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# ZAMBIA MINE SAFETY



**P.G 04...VISION AI FOR ASSET RELIABILITY: CONVERTING UNTAPPED VISUAL DATA INTO UPTIME, SAFETY, AND MEASURABLE ROI**

October  
6-10, 2025

**ZAMBIA**  
MINING AND INVESTMENT  
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At Mulungushi International  
Conference Center, Lusaka, Zambia

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Digital **Safety**, Real-Time  
Decisions: Modernising **Zambian**  
Open-Pit Operations

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# VISION AI FOR ASSET RELIABILITY: CONVERTING UNTAPPED VISUAL DATA INTO UPTIME, SAFETY, AND MEASURABLE ROI

**A**cross sub-Saharan Africa, mines and minerals processors are under pressure to improve plan-to-actual adherence, reduce unplanned downtime, and lift safety performance, often with ageing assets, skills shortages, and uneven connectivity. DGC Africa's Vision AI for Asset Reliability transforms existing optical and thermal camera networks into a 24/7 intelligent monitoring layer that detects anomalies earlier, prioritises interventions, and, where authorised, automates protective actions. Documented results across comparable industrial deployments include 3–5% yield improvement, ~10% downtime reduction, ~3% energy savings, 95%+ detection precision, 10× more relevant anomalies surfaced, and 1:5+ first-year ROI.

**The reliability gap: thousands of cameras, almost no analysis**  
Industrial sites often operate hundreds of cameras, yet less than 1% of captured video is ever analysed. Human observation is limited by shift length and attention; point sensors provide depth but lack visual context. The consequence is predictable: late detection, reactive maintenance, and avoidable safety exposure.

Vision AI closes the gap by continuously analysing streams from optical and thermal cameras, learning normal operating patterns, and elevating only material deviations—complete with video evidence, location, severity, and trend context.

**What Vision AI for Asset Reliability is — and how it works**  
DGC Africa's solution combines computer vision, thermal analytics, and edge processing with open integration to plant systems.

## Core capabilities

- Continuous visual analytics (24/7) across hot, dusty, vibration-prone zones where human rounds are risky or infrequent
- Model-based pattern recognition that distinguishes normal process cycles from true anomalies
- Risk-prioritised alerting via control room HMI, email, SMS, or WhatsApp to eliminate noise and accelerate decisions
- Optional machine integration to slow/stop conveyors, interlock feeders, or trigger safety actions when thresholds are crossed
- Edge + cloud architecture for low-latency detection even on limited-connectivity sites, with secure dashboards for trend review
- Open protocols (e.g., OPC-UA) for interoperability with SCADA/PLC/DCS without costly rip-and-replace

## High-impact use cases in mining and minerals processing

### Equipment monitoring: towards zero unplanned downtime

- **Conveyor health:** progressive crack/tear tracking from first abrasion; severity escalation tied to load and duty cycle
- **Thermal integrity:** kiln and furnace shell profiling, refractory hot-spot detection, switchyard thermal exceptions
- **Rotating equipment oversight:** visual cues of misalignment, abnormal vibration proxies, lube leaks, seal failures

### Material monitoring: quality, throughput, and Net Zero alignment

- **Granulometry:** continuous particle size distribution for ore, sinter, coke, and coal to stabilise downstream circuits
- **Moisture and contamination:** IR-assisted moisture estimation; foreign object detection to protect crushers and mills

- On-belt quality control: fines/undersize rates, oversize excursions, and blending adherence in real time
- Process and safety monitoring: zero-incident ambition
- Big-rock detection pre-crusher with interlock options to prevent jams
- Restricted-zone intrusion and PPE: automated compliance oversight in high-risk areas
- Casting/ladle monitoring: flow anomalies, slag carryover indicators, and bay-level safety envelopes

#### Quantified business outcomes

- **Throughput and yield:** 3–5% improvement via tighter process control informed by real-time visual data
- **Asset availability:** ~10% reduction in downtime through early detection and planned interventions
- **Energy intensity:** ~3% reduction through thermal optimisation of kilns, furnaces, and auxiliary systems
- **Operational focus:** 95%+ precision in anomaly detection and 10× more relevant issues surfaced than manual inspection—without alert fatigue
- **Financial return:** portfolios report 1:5 or better ROI in year one, compounding as models learn and scope scales

#### Field vignette: conveyor failure prevented by progressive monitoring

A large open-pit operation faced recurring belt rips. Vision AI flagged faint abrasion lines on Day 1, escalated severity as growth accelerated by Day 4, and issued a high-severity alert on Day 7 with precise belt coordinates and progression graphs. Maintenance executed a controlled splice during planned downtime. The site avoided a catastrophic rip, multi-shift production loss, and emergency repair premiums—paying for the pilot within weeks.

#### Why DGC Africa: implementation that works in African conditions

- **115+ years of industrial execution** in smelting, minerals processing, cement, and power—translating analytics into timely, competent action
- **Pan-African delivery** across South Africa, Zambia, DRC, Zimbabwe, and Madagascar for rapid mobilisation and local compliance
- **Integrated asset-integrity ecosystem**—condition monitoring, oil analysis, mechanical services, industrial

linings, shutdowns—so insights flow into work orders and get closed out

- **Brownfield-ready architecture** with rugged hardware, edge analytics, and staged integrations suited to dust, heat, and patchy networks
- **Change enablement** through operator training, supervisor playbooks, and KPI governance so the system is used—and trusted—on the floor

#### Governance and KPIs: making value visible and auditable

- **Leading indicators:** detection-to-intervention time, hot-spot dwell time, crack-growth rate, big-rock near-misses avoided
- **Reliability metrics:** MTBF/MTTR improvements, planned vs. unplanned work mix, maintenance schedule adherence
- **Production and energy:** yield variance, specific energy consumption, rework and scrap rates
- **Financials:** avoided downtime hours, avoided damage events, payback and ROI tracked by use case

#### Implementation with minimal disruption

**Phase 1 — Assess and prioritise:** site survey of camera coverage and connectivity, value mapping to pinpoint the highest-impact lines, kilns, bays, or switchyards; business case and roadmap agreed

**Phase 2 — Deploy and integrate:** plug-and-play rollout for the first use cases in under a week; secure dashboards live; optional SCADA/PLC/DCS hooks; operator and supervisor training

**Phase 3 — Optimise and scale:** model tuning, alarm rationalisation, and expansion to adjacent processes; quarterly value reviews

Vision AI has moved beyond promising pilots to become a practical reliability lever for African heavy industry.

By converting under-analysed visual data into precise, context-rich signals, DGC Africa enables earlier interventions, safer operations, and steadier throughput, without demanding rip-and-replace investment or perfect connectivity.

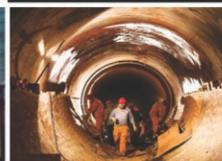
The combination of 24/7 coverage, plant-specific learning, and integration with proven asset-integrity services is what changes outcomes: fewer surprises, lower total cost of reliability, and a sturdier path to plan adherence in some of the world's most demanding operating environments.

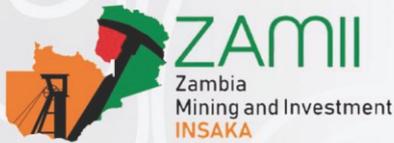


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# MINING INSAKA TO FORGE INDUSTRY LINKS

The much-anticipated Zambia Investment and Mining Insaka (ZAMII), a key gathering for the nation's mining sector, has been scheduled for 6th to 10th October 2025, officials have confirmed.

The event, designed to bridge the gap between large mining houses and smaller enterprises, will be held at the Mulungushi International Conference Centre in Lusaka and is expected to draw hundreds of local and international industry players.

Mines and Minerals Development Permanent Secretary Dr.Hapenga Kabeta, described the Insaka as a critical platform for creating business linkages that drive the sector forward.

*"The Zambia Investment and Mining Insaka is an opportunity for players in the mining sector such as suppliers to link up with mining firms," Dr.Kabeta stated. "Small scale mining firms, both local and international, can create linkages through this window of opportunities for all stakeholders."*

He further emphasized the government's view that the private sector is the engine of the nation's economic progress, describing its involvement as "a gateway to Zambia's development." The five-day conference is positioned to be a hub for deal-

making, networking, and knowledge exchange. For local suppliers and small-scale miners, it represents a direct channel to engage with the major corporations that form the backbone of Zambia's economy.

**ZAMII**  
Zambia Mining and Investment  
INSAKA

**6<sup>TH</sup>-10<sup>TH</sup> OCT 2025**  
LUSAKA, ZAMBIA

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# DONALDSON UNVEILS CONTURA PULSE CONTROLLER WITH BUILT-IN ICUE™ TECHNOLOGY FOR EFFICIENT DUST COLLECTION

*Donaldson Filtration Solutions has launched the Contura Pulse Controller, a dust collector control system with built-in iCue™ Connected Technology. The integrated design streamlines connectivity, enabling real-time data tracking, performance optimization, and proactive maintenance to boost equipment efficiency.*

**D**onaldson Filtration Solutions, a leading worldwide provider of innovative filtration products and solutions, is launching the Contura Pulse Controller. This new dust collector control solution has iCue™ Connected Technology built in, strengthening Donaldson's position as a global leader in filtration solutions.

The Contura Controller is designed to simplify connectivity and help customers improve equipment performance. Embedded iCue technology in the controller provides an integrated solution for data tracking, performance optimization, and proactive maintenance.

Donaldson's iCue Connected Technology is a monitoring system that collects and analyzes data from industrial dust collectors to help facilities operate efficiently. Using integrated sensors and a secure cloud-based platform, the system can help customers track critical performance indicators and provide them with real-time insights via an intuitive online dashboard. With this technology, Donaldson

customers can leverage real-time data and analytics to support uptime, maintenance efficiency, and help manage their operations' critical compliance data.

***“Making iCue connectivity standard on our dust collectors through the Contura launch reinforces our commitment to delivering innovative, customer-centric technologies that help users operate efficiently,” said Mauricio Goes, Vice President of Industrial Air Filtration at Donaldson. “We're excited about how this advancement supports uptime and decision-making across multiple facilities.”***

Initially available on select dust collector models in Europe and North America, the Contura Controller marks the first step in a phased rollout which will extend to additional equipment and regions over time. This launch is a key milestone in Donaldson's broader strategy to deliver innovative, connected filtration solutions to support evolving customer needs and operational expectations.



# ULTRA-DURABLE STAINLESS-STEEL SUBMERSIBLE PUMPS



The pump's lightweight modular design allows it to be installed vertically, horizontally or inclined, which makes it adaptable to a variety of borehole and tank installations. What really makes the CORAChrom unique is its wide power compatibility. It can operate on both single and three-phase AC power and is also available in DC solar-ready options, which are proving especially valuable in off-grid or energy-constrained areas."

"Our CORAChrom pumps are capable of delivering flow rates of up to 12 m<sup>3</sup>/h (200 litres per minute), with maximum heads of 638 m at 50 Hz (2900 rpm) or 780 m at 60 Hz (3500 rpm). Motors are available up to 22 kW, depending on model and application. This is tested and certified in our global manufacturing sites where each pump undergoes rigorous hydraulic testing under ISO 9906 Grade 3B standards verifying its real-world efficiency," says Hugo.

**KSB CORAChrom series is already gaining traction across multiple sectors with successful deployments in:**

- Borehole-based irrigation for farms and smallholdings
- Garden and nursery watering systems
- Domestic water supply in rural or peri-urban housing developments
- Dewatering and groundwater management in construction and mining
- Pressure boosting and cooling water systems in commercial and industrial buildings

Du Plessis notes that in drought-prone areas such as the Northern Cape, Karoo and North West, where boreholes may be drilled to depths exceeding 500 m and access to reliable electricity remaining a challenge, the solar-ready DC models have proven to be game changers.

***"These pumps deliver excellent output per watt-peak (Wp), even in low-light conditions, which makes them ideal for solar applications. It's part of KSB's commitment to sustainable water access and long-term value for our customers," he says.***

As with all KSB products, the CORAChrom range is backed by KSB's extensive South African sales and service network with expert support and technical backup available through its nationwide branches and distributors.

**K**SB Pumps and Valves has launched a rugged stainless-steel submersible pump range designed for deep borehole use and other demanding freshwater and saline pumping applications.

The new CORAChrom pumps are a gamechanger for African conditions with all wetted components including the diffusers being fabricated from corrosion resistant high-grade AISI 304 stainless steel or a choice of stainless steel or engineered polymer impellers depending on the environment. This ensures the longest possible operational life even in mineral-rich or aggressive groundwater.

According to KSB Pumps and Valves area manager, Hugo du Plessis, the CORAChrom series is available in 100 mm (4") and 150 mm (6") multistage centrifugal variants and is tailored to cope with the kind of variable borehole conditions and challenging water chemistry commonly encountered in South Africa and across the continent. This includes high iron or salt content, variable water tables and unreliable electricity supply especially in rural areas.

Unlike traditional cast iron or bronze pumps that may degrade or clog over time the new KSB CORAChrom submersible pumps use investment-cast stainless steel for key components such as the suction housing and non-return valve. The range also features integrated intermediate bearings and a counter-thrust ring to support axial loads and extend bearing life and further enhance reliability.

# MAAMBA SIGNS 100 MW SOLAR DEAL AND NAVA GLOBAL PTE LTD SIGNS \$300MN AGRO DEALS WITH GRZ



**T**he Government of Zambia has formalised a partnership with Maamba Solar Energy Limited to implement a 100 MW solar power project at Maamba, Sinazongwe District.

The signing ceremony, held at the Mulungushi Conference Centre in Lusaka, brought together key stakeholders including the Ministry of Energy, Zambia Development Agency (ZDA), ZCCM Investments Holdings and Maamba Solar Energy Limited (MSEL). Two key agreements were executed at the event, the Implementation Agreement (IA) and the Investment Promotion and Protection Agreement (IPPA), providing the legal and operational framework for the project's rollout.

Speaking at the signing ceremony, Ministry of Energy Permanent Secretary – Electricity, Eng. Arnold Simwaba said: “We are now diversifying, investing in different technologies like solar. We have just witnessed the signing of 100 MW of solar energy to be installed in Maamba.”

The solar facility will feature advanced technology, including bifacial solar modules, single axis tracking systems, and a 330 kV substation built to international standards. Once operational in 2026, it will deliver clean, reliable, and affordable electricity to households, industries, and businesses across the country.

Maamba Solar Energy Director, Mr Ashwin Devineni, highlighted the project's strategic importance: “This 100 MW solar project is a critical step in diversifying Zambia's energy mix. We are looking to help solve the load-shedding problem. We're already generating 300 MW, with another

300 MW coming on stream next year. The 100 MW solar should also be ready in nine months' time.”

ZCCM-IH chairman Mr Phesto Musonda expressed enthusiasm at being part of this transformative initiative to augment Zambia's power capacity, noting that the impacts of load shedding that are being felt by all citizens will be mitigated by the projects that Maamba is executing.

“We all know that the load-shedding has affected each and every one of us. What you see today is really a result of the call by government for all those companies, individuals who have the capacity to invest in power,” Mr Musonda stressed.

During the ceremony, Nava Global Pte Ltd also signed agreements with the Zambia Development Agency (ZDA) for its investments in Luapula Province, which include Nava Avocado and Kawambwa Sugar Limited (KSL). The company is investing more than US\$300 million in these projects. Once fully developed, the avocado farm is expected to produce 25,000 metric tonnes a year, making it one of the largest avocado projects in the world. KSL's Sugar Project will cover 5,000 hectares of sugarcane, with a sugar factory that can process 3,500 tonnes of cane per day, a 20 MW power plant that runs on bagasse, and a distillery that uses molasses.

***“Of course, this signifies the fact that investment climate in this country is at its highest and of course top of the agenda. We are so happy that just a few days ago we launched the groundbreaking for the 100 MW Solar Project. Now we are talking about the avocado farm block and sugar,” said ZDA Director General, Mr Albert Halwampa.***

The Maamba solar initiative complements the existing 300 MW thermal power plant operated by Maamba Energy Limited, whose Phase II expansion will double capacity to 600 MW by 2026.

Together, the solar and thermal power plants will contribute nearly 700 MW to Zambia's national grid, reinforcing the country's position as a regional energy hub in Southern Africa.

The Maamba Solar initiative offers a home-grown solution, enhancing long-term energy security while supporting growth across key sectors such as mining, agriculture, manufacturing, and services.



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## CONSULTING

## DIGITAL SAFETY, REAL-TIME DECISIONS MODERNISING ZAMBIAN OPEN PIT OPERATIONS

### Building Safer Mines for Zambia's Copper Boom

Zambia's mining industry is poised for rapid growth. With production targets set to rise from 820,000 tonnes in 2024 to one million tonnes in 2025, and three million tonnes annually by 2031, the country is positioning itself as a global leader in copper production. But scaling production brings complexity. Larger fleets and deeper pits mean higher operational risk.

In this fast-moving environment, safety management can no longer rely on end-of-shift reporting or paper-based systems. Real-time safety management

is essential to keep both workers and production safe.

#### The Hidden Risks of Manual Safety Systems

Traditional safety processes depend on handwritten inspections and delayed reporting.

By the time hazards are identified, it's often too late to prevent disruptions.

This means:

- Missed early warnings of equipment or environmental hazards,
- Reactive, rather than preventive, interventions,

- Stoppages that cost both time and tonnes.

In open-pit operations, even short delays can have a major impact on productivity and crew safety.

#### A National Step Towards Digitalisation

As Zambia's copper industry continues to expand, its ability to integrate modern safety practices will be a key determinant of long-term success. Mines that adopt real-time, digital safety systems will be better positioned to scale without sacrificing the well-being of their workforce or the integrity of their operations.

The government's Zambia Integrated Mining Information System (ZIMIS) is a major step forward.

By digitising reporting and compliance processes, ZIMIS is laying the foundation for a modern, accountable mining sector that attracts international investment.

Mineware Consulting's Safety Suite complements this initiative by giving mine operators the tools to act on safety data within the same shift—not days later.

**Mineware Safety Suite: A Proactive Approach**

Mineware's Safety Suite transforms how mines approach safety by embedding it into production planning.

- **Mapped Safety Checks:** Critical risk areas—like haul road conditions or PPE compliance—are built into every inspection, ensuring the right risks are tracked.

- **Automatic Follow-Ups:** When a risk is flagged, corrective actions are generated immediately, keeping crews protected and production running.

- **Clear Compliance Records:** Every step is digitally captured, creating a full, auditable record for regulators and investors.

- This approach empowers supervisors to fix problems before they escalate, supporting both worker safety and production efficiency.

**The Bigger Picture for Zambia**

As Zambia pushes towards its ambitious copper production targets, safety will play a decisive role in shaping the country's international reputation.

Mines that can demonstrate safe, sustainable growth will be better positioned to attract investment and long-term partnerships.

Digital safety systems like Mineware's deliver a dual advantage:

1. **Protecting people and assets,**
2. **Ensuring operational stability and predictable output.**

**Partnering for the Future**

Mineware Consulting has a proven track record of supporting mines through complex transitions.

With expertise in safety and production software, Mineware is ready to work alongside Zambian operators to modernise safety systems and help achieve the country's bold growth goals.

**Contact: Mineware Consulting**  
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**Email: [info@mineware.co.za](mailto:info@mineware.co.za)**  
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## **MINE SAFELY WITH GRINDING TECHNIQUES AND KEEP THE ABRASIVE EDGE**

**T**he process of extracting valuable and useful minerals from the earth is fraught with danger. Not only is the mining and extraction process potentially hazardous, but the working environment itself and the sundry processing of materials may pose a threat too.

Abrasive products such as cutting and grinding discs are essential to the mining process. Be it for cutting pipe sections, grinding and blending welds, or cutting of concrete slabs – the humble angle grinder has become part and parcel of the process.

With focus on improving safety of cutting and grinding applications, Grinding Techniques carry two specific products within the Superflex range.

### **The Dual Purpose Cutting and Grinding disc, and the Superflex Cool cut.**

The Cut-Grind disc specifically designed to replace traditional unsafe practices of using cutting discs for cleaning out welds, is classified as a Type 27, being safe to operate as both a cutting and light grinding disc, effectively reducing a

two-step process, to only one.

For a product that lowers operator fatigue, the Superflex “Cool” disc speeds up operation and reduces application vibration and temperature on application resulting in reduced overall downtime.

With advances in grain, bond and reinforcing technology, along with constant research and further development, our abrasive products will continue to provide a safer working condition, with emphasis on enhancing efficiency.

As a local manufacturer, we are proud to carry the oSa certified mark – only awarded by the Organisation for Safety in Abrasives to those passing the strict admission criteria, which ensures that products undergo rigorous testing and approval processes, with operator safety at the top of the list.

Being a preferred industry partner since 1981, we pride ourselves on bringing only the best to the industry, with added value of being able to offer custom solutions to almost any abrasive application.



## KONKOLA COPPER MINES COMMENCES \$63 MILLION PUMP STATION PROJECT AT KONKOLA DEEPS MINING PROJECT

**K**onkola Copper Mines (KCM) Pic has engaged Mancala, an Australian mining expert in the construction of vertical and lateral mine developments, to commence mining excavations that will allow for the construction and equipping of a pump station at the Konkola Deep Mining Project (KDMP) in Chililabombwe.

The KDMP has one of the deepest shafts in Zambia at 1,505m, situated on one of the highest – grade copper seams in the world with over 291 million tonnes of ore resource and at least 50 years of mine life.

The project which will take 26 months to complete includes excavations for the sumps and settlers, pump station and other associated infrastructure at 1350m and 1390m levels at a cost of US\$63 million.

Mancala will also engage several local contractors to supply and provide services to support the project, generating additional employment for approximately 200 local people, while enabling skills transfer in safe and modern excavation and blasting techniques among others.

KCM Acting Chief Executive Officer (CEO) Malcolm Mewett said the works are necessary to unlock 283 million metric tonnes of un-dewatered resources.

Mr Mewett added that, “The deepest pump station at Konkola is at level 985m and currently ore cannot be safely mined below level 1040m due to mine dewatering constraints.

Our current dewatered resource only accounts for less than three percent of the total Konkola resource, therefore, we

need a new pump station to be constructed at 1390m to allow for the dewatering of 283 million metric tonnes of ore resource between levels 1040m and 1350m.”

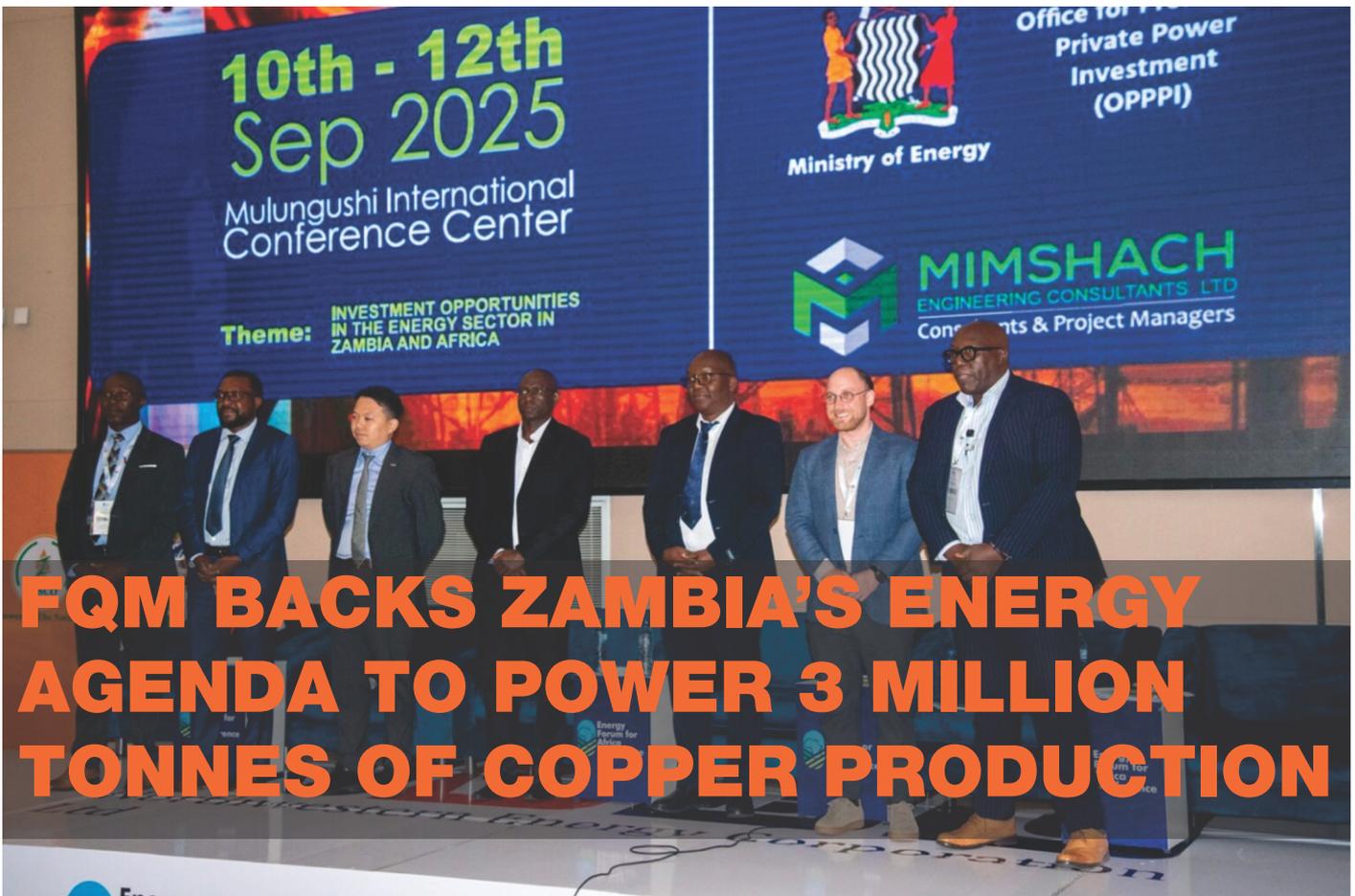
He said KCM has engaged Mancala, experts with over 35 years of experience in mine developments, to construct the pump station’s infrastructure to ensure international standards are upheld and the project is completed in time to allow the company to ramp up production quickly.

The pump station will have a nominal capacity of 290,000m<sup>3</sup>/day, utilising 22 multistage clear water pumps, a set of eight settlers to remove suspended solids and ensure environmental limits compliance and eight sumps to allow for surge capacity in case of an emergency stoppage of the pump station.

And Head of Special Projects at Konkola Copper Mines, Andre Trytsman said the actual equipping and construction of the pump station, electrical substations and supply infrastructure to the current pump stations on 985m, 660m and 370m will follow after the excavation works.

**“We will then install water tight doors and penstocks required to contain the water in the workings in case of an emergency,” he added.**

Unlocking the KDMP is of paramount importance for KCM to achieve its production target of 300,000 tonnes of copper by 2031 and contribute 10 percent to the national target of 3 million by the same year.



## FQM BACKS ZAMBIA'S ENERGY AGENDA TO POWER 3 MILLION TONNES OF COPPER PRODUCTION

**F**irst Quantum Minerals (FQM) is investing in Zambia's energy infrastructure to help the nation achieve its ambitious target of 3 million tonnes of annual copper production. The company emphasised that expanding generation capacity and modernising transmission systems are essential not only for mining growth but also for powering Zambia's broader economic development and supplying critical minerals for the global energy transition.

Speaking at the 2025 Energy Forum for Africa, FQM's Infrastructure Lead for Zambia, Jed Goldstein, highlighted the company's dual approach: securing reliable energy for its operations while driving strategic grid-strengthening initiatives across the country.

**"We are actively addressing the power deficit by sourcing about 65 percent of our energy needs from the region at emergency rates. At the same time, we are advancing off-take agreements with new Independent Power Producer (IPP) projects, including a 430-megawatt solar and wind facility with TotalEnergies,"** said Mr Goldstein.

He noted that modernising the grid is particularly urgent in Zambia's North-Western Province, where FQM's mines are located and where long-distance power transmission has historically caused operational instability.

"Most of Zambia's domestic generation is located over 600 kilometers from the Copperbelt and the North-Western province, where demand is concentrated. This distance creates voltage fluctuations that affect mine operations and surrounding communities. Working with ZESCO and Barrick on grid modernisation workstreams, FQM is installing advanced STATCOM equipment at key substations to stabilise power flows and enable greater integration of new renewable power generation."

"Mining companies are catalysts for national development. Working with ZESCO to strengthen the grid and bring more renewable generation online, not only enables mine expansion but also improves reliability for households and businesses already connected. Zambia's copper endowment can underpin both industrial growth and greater energy access across the country." Mr Goldstein said.

At the same forum, Dr Pius Kasolo, Head of Strategy at Africa GreenCo, emphasised the role of renewable energy in accelerating Zambia's production goals.

"Renewable energy projects can be deployed rapidly and de-risked through mechanisms like credit guarantees. For example, the 100-megawatt solar project developed with ZESCO secured nearly \$100 million in funding," Dr Kasolo said.

He noted, however, that reaching 3 million tonnes of copper annually will require energy generation to more than triple.

**"Over 1.5 gigawatts of renewable energy projects are currently in the pipeline. Accelerating their delivery is critical if Zambia is to achieve its production and development goals,"** he added.

FQM reiterated that collaboration between mining companies, energy producers, and government is essential to building a resilient and sustainable energy system that can power Zambia's economic growth.

# MINISTRY OF MINES ISSUES 1,498 ARTISANAL MINING LICENCES NATIONWIDE

**T**he Ministry of Mines and Minerals Development has announced the issuance of 1,498 artisanal and small-scale mining licences across Zambia since 2023, a move aimed at formalising the sector and unlocking its economic potential.

The figures were disclosed by the Minister of Mines and Minerals Development, Paul Kabuswe, in a ministerial statement delivered to Parliament on 25 September 2025.

Mr. Kabuswe informed the Parliament House that the bulk of the national licences, 1,201, were for gold mining, while the remaining 297 were for non-gold commodities such as manganese and copper.

*“I wish to inform this House that, since 2023 up to 8th August, 2025, a total of 1,498 artisanal and*

*small-scale licences have been issued countrywide,”* the Minister stated, highlighting the Ministry’s active role in regulating the sector.

The Minister also pointed to Serenje District as a case study of regional mineral diversity, noting that 76 of the licences were granted there for a variety of minerals including copper, gold, manganese, and limestone.

While characterising the licensing drive as “encouraging,” Mr Kabuswe outlined significant challenges facing the sector.

These include limited access to geological information, finance, markets, modern equipment, and technical skills, alongside persistent concerns over occupational health and environmental safety.





# ZAMBIA LAUNCHES FIRST GEOLOGICAL SURVEY DIGITAL STORE TO BOOST MINING TRANSPARENCY AND INVESTMENT



The Government of Zambia has officially launched the country's first-ever Geological Survey Department (GSD) Digital Store, a landmark step in national digital transformation and smarter natural resource management. The launch ceremony was held at the Taj Pamodzi Hotel in Lusaka.

Speaking at the event, Ms. Kasali Musenge, Acting National Coordinator of the Smart Zambia Institute, reaffirmed the government's commitment to hosting and managing the platform locally.

"This initiative underscores our dedication to building home-grown digital solutions that are not only reliable but also sustainable, while strengthening Zambia's position in the regional digital economy," Musenge said.

Minister of Mines and Minerals Development, Hon. Paul C. Kabuswe, praised the transition from paper-based systems to a modern digital archive as a "major step forward" for the mining sector.

He explained that the platform would streamline data storage and retrieval while empowering decision-makers to manage Zambia's resources more effectively.

Dr. Hapenga Kabeta, Permanent Secretary in the Ministry, highlighted the innovation's potential to revolutionize the mining industry by providing secure, efficient, and accessible geological data. He added that the system would attract investment, foster transparency, and encourage innovation.

From the private sector, Mr. Tuleyone Mpengula, IT and Digitalisation Lead at Kobold Metals, stressed the importance of partnerships in driving national progress. He commended the collaboration between public and private stakeholders that made the project possible.

The GSD Digital Store will serve as a gateway to informed decision-making and a catalyst for sustainable exploration and growth. It provides seamless access to decades of geological publications and datasets through a secure, user-friendly platform integrated with advanced analytical tools.

The platform is expected to benefit researchers, investors, geologists, and the general public, transforming how geological resources are accessed and managed in Zambia.



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## MIN'GOMBA COPPER PROJECT SET TO BECOME ONE OF THE WORLD'S RICHEST UNDERGROUND COPPER DEPOSITS

### *Min'gomba Copper Mining Project in Zambia Poised to Become World's Richest Underground Copper Deposit*

**C**hililabombwe, Zambia – The Min'gomba Copper Mining Project is emerging as a potential game-changer for Zambia and the global copper industry, with estimates suggesting it could become one of the richest underground copper deposits in the world.

President Hakainde Hichilema shared his optimism about the project, following updates from mining partners KoBold Metals and ZCCM Investments Holdings (ZCCM-IH).

The President underscored that Min'gomba is far more than a mining initiative—it is a transformative development that promises to deliver economic growth, local empowerment, and sustainable industry practices.

#### **Cutting-Edge Mining and Economic Impact**

KoBold Metals, renowned for its advanced mining technology, is partnering with ZCCM-IH, Zambia's state mining company, to develop the Min'gomba deposit in Chililabombwe.

This collaboration leverages innovative approaches to mineral exploration and extraction, enhancing efficiency, safety, and sustainability.

#### **President Hichilema stated:**

*“With KoBold’s cutting-edge technology and Zambia’s stake through ZCCM-IH, Min’gomba has the potential to become a globally competitive, world-class mine.”*

The project is expected to deliver substantial benefits to the Zambian economy, including job creation, skills development, and increased opportunities for local businesses. It will also foster value addition, ensuring that Zambia maximizes the benefits of its mineral resources beyond raw extraction.

#### **Strategic National Goals**

Min'gomba is aligned with Zambia's vision to produce 3 million tonnes of copper annually by 2030, a target that would strengthen the country's position as a leading global copper producer. President Hichilema emphasized that the project would ensure Zambians remain central to the process:

*“This project is not only about extracting copper; it is about transforming lives through value addition, empowering local participation in trade and economic development, and creating jobs, skills, and opportunities for our communities.”*

#### **Commitment to Sustainable Mining**

The Zambian government remains committed to ensuring that mining operations are legal, safe, formal, and security-oriented, with a strong focus on sustainable growth. President Hichilema concluded:

*“As Government, our commitment to legal, safe, formal, and security-oriented mining remains paramount as we pursue sustainable growth for our people and our nation.”*

The Min'gomba Copper Mining Project stands as a symbol of Zambia's ambition to harness its mineral wealth responsibly, ensuring economic transformation while safeguarding the interests of its citizens and future generations.



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*The initial list brings together government bodies, mining operators, service providers, equipment suppliers, financiers and international partners — signaling a high-impact event on October 22–23 in Luanda*

**W**ith just few weeks until doors open, AIMC 2025 unveiled an expanded and compelling roster of sponsors and exhibitors that reflects growing global interest in Angola's mining potential.

The initial list brings together government bodies, mining operators, service providers, equipment suppliers, financiers and international partners — signaling a high-impact event on October 22–23 in Luanda where strategy, investment and sustainable development will be front and center.

### Standout sponsors and partners

- **Institutional & regulatory:** ANRM (National Agency for Mineral Resources) — Titanium Sponsor; SODIAM E.P. — Platinum; ENDIAMA E.P. — Diamond; Port of Namibe — Gold. These institutions will play a central role in panels and bilateral meetings, presenting regulatory updates, investment incentives and regional licensing priorities that aim to streamline project development and strengthen oversight.
- **Operators & producers:** Sociedade Mineira de Luele — Platinum; Sociedade Mineira de Catoca — Diamond; De Beers — Diamond; exhibitors include Rio Tinto, Minbos and Kaixepa. Attendees can expect operator-led sessions on exploration breakthroughs, mine development roadmaps, community engagement strategies and case studies demonstrating operational best practice in Angola's geology.
- **Energy:** Sonangol — Titanium; Sonagalp — exhibitor. Representatives will discuss energy supply frameworks

for mining operations, opportunities for local content in fuel and power infrastructure, and collaborative approaches to decarbonization and shared logistics.

- **Finance & insurance:** ENSA Seguros de Angola — Gold; Caixa Angola — exhibitor; Banco Keve — Associate Sponsor. These institutions will host workshops and roundtables on project finance structures, risk mitigation tools, insurance products tailored to mining, and investor readiness — critical for translating resource potential into funded projects.
- **Equipment & services:** HiperMáquinas Angola — Platinum; Maqman / Maqtools — Gold; GeoAtlanticus — Gold. The exhibitor hall will showcase the latest in heavy machinery, drilling technology, geotechnical services, surveying, and digital monitoring solutions, enabling operators and service providers to evaluate fit-for-purpose equipment and local supply chain options. Additional confirmed names: Tratomáquinas, Alaturca, Geosondas, Chinangol, Dronesig Angola, Mpolo / Tecnopromic, CNC ITIE, Ciertex Angola, Sonair, SinoStore Group, Huawei and Transorga Angola Limitada.
- **International partners & exhibitors:** Minelabe, PRD Rigs, Bauer, SONAIR, KODO Drilling, Bond Equipment and Spatial Dimension. These global suppliers and technical partners will provide international perspectives on best practices, technology transfer and joint-venture opportunities, reinforcing Angola's attractiveness for cross-border partnerships.

### Digital Mining Cadastre: a governance milestone

AIMC 2025 will formally launch Angola's Digital Mining Cadastre — a transformative step toward digitized licensing and transparent governance.

The Cadastre centralises permit applications, geological and spatial data, license histories and compliance records in a single online platform. This will accelerate approval timelines, reduce administrative bottlenecks, and create an auditable trail that improves investor confidence and public accountability.

The official launch — expected to feature remarks by His Excellency João Manuel Gonçalves Lourenço — will include a live demonstration, stakeholder Q&A and sessions on integration with environmental permitting and tax reporting systems.

### Program highlights and thematic deep dives

The conference program is built to move conversations from policy to practice, with targeted sessions that combine high-level strategy and actionable outcomes:

- **Financing the Future:** A deep dive into financing mechanisms for exploration and mine development, including project structuring, off-take agreements, equity and debt instruments, and public-private partnership models. Speakers such as Maurice Madiba (Johannesburg Stock Exchange) and Fernando Amaral (SODIAM E.P.) will present case studies and investor expectations for risk-return profiles in Angola.
- **Risks, Taxation & Regulation:** Practical guidance on navigating Angola's fiscal regime, tax incentives, royalty structures and compliance obligations. Panelists including Rúben Brigolas (PLMJ Advogados) and insurance experts from Ensa Seguros will address dispute prevention, contract best practices and strategies to mitigate political, environmental and operational risks.
- **Sustainable Supply Chain:** Focused discussion on the Lobito Corridor as a backbone for mineral export logistics, covering port capacity, rail and road integration, customs facilitation, local content development and community benefits. The session will explore opportunities to shorten lead times, reduce costs and enhance traceability across the value chain.
- **Oil & Mining Synergies:** Cross-sector dialogue on shared infrastructure, knowledge transfer and coordinated resource planning. Senior leaders from ANPG, IGEO, ANRM and companies such as Equinor, Sociedade Mineira da CATOCA and SONANGOL will examine models for co-investment in power, transport and processing facilities that unlock scale economies.
- **Women in Mining & Inclusion:** Panels and breakout sessions highlighting programs, mentorship pathways and procurement opportunities to accelerate women's participation across technical, management and leadership roles in mining and oil & gas.
- **Strategic Minerals & Energy Transition:** Technical and policy sessions on critical minerals, responsible sourcing, local beneficiation opportunities and Angola's role in global supply chains for the energy transition, with contributions from Pensana Plc and the Critical Minerals Africa Group.

### Global participation and governance agenda

AIMC 2025 has attracted major multinationals — Rio Tinto, De Beers and Ivanhoe — alongside specialist consultancies like Wood Mackenzie and civil-society watchdogs such as Global Witness. This mix creates a platform for frank discussion on governance, ESG performance, anti-corruption measures and community rights. Sessions will explore how international standards and local regulation can align to attract capital while ensuring social and environmental safeguards.



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