

The top of the slide features a dark red background with a subtle dot pattern on the left and a photograph of a large industrial facility at night on the right. The facility is illuminated with bright lights, showing complex piping and structural elements. The Honeywell logo is positioned in the upper right corner, overlaid on the industrial image.

Honeywell

MINING, MINERALS & METALS

Proven technology solutions.

Evolving operational performance.

Accelerating competitive growth.

Acknowledgement of Country:

In the spirit of reconciliation, Honeywell acknowledges the Traditional Custodians of Country throughout Australia and their connections to the land, sea and community. We pay our respect to Elders past, present and emerging, and embrace the continuation of Aboriginal and Torres Strait Islander people and their cultural and spiritual practices.

May 2025

GLOBAL FOOTPRINT

MINING, MINERALS & METALS

50 YEARS IN MINING

75 of Top 100 Miners

300+ Sites Globally

55,000 Personnel

\$100m Annual R&D Budget

4 Centres of Excellence

#1 Global Expertise

Honeywell



TRONOX

BHP

RioTinto

GLENCORE



AngloAmerican



BAOSTEEL 宝钢股份

EGA



KAZ
MINERALS



Ausenco

MIDREX



adani



ADRA



Teck



BUMA

NORTON GOLD FIELDS



HINDUSTAN ZINC



RAMU
NICO



Newmont



FREEPORT-McMoRAN



MA'ADEN



REGIONAL STRENGTH

MINING, MINERALS & METALS IN APAC

Honeywell

50 YEARS IN APAC

200+ DCS & APC deployments

Full range of mineral processing operations

Wide breadth of commodity classes

Core control & optimisation systems

Integrated PAR & APM solutions

Unified operational & financial view of performance

Enabling decision confidence across the mining-processing value chain

SELECTION OF APAC CLIENT SITES

- **COBALT BLUE**
- **ILUKA RESOURCES**
- **COVALENT LITHIUM**
- **MINERAL RESOURCES**
- **NEW HOPE, BENGALLA**
- **NEWMONT, LIHIR**
- **TRONOX, AUSTRALIA**
- **RIO TINTO, TARWUN**
- **BOYNE SMELTERS, GLADSTONE**
- **WORSLEY ALUMINIA, SOUTH 32**
- **ALCOA, QUASAR**
- **BHP, OLYMPIC DAM, BMA**



KEY TECHNOLOGIES

Aligning to Purdue Model

Delivery of Operational Technology

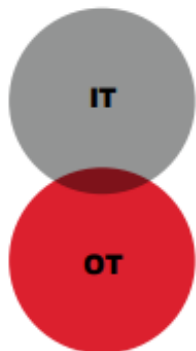
WE MANAGE

LEVEL 4
Cyber Security

LEVEL 3
MES | QMS | PMS

LEVEL 0-2
SCADA | DCS |
PLC | Edge Device

WE INTEGRATE

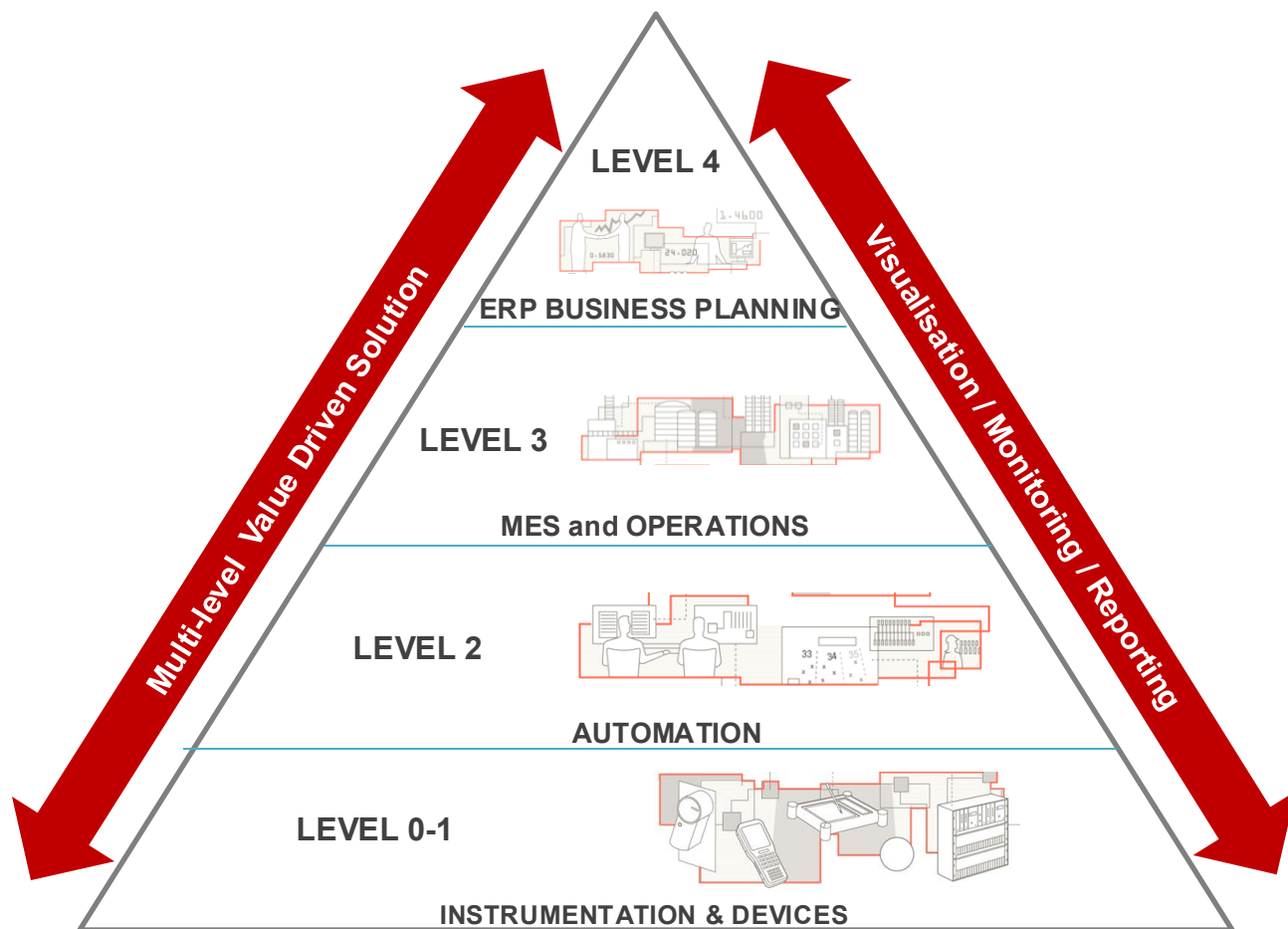


WE GENERATE

#1
Business Outcomes

#2
Process Insights

#3
Operational
Efficiencies



Managing the entire ecosystem (L0-L4)

ILUKA

ELEMENTS OF DIGITAL TRANSFORMATION FOR CRITICAL MINERALS

ILUKA - ENEABBA

DIGITAL READINESS FOR RARE EARTHS REFINING



The architecture solution centred on a Honeywell-engineered ICSS aligned to the Purdue model to meet Eneabba's objectives.



Bring forward production of cabinets, reduced rework and ensure concurrent commissioning with fabrication



LEAP project implementation process with universal I/O cabinets, virtualisation, cloud engineering and auto-device commissioning



Modular architecture, operational scale-up, preconfigured for additional process lines and total lower cost of ownership

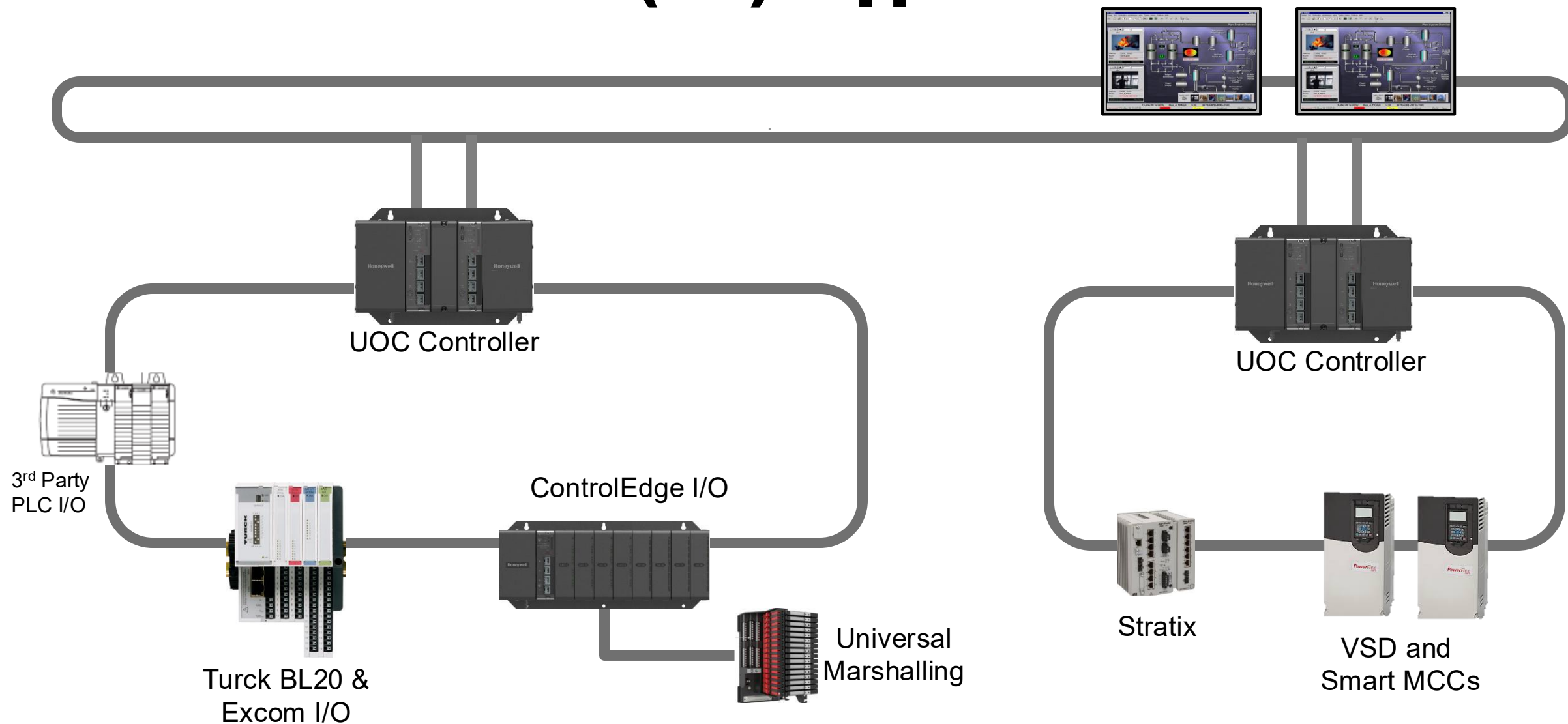
Build Efficiency & Customisation

- Customised 128 I/O field cabinets
- Ruggedised I/O using TURK I/O connected via Ethernet/IP
- Universal I/O and Marshalling
- Enhanced cyber security posture

ICSS Functional Overview – Scalable & Secure

Level	Functionality
Level 3 Operations	<ul style="list-style-type: none"> • Real time monitoring for early detection of equipment issues • ISA-18.2 and IEC 62682 compliant alarm management • Time-series historian from control systems layer in real time
Level 2 Supervisory	<ul style="list-style-type: none"> • Experion PKS unified DCS/SCADA/PLC • Alarm rationalisation and visualisation • Plant-wide automation and visibility
Level 1 Control	<ul style="list-style-type: none"> • DCS-grade control at PLC cost • Support batch & continuous modes • Built-in simulation and recipe validation • ISA Level 2 certified controllers • Compact SIS: HC900 Safety PLC

Native UOC Ethernet/IP (EIP) Support

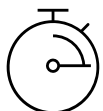


STRATEGIC VALUE

DIGITAL CONTROL - PROCESS INTELLIGENCE



- Cybersecurity - IEC 62443 compliance.
- Centralised access policies and role-based accountability.
- Advanced Process Control (APC) ready Control System.



- Time-series event capture and historical traceability.
- Built-in alarm rationalisation and reporting structures.
- Minimise commissioning delays via central templates.
- Enabling ROC ready system



- Guidelines that ensure infrastructure controls align with cybersecurity and sustainability frameworks.
- Encouraged evaluation of total cost of ownership, not just EPC capex.
- Ensure systems selected are suitable for future-state operations.



- Partner that understands complex processing environments.
- Proven track record in mineral processing space.
- 20+ year horizon to partner beyond project delivery.

GLOBAL CLIENTS

TIER ONE MINING COMPANIES



Teniente Mine, Chile

Codelco

17 Years

JV Operations (Kairos Mining)

35% to 7% production increase

3% to 10% reduction in specific energy

40% boost in productivity via Remote Operations

IROC



Ma'aden Saudi Arabia

Alcoa

24 Years

World Class Quasar Program

+3% Productivity 2001-2011

+2% Productivity 2012-2022

Global APC program

Standardised Practices



Olympic Dam Mine, SA

BHP

25 Years

Multiple Commodities

Metal Balance (20 years)

Technology Development

Supply Chain Integration

World Class Assets



Quellaveco, Peru

Anglo American

24 Years

Across 4 Continents & 11 Countries

40% Process Stability Improvement

2% process recovery

4% improvement in energy efficiency

790 APC's deployed worldwide

THANK YOU

PRESENTED BY

Sophie Allen
Regional Engineering Manager

THE
FUTURE
IS
WHAT
WE
MAKE IT

Honeywell

Honeywell