



# BUSINESS OVERVIEW

A leading supplier of Blasting  
and Metallurgical Solutions

# Delivering Sustainable Future Fit Solutions

- Established in 1984, BME is a leading global manufacturer and supplier of explosives, related accessories and blasting services to the mining, quarrying and construction industries.
- Added to this is our mining chemicals and metallurgy solutions, client tailored to extract maximum value from ore while reducing costs and environmental impacts.

*"BME aims to be a globally trusted mining solutions provider by prioritising safety, sustainability, and continuous technological innovation. Through strong governance, community engagement, and a commitment to a carbon-free future by 2050, we are building a winning culture that not only empowers our clients, but our employees."*

# BME is a division of the Omnia Group

## PURSuing GROWTH FROM THE CORE AMMONIA AND NITROGEN VALUE CHAIN



# Mining segment overview

Delivering blasting technology and metallurgical solutions in Africa and beyond



## Africa

South Africa, Lesotho, ESwatini, Botswana, Zimbabwe, Namibia, Zambia, Mozambique, Tanzania, DRC, Sierra Leone, Guinea, Senegal, Mauritania and Mali

## International

Indonesia, Australia, USA and Canada

**1 720**  
employees

Across  
**18 countries**

**284**  
explosives customers

**70**  
chemicals customers

# A global and diverse leadership team

Extensive sector & technical knowledge



## Ralf Hennecke

Managing Director  
Mining Engineer, MBA



## Meagan Van Den Berg

Managing Director  
BME Africa (Blasting Operations  
and Metallurgy Global)  
*BSC. Mining Engineering, MBA*



## Deon Swart

Chief Operating Officer  
CA (SA)



## Dirk Voogt

General Manager:  
Production & Logistics  
*B.Engineering, Chemical*



## Nishen Hariparsad

General Manager:  
Technology & Marketing  
*Chemical Engineer, MBA*



## Cobus Meyer

Acting General Manager:  
Southern Africa Operations



## Lucy Dirole

Financial Director  
CA (SA)



## Agusman

General Manager:  
Indonesia  
*Civil engineer, Masters in  
Finance*



## Rakhi Pathak

Acting General Manager:  
Australia/ Asia  
*PhD, Organic Chemistry*



## Ramesh Dhoorgapersadh

General Manager:  
Global Operational Excellence  
*Industrial Chemist, MBA, PhD*



## Kasturi Adari

General Manager:  
Human Resources  
*Post Grad: Labour Law*



## Nelisile Thanjekwayo

Head of Legal  
*LLM, Commercial and business  
law*



## Lefa Masiuana

General Manager:  
BME Metallurgy  
*Chemical Engineer*



## Neil Alberts

General Manager:  
Americas  
*MPhil: International Business,  
MBA*

# We are a purpose-led business

Innovating to enhance life, together creating a greener future

**Food security**

**Critical mineral extraction**

**Economic growth**

## Our business impact on the world

**Increased food production capacities  
ensuring stable, productive food supply  
and combating global hunger**

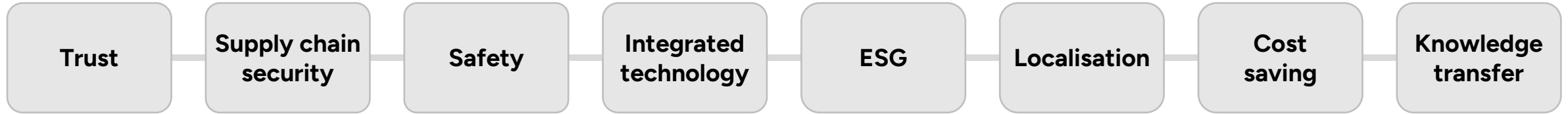
**Fostering innovation  
and sustainability in  
essential global industries**

**Enhanced economic stability and growth  
in regions of operation, improving living  
standards and  
fostering long-term development**



# Meeting customer needs throughout the mining value chain

Evolution of technologies continue to unlock new opportunities and drive value creation



**Innovative  
blasting solutions**



**Optimised  
extraction and yield**



**End to end  
product solutions**



**Transforming  
mining**





**bme**  
BLASTING SOLUTIONS



# WHAT WE DELIVER

Mining Explosives & Electronic Initiation Systems

# Consolidated product and service offering: Blasting Solutions

## SERVICES



### Products

- Axxis Detonators
- Axxis Wire
- Bulk Raw Material
- INNOVEX (Surface and Underground)
- INNOPAK
- INNOFEX
- Viperdet
- Boosters
- Traded packaged explosives
- Traded 3rd party Non-electric and Electric I.S. and Accessories



### Infrastructure and equipment

#### Surface

- MMU truck – Emulsion
- MMU truck – HA
- Stemming Truck
- LDV – Bulk
- Apex Plant
- Acid plant
- AXXIS blasting boxes and various other components

#### Underground

- Megacharger
- CCU
- ECU's
- Chargers
- Transfer cassette
- Filling Station – Rapid Emulsion Delivery System
- Vertical pipeline
- Closed Emulsion System
- CBS

#### Production infrastructure

- Mobile plants
- Water tanks
- Silos

#### Support structures

- Offices
- Fences



### People

#### Operations personnel

- Blaster
- Blaster Assistant
- Truck Operator
- Truck Assistant
- Site Manager
- Operations Foreman
- Priming Operator
- Administration person
- Blasting licence holders
- Magazine master

#### Technical personnel

- Blasting Technician
- Blasting Engineer
- Blast Optimisation head
- Blasting Technology Director



### Advanced technical services

#### Level 1

- Drill & Blast Audit
- Drill and Blast Investigation
- VOD Monitoring
- Vibration and Airblast Monitoring
- Fragmentation Analysis
- Blast Video Analysis
- 2D Laser Profiling
- **Blast Investigation**
- Borehole calipering
- Boretrak
- Reactive ground testing
- 3G Face Profiling
- UAV
- High Speed Video Analysis
- **Rock Response Testing (Tmin)**
- Regression analysis
- Blast design and predictions
- Survey Services

#### Level 2

- Green Field Design Projects (Consulting based)
- Blasting Impact Assessments
- Blast design and predictions (Project Based)
- Signature Hole Analysis
- Blastmap software training
- Blast Modelling
- **Burden Response Mine to Mill Projects**
- Blast performance optimisation (ore dilution, wall control, fragmentation opt, etc.)



### Software

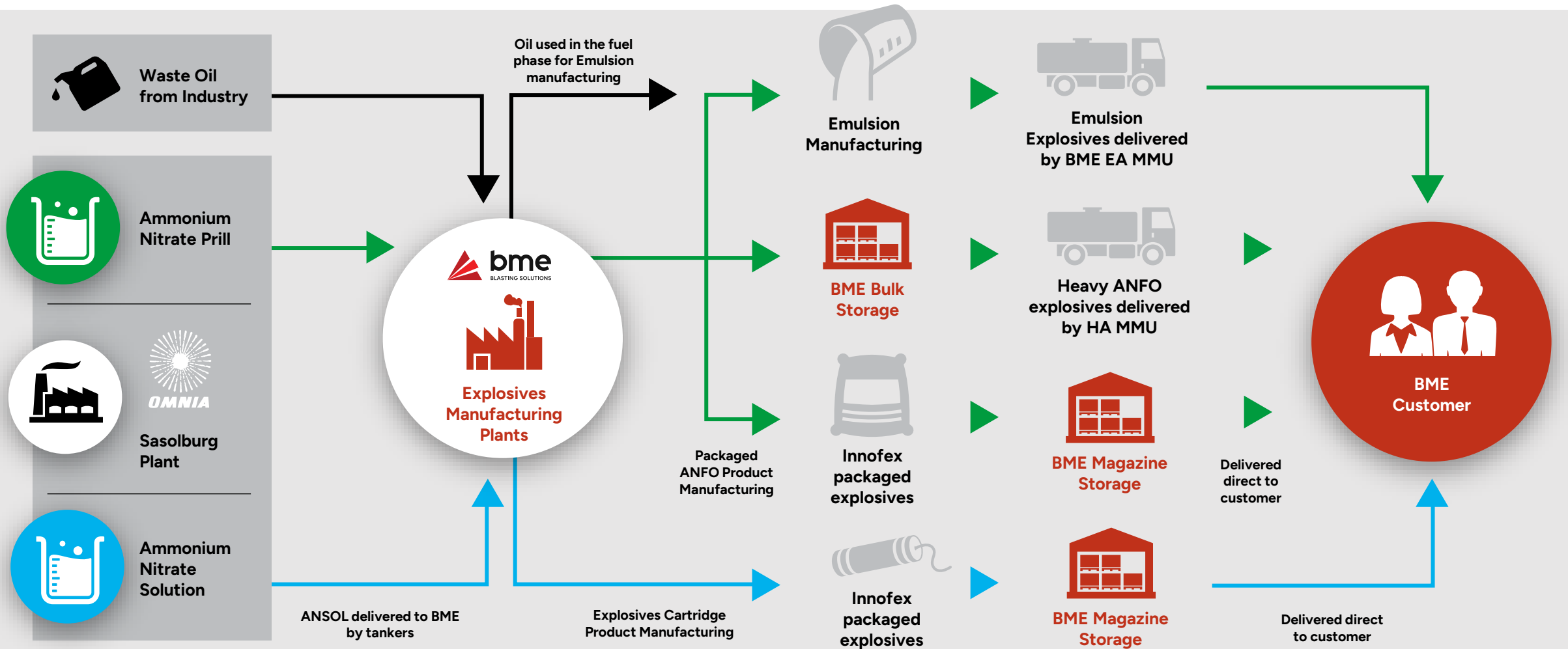
- BLASTMAP
- BLASTMAP Underground
- XPLOLOG
- XPLOCHARGE
- XPLOSMART
- Smart MMU
- BME Blasting Guide
- API development

## Unlocking value across the entire mining value chain: **mine-to-mill process**

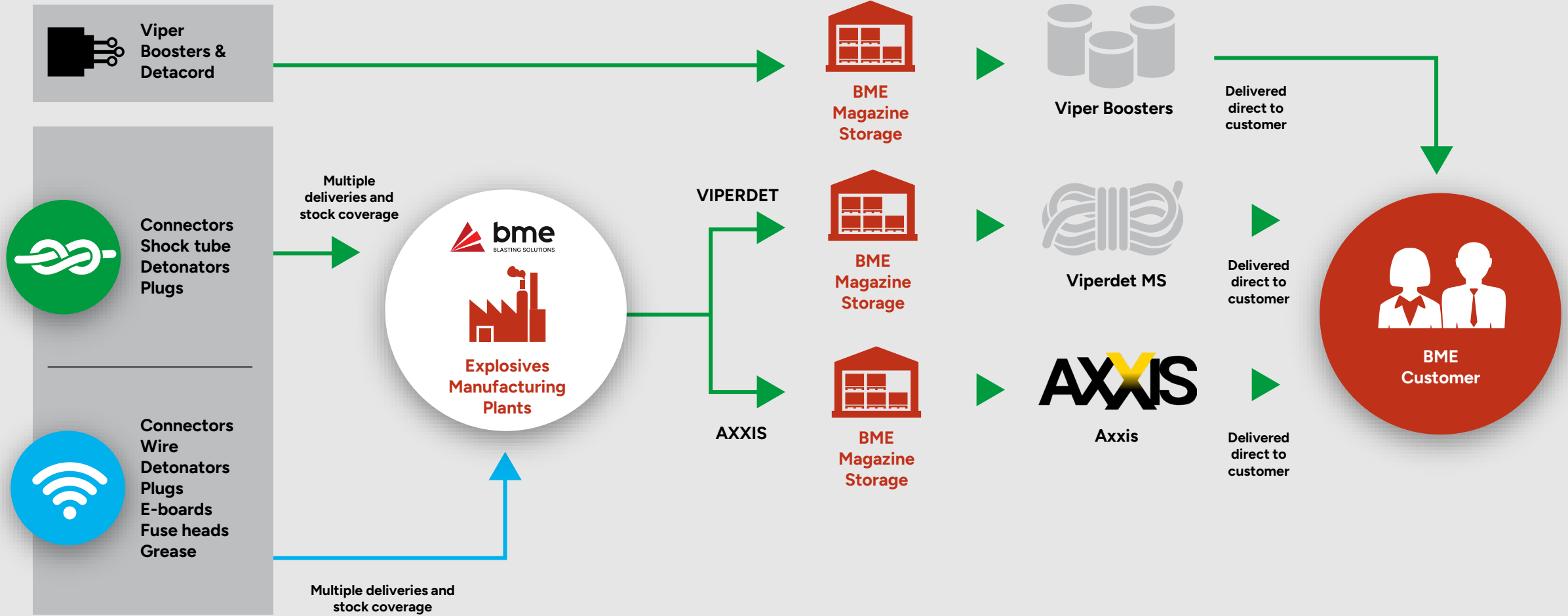


- **BME is investing in the next generation of digital technologies and solutions** as customers seek operational efficiencies across the mining value chain
- **Innovative solutions to** enhance mine yields & cost saving from blasting to mineral processing
- **Opencast market leader** – bulk emulsion & blended bulk explosives
- Proprietary **precision software & electronic detonators** – strong mining relationships & global presence
- **Dual salt emulsion** using less AN, requiring less electricity to produce and more stable
- Award-winning **used oil technology**
- Exemplary **safety record**

# Our value chain: BME explosives manufacturing



# Our value chain: **BME accessories manufacturing**



# Consolidated value proposition

Leveraging key technologies to drive growth and sustainable value

## Emulsion

System of technologies



## INNOVEX

Bulk emulsion systems

## Chemistry

Differentiated chemicals



## Emulsification

Unique analytical chemistry solutions

## Initiation System

Innovative benefits



## AXXIS

Enhanced precision and accuracy

## Manufacturing

Modular and Automated



## Manufacturing

Enabled assembly and quality systems

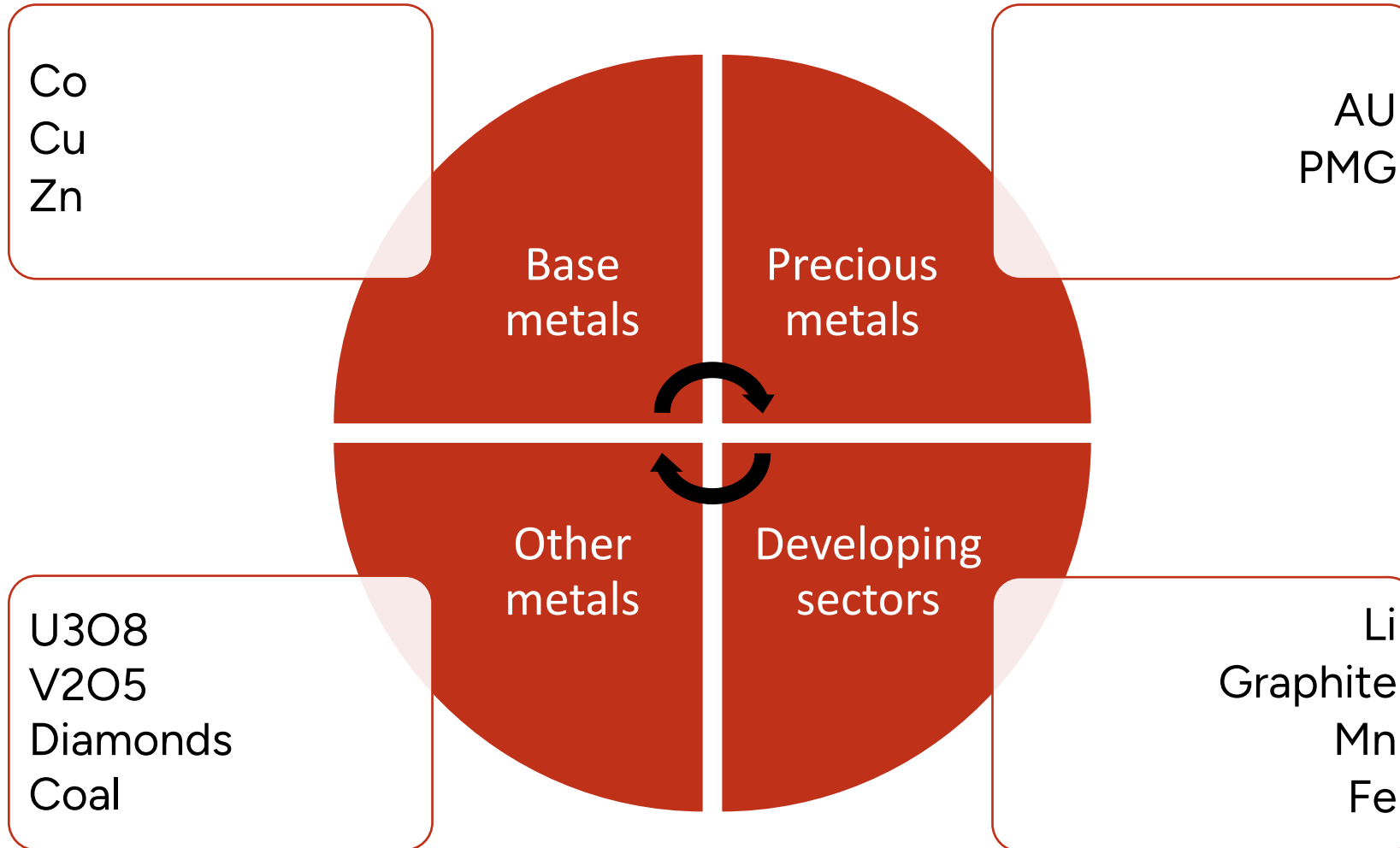


# WHAT WE DELIVER

Mining Chemicals & Metallurgy Solutions

## Mining Solutions - Mineral Sectors

We partner with global industry leaders in delivering innovative cost saving mineral recovery solutions



## Areas of support

Primary areas where we support clients in driving success, address challenges, and deliver value.

### Comminution



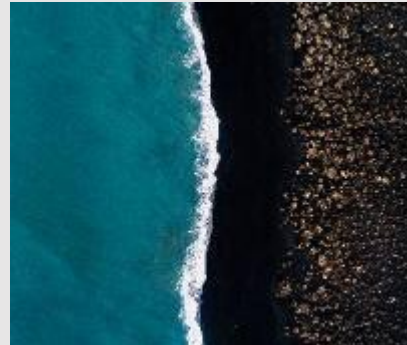
- Grinding media
- Lime

### Flotation



- Frothers
- Depressants
- Dispersants
- Collectors
- Activators
- Promoters
- Sulphidizers

### Solid-liquid separation



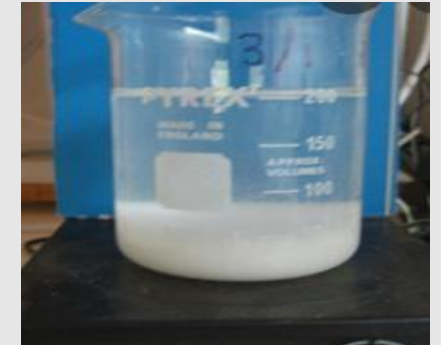
- Flocculants
- Coagulants
- Filter aids

### SX/EW



- Diluent
- Colloidal Silica Coagulant
- Smoothing agents
- Acid demister

### Precipitation



- MgO
- Lime
- Soda ash
- Caustic

## Areas of support

Primary areas where we support clients in driving success, address challenges, and deliver value.

### Adsorption



- Carbon blanking agents
- Activated Carbon

### Water Treatment



- Coagulants
- Biocides
- Corrosion inhibitors

### Leaching



- Acids
- Bases
- Hydrogen Peroxide
- Ammonia

### Support services



- Risk Mitigating Services
- Training
- Metallurgical support

### Analysis



- Lab analysis
- Flux formulations



# HOW WE DELIVER VALUE

SUSTAINABILITY

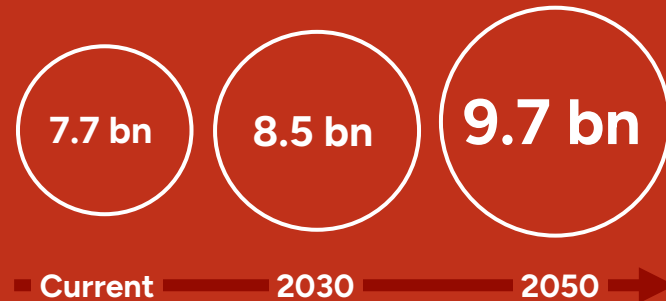
SECURITY OF SUPPLY

FIT-FOR-PURPOSE  
SOLUTIONS

# Sustainability: BME's solutions are positively aligned to global mega trends

## Factors driving demand for minerals

### Population growth



2050 urban occupancy projected at 68%, increasing the need for natural resources, infrastructure and industrialisation

### Decarbonisation

Global action towards



carbon emissions by 2050

Mining companies are looking to reduce Scope 1, 2 and 3 GHG emissions – BME's green tech solutions reduce emissions across the supply chain (Scope 3)

### Climate change and critical minerals



Markets for critical minerals used in green energy technologies are expected to expand sevenfold in the next decade

# Sustainability: ESG<sup>1</sup> goals to 2030<sup>2</sup>

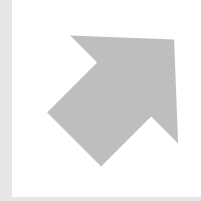
Defined objectives with solid performance against targets<sup>3</sup> up to 31 Jan 2023



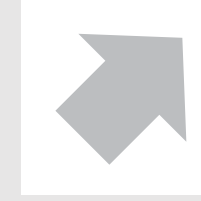
Energy



**20%**  
Absolute energy use  
*Achieved: 24%*



**15%**  
Renewable energy consumption  
*Achieved: 9%*

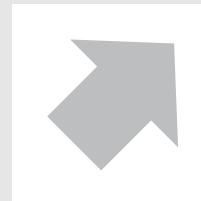


**25%**  
Energy efficiency  
*Achieved: 21%*

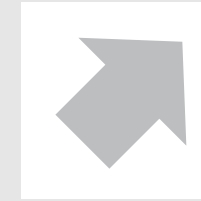
Water



**25%**  
Absolute water use  
*Achieved: 23%*



**20%**  
Water recycling  
*Achieved: 6%*



**15%**  
Water efficiency  
*Achieved: 21%*

Climate Change



**25%**  
GHG<sup>4</sup> emission  
*Achieved: 77%*

Safety, health  
and wellbeing  
of staff and  
communities



**50%**  
RCR<sup>5</sup>  
*Achieved: 67%*

# Sustainability: Strengthening our ESG commitment

Omnia's strategic intent is to move towards facing green & sustainable products and solutions



## Agriculture

- Nutriology® - **Nutrient and water use efficiency**
- **Ammonium Nitrate fertilizer** < carbon footprint than Urea
- **AgriBio** product range
- **Precision farming** technology



## Mining

- Dual salt technology
- **Used oil** as a fuel agent for emulsions
- **Precision blasting** technology solutions
- R&D of innovative **environmentally friendlier emulsion technology**
- Innovated processes for the **efficient extraction of minerals**



Indonesian Government  
Good Mining Practices



## Production & supply chain

- Reverse osmosis water treatment plant - **eases reliance on municipal water** consumption, and decreases effluent discharge
- World class EnviNox™ emission abatement technology - **reduces carbon footprint**
- **Solar installation** supplementing 25% – 35% of Sasolburg's electricity demand; investment to double capacity currently underway



## Chemicals

- HydroEnergy® – carbon reducing hydrogen fuel supply
- Sourcing of **green chemicals** and advisory on application



CAIA Responsible Care®



CFI Best Sustainable Diversified  
Chemicals group in Africa



## Sustainability: Green economy solutions



### ESG goal contributor

#### Used Oil & Recycling of Waste streams

- Conserves resources, eg diesel and water, used as alternative to diluents in fuel blend
- Mitigates environmental impacts of waste streams
- Improves safety, and reduction of costs



### Reduction in non-renewables

#### Dual Salt optionality

- Reduces environmental impact, producing less toxic fumes
- Reduction in nitrates in mine fills and
- Lower ammonia leaching charac...
- Lower manufacturing temperature reduces reliance on energy sources



### Decarbonisation imperative

#### Circular Economy contribution

- Reduction of waste into landfills;
- Prevention of soil contamination;
- Conserves resources, supplements
- Diesel reserves;
- Prevention of water contamination
- +/-20% contribution to the mineral economy of RSA;
- Boosts economy providing jobs from collection & transportation



### Future-fit product solutions

#### Nitrate Free, Eco Bulk Emulsion

- Eco Bulk solution – Nitrate free emulsion solution
- Alternative fuel > Carbon neutral fuel
- Elimination of ammonia and Nox fumes;
- Reduction of CO<sub>2</sub> gasses;
- Minimise dependency on ammonia and nitrate streams

# Decarbonisation: **green emulsion technology**

## Customer Value Proposition

No nitrogen	GHG
NOx fumes	90% now
No nitrate/ ammonia waste	100% possible
Decreases reentry time	

- HP emulsions have **no nitrate or ammonia byproducts**
- **Used Oil Inclusion** – contributes to circular economy and reduction of non renewables
- **Sustainable manufacturing** processes
- **Renewable energy** inclusion
- Reduces **environmental** impact
- Improves **Safety**



# Sustainability: SHERQ commitment to our stakeholders



Safety



for



life



**Safety  
for life**



- Improve SHERQ knowledge and awareness



- Improve:
- Technologies
  - Processes
  - Products



- Report openly
- Listen to workforce



- Co-operate with all stakeholders



- Safety plans
- Integrated Management Systems (IMS)



- ISO:
- Implementation
  - Integration



- Environmental plan
- Impact studies



- Waste Management Plan

# Security of supply: Supply chain capability

Omnia and BME have made significant investments into its manufacturing base



**Two Nitric Acid Plants**

Newest in Africa



**Nitrophos Plant**

CN



**Ammonium Nitrate Facility**

ANS + ANCN Solution



**Two Central Emulsion Plants**



**Two Automated AXXIS Electronic Detonator Plants**



**Cartridge Explosives Facility**



**Non-Electrics Assembly Plant**



**MMU Manufacturing and Assembly**



**Remote Emulsion Plants**

## Security of supply: Manufacturing competency

### Unique design efficiencies and low environmental impact, is a **strong competitive advantage**

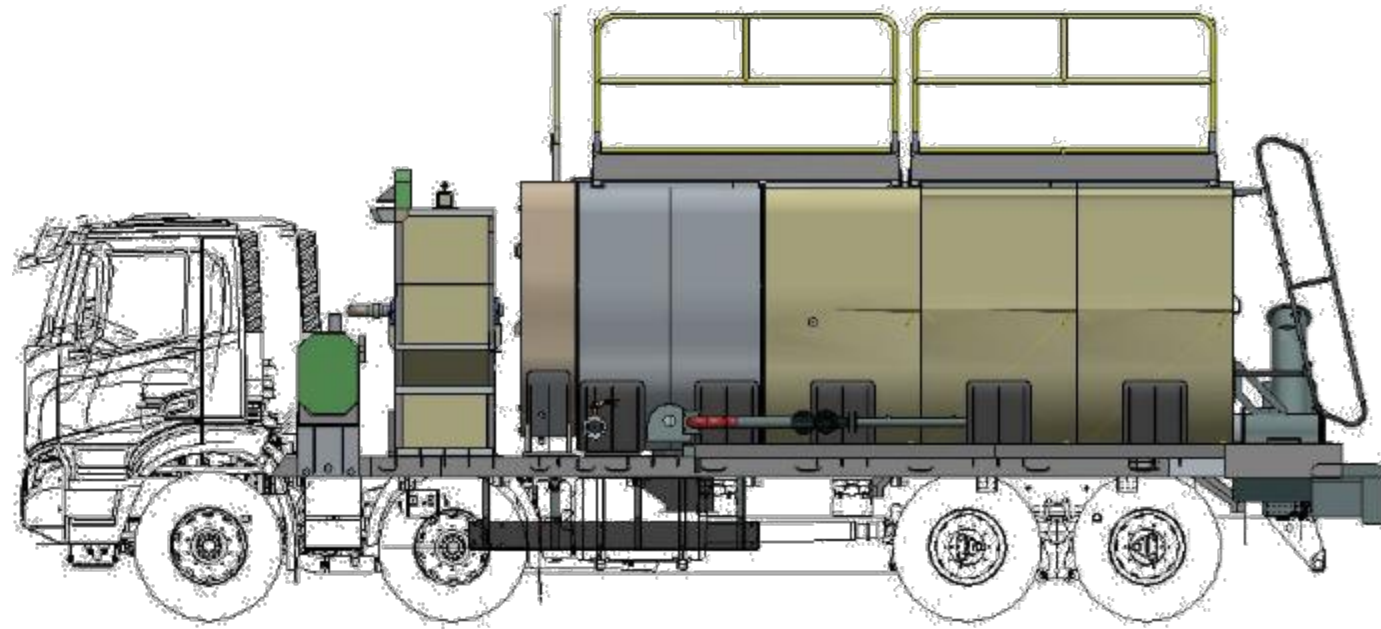
- Most modern Nitric Acid and AN product manufacturing plants in SADC1
- Leveraging granulation and Nitro phosphate technology
- EnviNox™ reduces emissions by > 90% generating carbon credits
- Solar installations ongoing
- Electricity co-generation can provide approximately 50% of the Sasolburg complex
- Sasolburg Manufacturing has a dual ammonia supply
  - Sasol pipeline supply
  - Imported ammonia supply (own rail tankers)
- Increase in downstream storage of nitrogen
  - Expanding additional Ammonium Nitrate Solution storage tanks
  - Nitrogen is stored in raw materials, Nitrophos powder, final products and at the Liquids facilities





## Differentiated mobile equipment strategy:

- BME has limited **variation in process design**:
  - Allows easier management of assets,
  - Control maintenance spend,
  - **Optimised control systems** for efficient management of control systems and easier adoption of BME's technology roadmap.
- BME's **standardisation of chassis** aid in maintenance and spares management of single OEM parts list.
- BME's MMU's are easier to redeploy to other customers provided **product solution and capacity requirements** are met. (not limited to regional technologies as others are.)
- BME has employed a consistent mixing technology (bar the homogeniser system) on the majority of its fleet allowing for BME to **affirm product quality as consistent across all customers** (respective of product type E vs HA).



## Security of supply: **agility, supplier diversification and product mix**



## **Offsets the risk** in current and future volatile commodity markets

- Robust supply chain to navigate supply and demand of key raw materials through:
  - Sector based seasonal analysis
  - Logistics management
  - Technology
  - Supplier diversification
  - Long term agreements
- Sophisticated supply chain management, own infrastructure
- Security of supply to customers maintained though leveraging alternative suppliers for key inputs
- Supply chain finance program



## Value add: In-house dedicated development & manufacturing



## In-house hardware and software Development Team

- Global partners with dedicated blast technology experience
- In-house and dedicated software and hardware development
- 6x dedicated developers
- 8x electronic and electrical engineers
- Dedicated network support engineers
- Dedicated quality and certification management

# Fit-for-purpose solutions: **Variable cost improvements**



## **INNOVEX™**

### **INNOVEX differentiator**

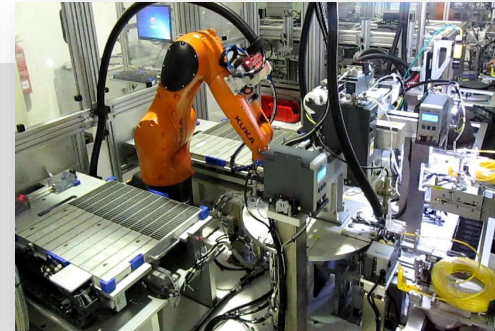
- Dual salt technology lowering impact of AN fluctuations
- Used oil inclusion lowering cost of fuel diluents
- In house emulsification technology providing lower cost of product



## **AXXIS™**

### **AXXIS Precision & Accuracy**

- Larger blasts (200,000 holes) = more benefits, relieves pressure points within mining value chain
- Predictable outcomes, fragmentation allows for more material through crusher = improves production
- Predictable muck piles reduces dependency of energy and drives efficiency and cost improvements



## **BME Manufacturing**

### **Automated Manufacturing**

- Improved first pass efficiency improves cost to manufacture
- Automated systems improves quality and lowers burden rates
- Reduced reliance on people resources,
- Efficient manufacturing processes



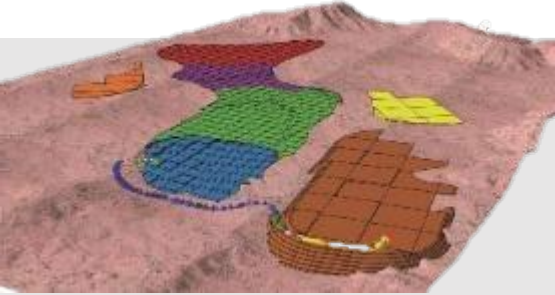
## **XPLOLOG, XPLOCHARGE, XPLOSMART and BLASTMAP**

### **Ecosystem of Technologies**

- Informed decision making through an integrated product offer
- Productivity and utilization of systems;
- Increase data points for statistical process control
- Increased blast accuracy and safety while reducing errors and wastage of critical products.



# Fit-for-purpose solutions: 'Glocal' Technical Services Delivery



## Global Technical services allocation of resources

- Regional TS managers in place
- Dedicated TS Engineers per site
- 4x Senior Technical Specialists in RSA
- 11x Technical Specialists
- Fragmentation and Blast Analyst in place
- Dedicated Reactive Ground Support (Field + lab)

## Regional Product support managers dedicated per region/Customer

- Dedicated team of field support and Field technicians per region allocated
- Equipment and product support
- Maintenance servicing and repair model developed
- Global allocation of resources across various business units

## Blasting Science

- Global Manager Blasting Science - >40years experience
- >10 papers and case studies published at ISEE and SME
- Dedicated PhD chemists with extensive experience in emulsion technologies
- Extensive Blasting and Mining Engineers with significant field experience

## Level 1

- Drill & Blast Audit
- Drill and Blast Investigation
- VOD Monitoring
- Vibration and Airblast Monitoring
- Fragmentation Analysis
- Blast Video Analysis
- 2D Laser Profiling
- **Blast Investigation**
- Borehole calipering
- Boretrak
- Reactive ground testing
- 3G Face Profiling
- UAV
- High Speed Video Analysis
- **Rock Response Testing (Tmin)**
- Regression analysis
- Blast design and predictions
- Survey Services

## Level 2

- Green Field Design Projects (Consulting based)
- Blasting Impact Assessments
- Blast design and predictions (Project Based)
- Signature Hole Analysis
- Blastmap software training
- Blast Modelling
- **Burden Response**
- **Mine to Mill Projects**
- Blast performance optimisation (ore dilution, wall control, fragmentation opt, etc.)

# Collaborating for positive change

Building resilient communities by addressing social challenges together

## Food projects



### Partnering with Reel Life Food Garden Project

- Promoting food security
- Innovative garden in a box
- Feeds a family of four for a year
- ~10 000 households supported

### Zamdela Community Food Project

- Developing agriculture entrepreneurs
- Supported 10 co-operatives, predominantly women



## Investing in education



### Partnering with Primestars and Youth Start Foundation

#### Educate

- Improving maths and science for Grade 12 learners
- Leveraging cinema and WhatsApp based learning
- Delivered 26 928 learner engagements



### Omnia Future Fund

- Education fund, for children of Omnia staff
- R4 million paid for school fees

### Education for Women in STEM

- R5 million (FY24) committed supporting bursaries, internships and mentorship opportunities

# Our commitment to inclusive social and economic development

## Procurement programmes

### Core

- Staff transportation
- Motor vehicle maintenance and repairs workshop
- Used oil bulking
- Motor vehicle wash bay



### Non-Core

- Office Consumables
- Building Maintenance
- PPE
- Laundry services



## Social programmes

### Education

- Grade 12 Maths and Science Revision
- Grade 8 to 11 Green Youth Entrepreneurship
- Bursaries for women in STEM <sup>1</sup>

### Food Security

- Household Food Gardens <sup>1</sup>





Reg No. 2006/013996/07

**Head office**

**Physical address**

Omnia House  
Building H  
Monte Circle Office Park  
178 Montecasino Boulevard  
Fourways  
Sandton  
2191

**Postal address**

PO Box 69888  
Bryanston  
2021  
Gauteng  
South Africa

Telephone +27 11 709 8888

Email [info@bme.co.za](mailto:info@bme.co.za)

[www.bme.com](http://www.bme.com)

