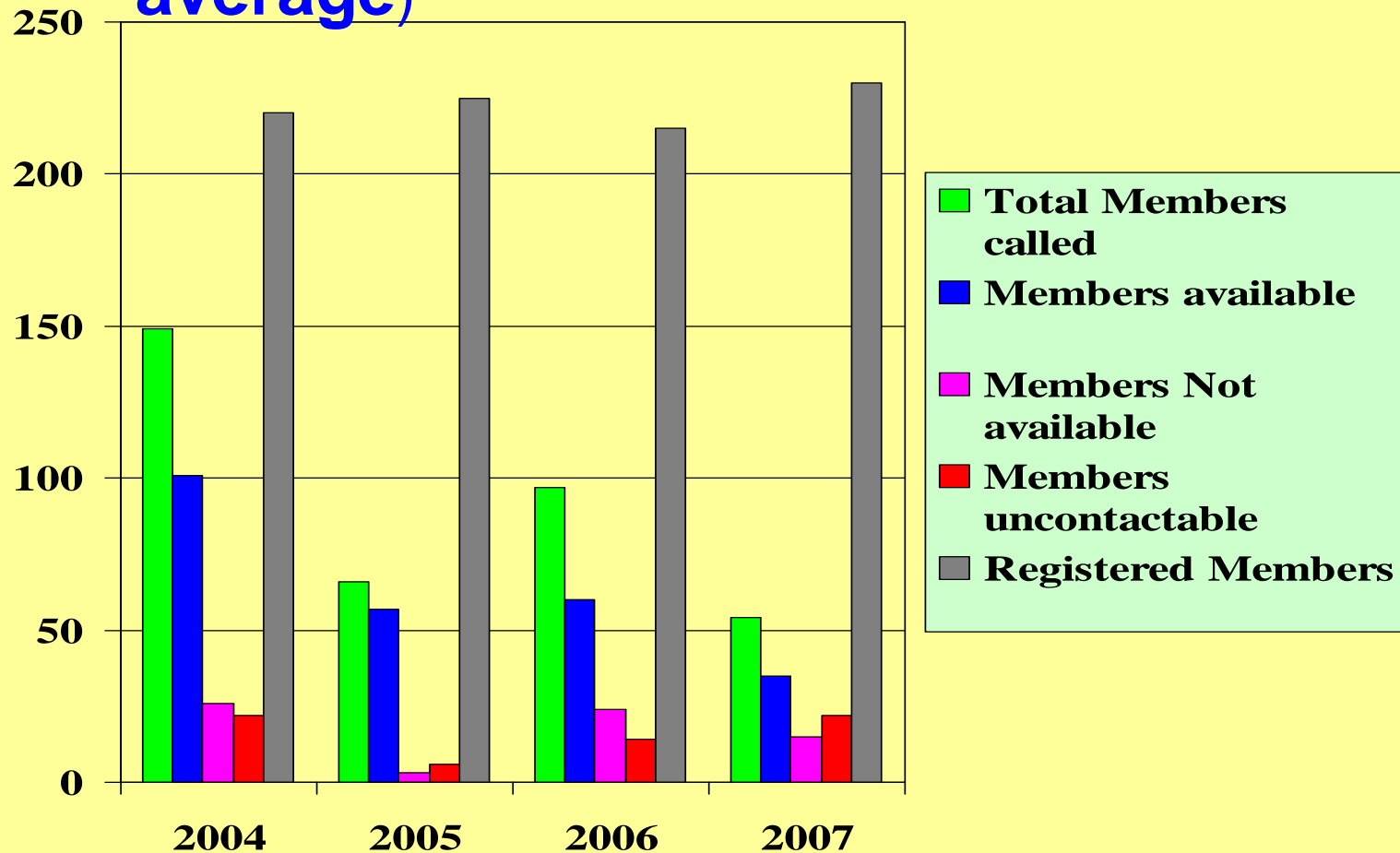


QMRS Capability Response During exercise

- QMRS regularly tests member response to call out. We are checking member response
 - Monthly test of system activated from a targeted mine.
 - Test response of members to planned exercises
 - Total number of registered members
 - Total number of members called.
 - Members available from called list.
 - Members unavailable for any reason.
 - Members not contactable.
 - Graph shows response of members in numbers.



QMRS Callout Response Times – expressed in minutes (Training and Exercises Yearly average)



Conclusions

- **Efficiency in Mines Rescue team mobilisation is dependant on:**
 - Organised and methodical call out system.
 - Efficient and flexible response system.
 - Call out by mine site should be a single number to a fully manned call centre.
 - Regular review and audit to ensure system operating effectively.
 - QMRS to ensure all stakeholders in response system maintain Competence levels.

Ensuring an efficient mobilisation.

