



# **OZ MINERALS**

**Remote Operations Centre Project**

**Presentation to MIPO**

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- Strong focus on safety
- Mines are becoming more complex and challenging to run
- Minimise non-essential people at remote locations
- Specialist skillset resource shortage
- Centralise experience & knowledge
- Pit to port optimisation
- Automate operations
- Real-time performance data capture
- Improved quality and speed of decisions by making information available on-line, accessible anywhere, on demand on any device

# OZ Minerals

## Mine Site Organisational Pathway



### Past:

- Every-one located on-site
- FIFO rosters
- Hands-on equipment operations

### Now:

- Maximise use of regional office
- Shared services / outsourcing
- Access to wider range of people and resources



### Future:

- Centralised specialist skills and knowledge
- Real-time scenario development
- Decision making removed from operational pressures

# OZ Minerals

## Operations Monitoring and Control Pathway



### Past:

- Shift by shift planning
- Reliance on operator knowledge
- Variation in operations aligned to rosters



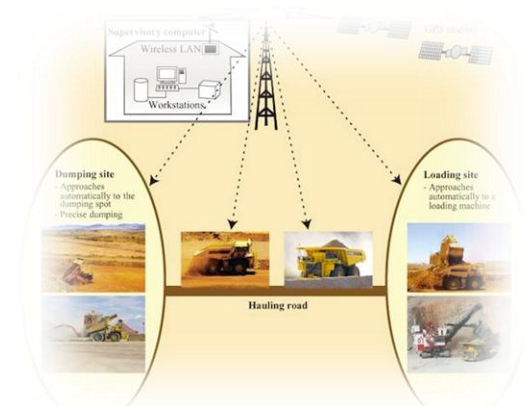
### Now: Optimised Operations

- Multiple site based control rooms for open pit, underground and process plant
- Real-time performance monitoring
- Improvements at tactical level – Optimised dispatch etc



### Future: Automation

- Autonomous equipment and remote control operations
- Improved safety with increased mobile plant density
- Sensors on everything – everything connected



# Remote Mining Operations Support Centre ("ROC")

## What advantages could a ROC offer OZ Minerals?



**The aim of a ROC should be to drive improvement in efficiencies and reliability through greater collaboration and integration with ICT enablement.**



### Safety

Fewer personnel exposed to hazardous environments.  
Better reaction to emergency situations.  
Back up for onsite control rooms.



### People

The opportunity for personnel to re-deploy to capital cities.  
Increased collaboration .  
Personnel skillset development.



### Productivity

Differing levels of data capture and equipment control.  
Integrated real time data visibility leading to improved plan compliance, diagnostic capability and decision making.  
Informed real time operational pit to port optimisation.

# Collaborative Remote Mining Operations Centre

## Why Did OZ Minerals Get Involved?



### **The ROC Value Proposition Challenge**

- OZ Minerals is a mid-tier miner with one current operational site and a large, early stage project, both in South Australia.
- Prominent Hill has mature operating systems, areas of class leading performance, and fit for purpose ICT solutions.
- Mixed value return for other industry examples.
- Does this limit the value from a remote operations control centre?

### **The Anticipated Collaborative ROC Model / Project Opportunity**

- Assistance in better defining further opportunities (the 'problem' and 'solution').
- Access to area experts and learning's from other companies ROC 'journeys'.
- A potential entry point into a ROC which adds value, but minimises capital expenditure and execution risk.

# Collaborative Remote Mining Operations Centre Project Participants\*



**Project Leader** – IPACS (ICT / defence SME)

**Research Partners** – UniSA, CSIRO

**Industry Partner** – OZ Minerals

**Technology Partner** – HP, OSIsoft

\*Source: Collaborative Remote Operations Centre Project Definition Workshop Attachment 1



# Collaborative Remote Mining Operations Centre

## Progress Update



- **IPACS** monitoring equipment will be installed at Prominent Hill:
  - Resulting data will be monitored and analysed by IPACS and UniSA.
  - Analysed data will be provided to OZ Minerals by secure internet portal.
- **OZ Minerals** will:
  - Set up monitoring stations in the Adelaide Office.
  - Receive new monitoring information in Adelaide and combine with existing monitoring / data sources (via systems previously viewed only at site).

- Most elements of remote operations support technically feasible.
- Recognition of much larger organisational change (people and processes) required for a single operation to exploit remote operations.
- There may be value opportunities for OZ Minerals core service providers to leverage value from remote operations.

# *Questions?*

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