



# minezone

The Innovative Industrial  
Automation and Control System

Realise Transformative Opportunities in  
Mining with Seamless Automation and  
IoT-independent Edge Intelligence

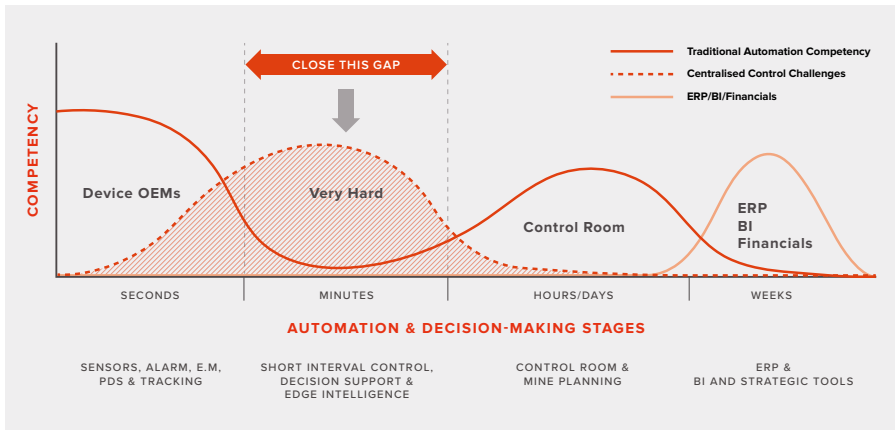


# Introduction to MineZone

## Challenges in Traditional Mining Automation

The mining sector has long grappled with challenges posed by legacy industrial automation systems. These systems hinder real-time, actionable intelligence and fail to leverage the full potential of modern technologies.

*Mines face obstacles such as limited scalability, lack of critical local functions, and extended downtimes due to centralised control vulnerabilities.*



## How MineZone works

MineZone is built on the revolutionary BASE industrial automation architecture, and represents a game changing departure from traditional automation approaches. It is an agent-based, distributed automation platform that emphasizes scalability, OEM interoperability, and seamless integration of humans and machines.



*A MineZone is sustained by a multimodal network of communication strategies, and its unique architecture allows for self-organising machines, sensors and personnel. This enables IoT and edge intelligence independent of network connectivity*

# Inside MineZone: Explaining BASE

BASE separates future, present and past data

BASE separates what something is, from what it's doing.

## Attributes

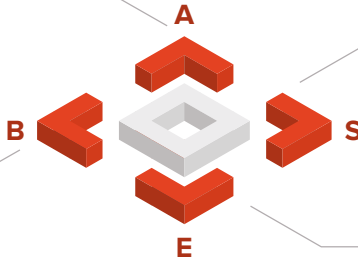
### What is this?

Person, Tool, Material, Activity?  
Name, ID, Serial No?  
Capabilities, Weight, Permissions?

## Schedule

### What is it going to do?

What activities will it be part of?  
Is it scheduled for maintenance?



## Biography

### What has it done?

What activities was it part of?  
How many cycles has the machine done?  
What was this worker exposed to?

## Execution

### What is it doing?

Where is it? What's the gas concentration?  
What is it working on? What's the job progress?

# MineZone Automation



A BHive digitises an area, forming a network with other BHives



Machines, material, humans and spaces are given BASE **resource agents**



Business processes and tasks are given BASE **activity agent**.

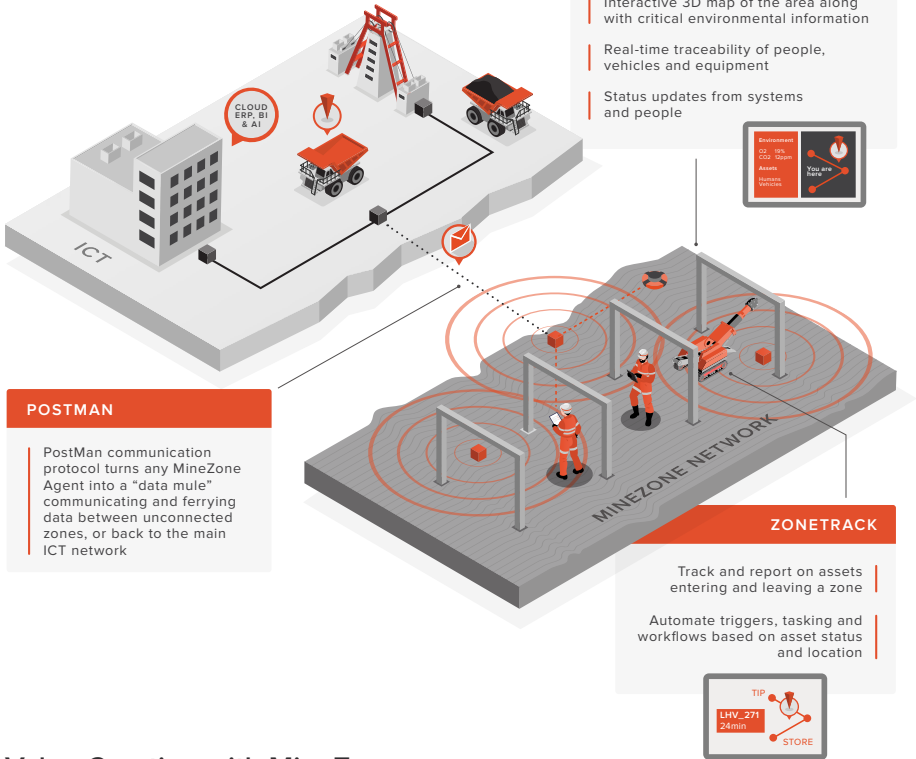


BASE resources are drawn to and linked by the activities that need them.

A fractal control hierarchy is formed by activities and sub-activities

*MineZone BHives create their own communication network anywhere, detecting and managing all machines, sensors, and personnel as resource or activity agents in a self-organizing control hierarchy. True edge intelligence.*

# MineZone in Action



## Value Creation with MineZone

### Decentralised Intelligence and Real-Time Decision-Making

MineZone enables seamless OEM interoperability and system integration. It offers resilience and automation at the edge, reducing downtime and increasing operational efficiency and situational awareness.

### Measurable Impact

- Reduced time to value
- Improved utilisation and responsiveness
- Reduced risk and enhanced safety
- Optimised hands-off, eyes-off automation
- Increased network independence and resilience

### Get in Touch

For more information on how MineZone can revolutionise your mining operations, contact us at:

### Metal Management Solutions

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