Innovation Award Presentation

Hail Creek Mine Induction Program
Real Time Data Collection

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RioTinto

Mastermyne
GROUP OF COMPANIES

MYNESIGHT

QUEENSLAND MINING INDUSTRY HEALTH & SAFETY CONFERENCE 2014

'Improving health and safety in challenging times'

The Initiative...

Rio Tinto's Hail Creek Mine undertook a project to rebuild our training system and as part of this project made a decision to refresh our entire workforce in Standard 11 induction competency requirements. We approached MyneSight looking for smarts to complete this training in a non traditional way by:

- Improve inefficiencies in administering their paper based system
- Moving to an electronic system
- Reducing costs without increasing risk
- Deliver quality training that is engaging and requires group participation
- Caters for and recognises differing levels of prior learning
- Applicable for varying group sizes from small to large
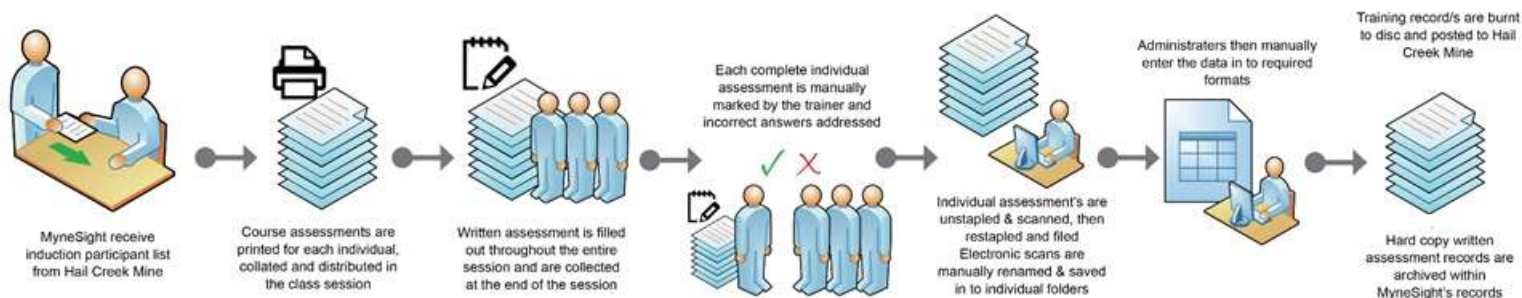- Site contextualised units of the Standard 11

The Innovation...

Site's training constraints;

- Maintained risk level

- No production loss

- Cost effective

- Efficient

- Recognise current level of competence

- Engaging

- Interactive

- Completed within scheduled training day window

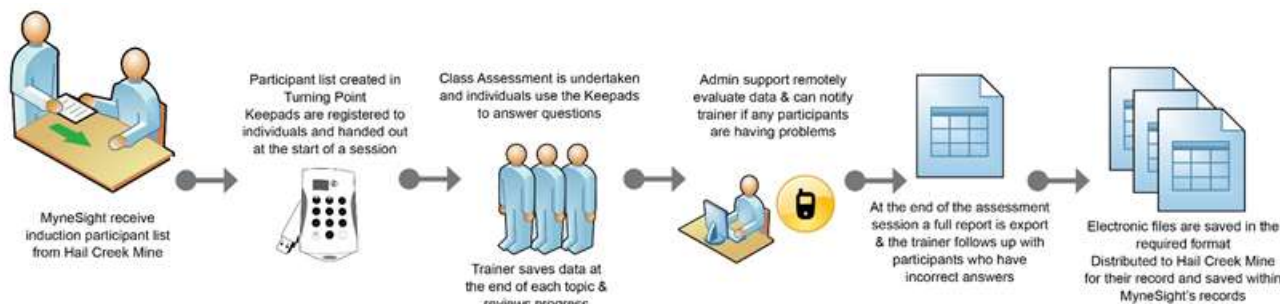- Suitable for class sizes of up to 220 trainees trained concurrently.
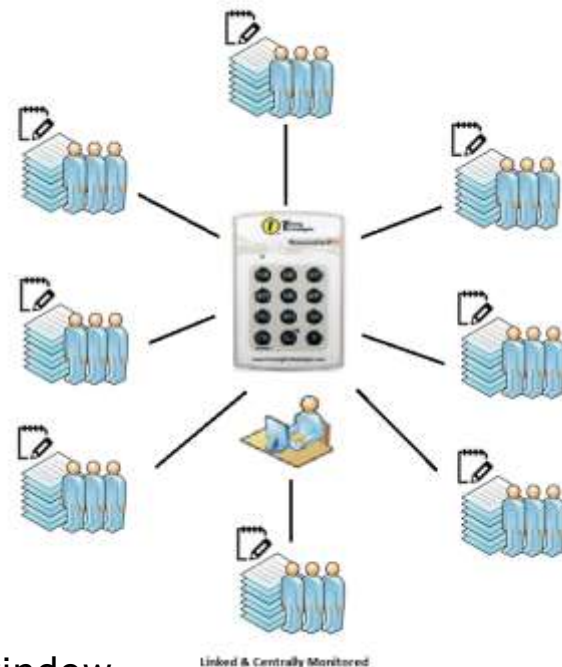
To address these requirements a purpose built program was developed utilising the keepad technology to enable **Real Time Data Collection**

The Innovation…

MyneSight receive induction participant list from Hail Creek Mine

Course assessments are printed for each individual, collated and distributed in the class session

Written assessment is filled out throughout the entire session and are collected at the end of the session

Each complete individual assessment is manually marked by the trainer and incorrect answers addressed

Individual assessment's are unstapled & scanned, then restapled and filed Electronic scans are manually renamed & saved in to individual folders

Administraters then manually enter the data in to required formats

Training record/s are burnt to disc and posted to Hail Creek Mine

Hard copy written assessment records are archived within MyneSight's records

Training process using paper based written assessments

MyneSight receive induction participant list from Hail Creek Mine

Participant list created in Turning Point Keepads are registered to individuals and handed out at the start of a session

Class Assessment is undertaken and individuals use the Keepads to answer questions

Trainer saves data at the end of each topic & reviews progress

Admin support remotely evaluate data & can notify trainer if any participants are having problems

At the end of the assessment session a full report is export & the trainer follows up with participants who have incorrect answers

Electronic files are saved in the required format Distributed to Hail Creek Mine for their record and saved within MyneSight's records

Training process using KeePad - Real Time Data Collection Tool

> The keepads system is paperless. Though some paper systems were still used in the program

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Keepad System...

- Interactive survey tool

- Multi channelled

- Remote monitoring capability

- Able to capture and report individual responses

- Utilises multiple choice questioning techniques in a polling or assessment format

- Each question can have up to 7 possible answers

- Monitors and display the number of responses

- Displays the response results

- Can include time constraints

- When polling opens participant simply selects response by pressing the keepad buttons

- Participants are able to change responses

Evidence Map...

COMPETENCE

- Team Judgement Process
- Individual Assessment (SLAM)
- Site Competency Reports (All Existing Workers)
- Individual Role Profiles (Students)
- Group Follow Through (Model Answers)
- Small Group Activity (Workplan)
- Site Assessment Evidence
- Third Party Report (Site Supervisor)
- Practical Assessmnet (Small Group JHA)
- Individual Assessment (Keypad)
- Small Group Assessment (Keypad)
- Classroom Observations (Trainer - Soft Skills)
- Individual Follow Through (Not Yet Competent)

The keepad system is the real time data collect tool, it was a key element to the success of the program through the data collected was only one source of the evidence used to prove competence

Polling Example

Please indicate your field of experience by choosing the relevant answer below.

A.   Administration

B.   Safety

C.   Training

D.   Operations

E.   Engineering

F.   None of the above

0%   0%   0%   0%   0%   0%

Administration   Safety   Training   Operations   Engineering   None of the above
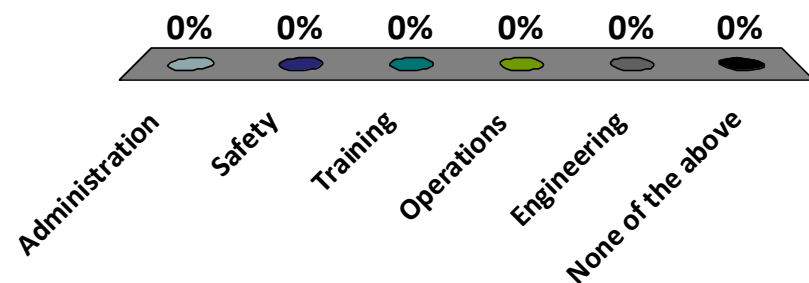
Polling Example

Please indicate your resource sector experience by choosing the relevant answer.

A.   Less than 12 months

B.   12 months – 2 years

C.   2 years – 5 years

D.   5 years – 10 years

E.   10 years – 15 years

F.   15 years or longer

0%	0%	0%	0%	0%	0%
A.	B.	C.	D.	E.	F.
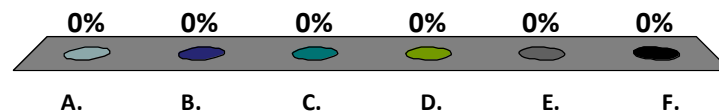
Polling Example

What is your favourite shade of pink?

A. French Rose

B. Hot Pink

C. Magenta

D. Rose

E. Salmon

0%   0%   0%   0%   0%

French Rose   Hot Pink   Magenta   Rose   Salmon
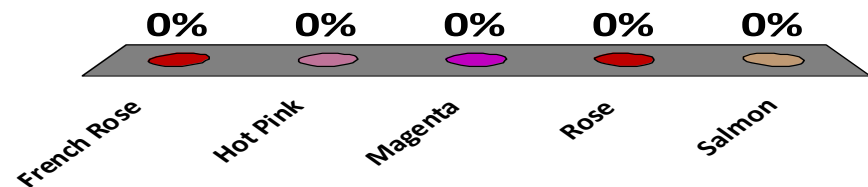
Polling Example

Utilising the risk matrix below; what is the likelihood of a someone from the conference winning more than $10,000 at the Casino?

A. Almost Certain

B. Likely

C. Possible

D. Unlikely

E. Rare

Likelihood	Consequence				
	1 - Minor	2 - Medium	3 - Serious	4 - Major	5 - Catastrophic
A - Almost Certain	Moderate	High	Critical	Critical	Critical
B - Likely	Moderate	High	High	Critical	Critical
C - Possible	Low	Moderate	High	Critical	Critical
D - Unlikely	Low	Low	Moderate	High*	Critical
E - Rare	Low	Low	Moderate	High*	High*

0% 0% 0% 0% 0%

Almost Certain   Likely   Possible   Unlikely   Rare

2014

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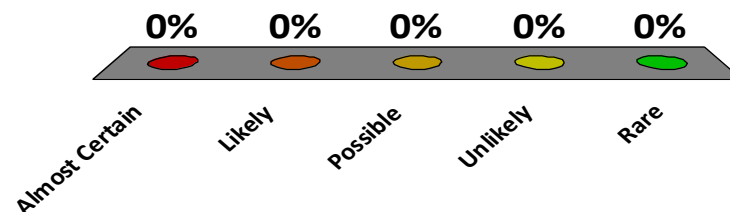
Assessment Example

There are how many shades of grey?

A.   1

B.   3

C.   50

D.   Between 150 – 200

E.   Between 1 – 2 million

More than one using the subtractive colour wheel (red, green, blue) with each one having a value from 0-255, with a total combination of 16,777,216 colour combinations, greys and grey hues would probably be sitting around 1-2 million possible shades

0%	0%	0%	0%	0%
1	3	50	Between 150 – 200	Between 1 – 2 million
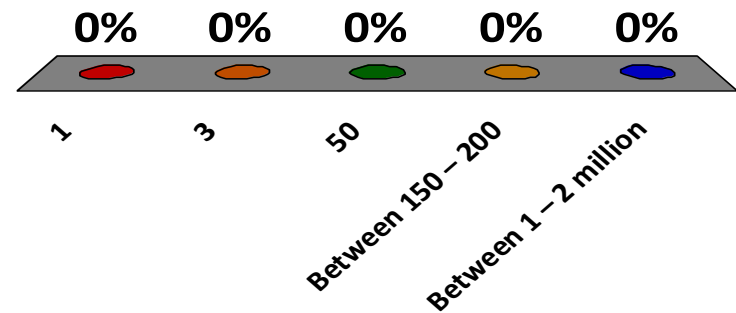
Assessment Example

A piece of equipment has been deemed 'unserviceable'. Which of the tags pictured below would you attach to it?

a.   Tag 1
b.   Tag 2
c.   Tag 3

a.

RioTinto

INFORMATION TAG

Name: _____
Company: _____
Equipment: _____
Time: _____
Date: _____

MESSAGE

b.

RioTinto

OUT OF SERVICE
DO NOT USE OR OPERATE

Equipment: _____
REASON FOR PLACING TAG:
Isolation of: _____

Isolation verified? ☐
Other reason: _____

Placed by: _____
Company: _____
Date: _____ Time: _____

OUT OF SERVICE

EQUIPMENT _____
PLACED BY _____
DATE _____ TIME _____
FILL OUT BOTH SIDES

c.

RioTinto

PERSONAL LOCK IDENTIFICATION TAG

DANGER
DO NOT OPERATE

Name: _____
Company: _____
Date: _____

Isolation Officer: _____

0%   0%   0%

a.   b.   c.
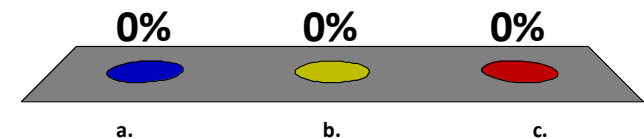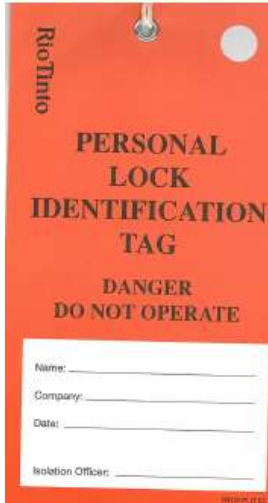
The Results...

- A number of preset reports are available
- Reporting function allows for remote monitoring upon the trainer saving the session
- Microsoft Excel format
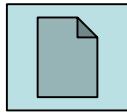
Summary Report
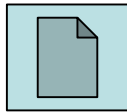
Full Report

Program stats...

- 911 trainees completed the program
- Class sizes ranged for 27 – 210 trainees trained concurrently
- 4.5% or 42 of trainees required further follow up after the program (i.e. assessment error or evidence gaps)

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Benefits…

- Assisted with assessment literacy constraints.

- Assessment legibility (hand writing variances) were largely overcome.

- Assessment completeness, although not a major issue has been addressed

- The reports easily provide a true indication of poor assessment questioning or facilitation techniques

- Timing of courses, all students at same position/stage of the program, none lagging behind, enabling the better class progression/scheduling

- The keepads allow for greater use of assessment flexibility (i.e. the students do not have to be chained to a desk to write a written response) This allows for the greater use for scenario based deliver/assessment, both in and outside of the room.

- The capturing of the assessment data in excel, allows for the easy transfer into program statistics and trend analysis information.

- The keepads have greater generation suitability (past, current, future)

- Advantages in the anonymous assessment/polling approach recognised during various program activities

Benefits…

- Due to the collection of real time date a true indication of not yet competent is evident in the reports.

- The remote monitoring of student performance and the ability for early interaction assist to manage/address whilst the program is being delivered.

- Reduction in;

  - Printing and collation time

  - Admin support time

  - Archiving processes

  - Trainer/assessors times to check and mark assessments

  - Paper usage and generated waste

Considerations…

- IT Support

- Trainer acceptance

- Facilitating the assessment

Outcomes...

- Training was engaging and effective (excellent feedback from participants)
- Reduction in paper assessment volume of approx. 6000 assessment in the first 6 months, expect over 9000 by years end.
- Streamlined data entry into site LMS systems
- Control of assessment evidence is excellent
- Reduce training costs significantly both in terms of delivery cost per person per competency and training administration costs. (paper, printing, data input, filing)

Thank You