



Innovation and Hydrogen

Katie Hulmes

August 2021



A modern
mining company

OZ Minerals

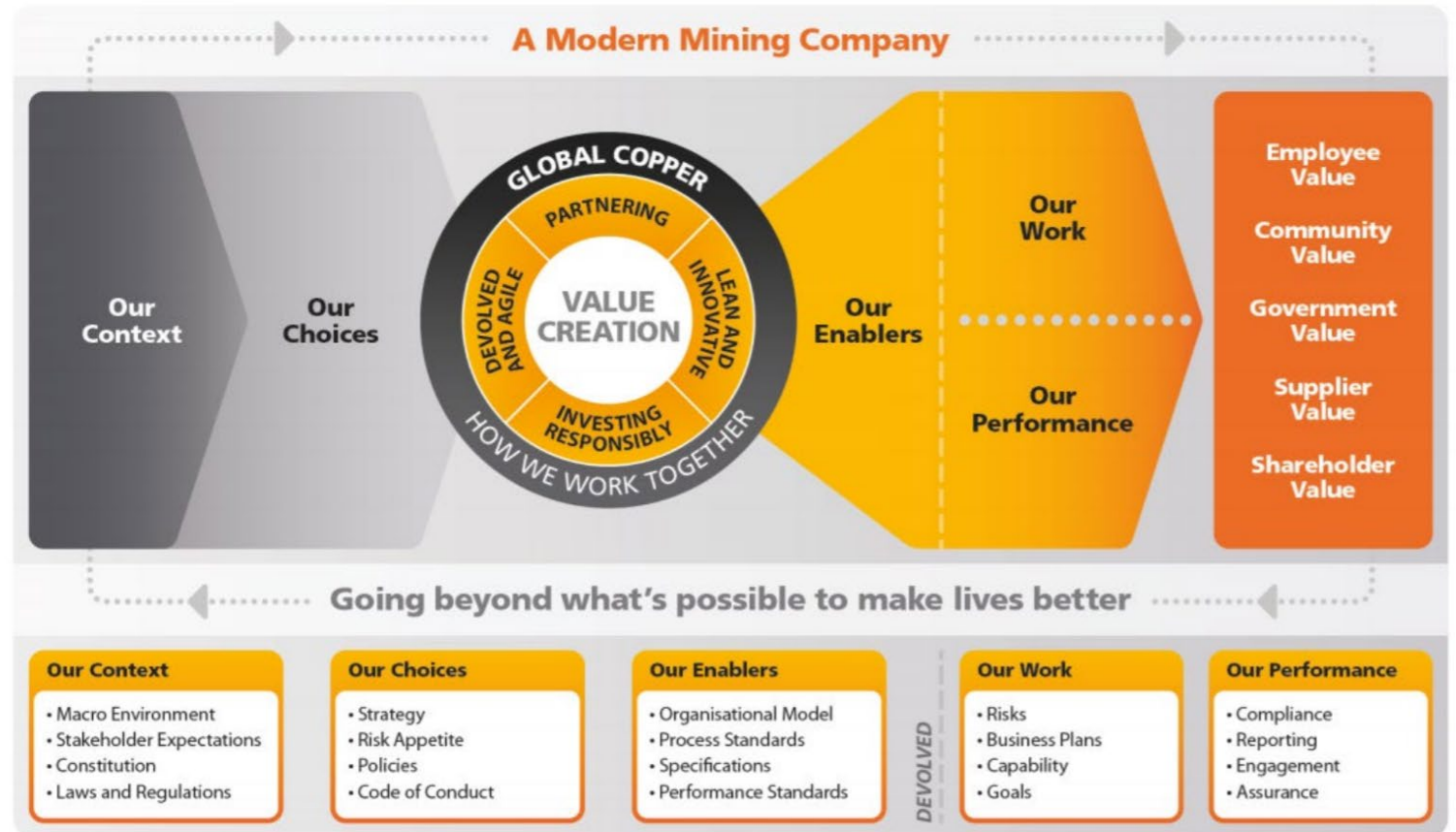
The OZWay

Innovation is a core strategic element and the OZWay empowers everyone to innovate

Transformation is an investment in longer horizon, disruptive opportunities that support accelerated achievement of our Strategy

We have developed an internal incubator and venture fund for internal and external access to increase experimentation and collaboration

The OZWay

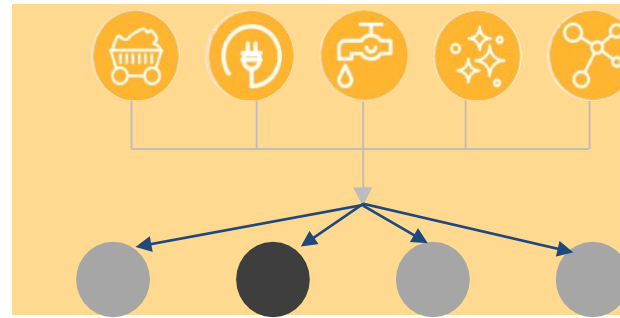


OZ Minerals

Process

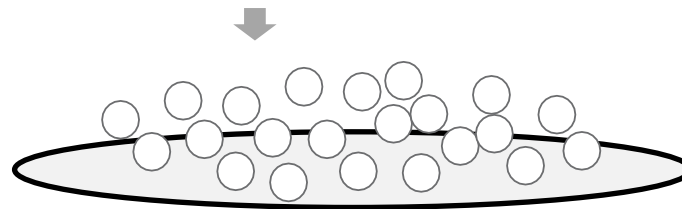
Think & Act Differently

TAD™ uses a simple process to access innovators, access leading technical expertise, use experiments as pathways to investment, develop capabilities and accelerate time to value



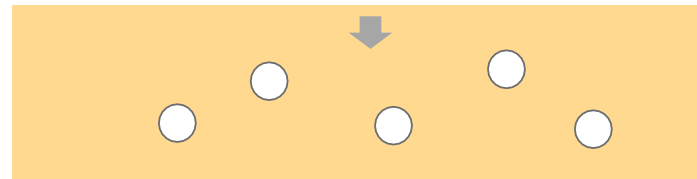
FRAMING

Identify and prioritise a Challenge (aligned to themes) which addresses threats and opportunities for OZ
Identify and prioritise transformation internal ideas (aligned to themes) that require acceleration



DIVERGENCE

Build a community of hundreds of innovators connected to the Challenge and receive submissions with ideas to address the Challenge



CONVERGENCE

Shortlist and select ideas (form challenges or internal ideas) which demonstrate high potential to create impact and value



ACCELERATE

Take selected ideas through the incubator to validate and test experiments in a safe environment to improve clarity on the innovation opportunity

OZ Minerals

Energy and Emissions – Hydrogen Hypothesis



OPPORTUNITY

- / Solar and wind cannot eliminate emissions on their own
- / Cost of green hydrogen forecast to fall

SOLUTION

- / Use green hydrogen to eliminate emissions from power generation and transport

BENEFITS

- / Hydrogen is dispatchable
- / Range and refuelling benefits for transport compared to batteries

FOCUS AREA

- / Building our network and learning
- / Reducing the cost of production and storage



/ 158 Participants



/ 35 Countries (every continent)



/ 10 Week Interactive Slack Conversation



/ 24 Submitted Ideas



/ 9 Finalists

OZ Minerals

24 Submissions from 15 Technology Categories

The Hydrogen Supply Chain Concept

- ✓ H2 Additive
 - ✓ Hydrogen Storage
 - ✓ Grid Optimisation
 - ✓ Onsite H2 Production
 - ✓ Hydrogen Engines
- ✓ Water and Waste
 - ✓ Digital Twin
 - ✓ Metal Extraction
 - ✓ Water Purification
 - ✓ Consultants
- ✓ Power Generation
 - ✓ Lighting Towers
 - ✓ Hydrogen Powered Drone
 - ✓ Steam Power
 - ✓ Hydrogen / Ammonia

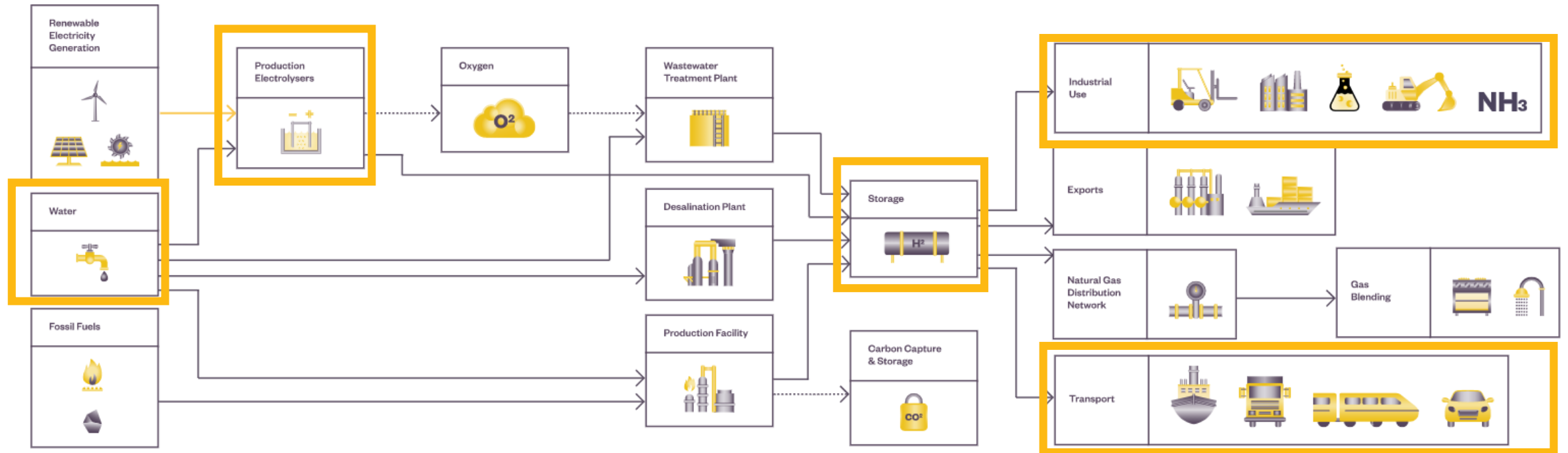


Image acknowledgements to SA H2H™ Hydrogen Technology Cluster

OZ Minerals

What's Next



HYDROGEN REDUCTION OF COPPER



HIGH TEMPERATURE ELECTROLYSER



HYDRILITE STORAGE SYSTEM



HYDROGEN POWERED LIGHTING TOWERS



HYDROGEN POWERED DRONE



ULTRA EFFICIENT CERAMIC ENGINE



HYDROGEN HIGHWAY

