

# EXXARO

## RESOURCES

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CORPORATE BROCHURE





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# possibility

Exxaro Resources is South Africa's largest listed empowerment enterprise by a long way, a position it has consolidated in just five years of operations; and its mid to long term strategy is nothing short of visionary





Exxaro owes its very existence to a vision following the 2006 restructuring of the former Kumba Resources with the specific objective of increasing the spread of shareholders to include employees and people from 'previously disadvantaged backgrounds'. The plan was to create a company to exploit the mineral resources that drive South Africa's economic wealth for the benefit of all sections of the community. In five years it has grown to become by far the largest of such companies, completely dominating the strategically vital coal extraction and beneficiation sector and with a strong global position in heavy minerals and, through its 20 per cent interest in Sishen Iron Ore Company (SIOC), iron ore. Its turnover for the six months to 30 June 2011 was R9.6 billion, a 22 per cent increase over the same period in 2010.





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## Joy Global

Joy Global has over 125 years of experience as a world leader in high productivity mining solutions. The company designs, manufactures and markets original equipment and aftermarket parts and services for both the surface and underground mining industries and certain industrial applications. Joy Global's products and related services are used extensively for the mining of coal, copper, iron ore, oil sands, gold and other mineral resources. Joy Global maintains an extensive service network with over 126 locations globally in 20 countries to provide our customers with service excellence. With its head office based in Steeledale, Johannesburg, Joy Global manufactures equipment from its Wadeville manufacturing plant in South

Africa, a state-of-the-art facility driven by operational excellence efficiencies ensuring that product and services offered to our customers are of the highest quality and safety standards. Today, Joy Global Africa employs over 1,500 staff with over nine service centres across Africa. Joy Global has a strong commitment to working in a sustainable and ethical manner, in conjunction with the communities and authorities within whose boundaries it operates worldwide. Recognised as a Level 5 Broad-Based Black Economic Empowerment value adding company, Joy Global focuses on skills procurement, employment equity, enterprise development and social and economic development.

In this short time Exxaro has expanded its portfolio of world-class assets in Africa and Australia, and with its joint venture Tiwest it is the world's third largest titanium feedstock production company, poised to become a prominent force in its key commodities, and a respected global participant for its governance standards and business approach based on sustainable development.

If there is a temptation to think of coal and iron ore mining as industries belonging to the 19th century industrial revolution, then talking to Exxaro's business development director Ernst Venter soon dispels that view. "We wanted to demonstrate that with the right skills mix and diversity, and commitment to your shareholders, you can also align yourself to the goals of this country and its economic growth. We want to be seen as a champion of change across Africa and globally."

When Exxaro was formed it had a large coal portfolio and was the world's third largest producer of heavy minerals, principally chloride slag for the pigment market. But rather than allow the shape of the existing business to lead its future development,

it has decided to take a global view in deciding what sort of a company it aims to be 15 years on, in 2025, says Venter. "We looked at the way economic power is shifting from the West to the East, and decided that in future, commodities would fall into three tiers."

Tier one would include minerals such as coal, iron ore, mineral sands and copper—the focus for Exxaro over the next 10 years. Tier two minerals—a priority 10 to 15 years down the line—are those for which industrial demand (from the aerospace and energy industries, for example) is increasing rapidly. This includes titanium and some of the rare earths, as well as titanium in Exxaro's KwaZulu Natal and Namakwa Sands deposits in South Africa, and its Australian deposits. And Exxaro is already looking beyond that to its third tier—materials the world will require in 30 years' time to enable industry to address economic megatrends like climate change and population growth.

This roadmap is designed to position Exxaro





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**OUR CUSTOM SOLUTIONS FOR EXARRO**

**ABOVE RIGHT:** 200 ton per hour DM Drum plant at Exxaro Resources NBC Colliery with the additional 200tph DM Cyclone under construction

**ABOVE LEFT:** 150 ton per hour DM plant at Exxaro Resources Leeuwan Colliery



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as a global player. When it was first listed five years ago, Venter points out, the company was capitalised at around \$4 billion; today it stands at \$9 billion, but its target is to achieve a \$20 billion market cap by 2020. The starting point for this has to be coal and the strong position Exxaro has in the energy market, since it is the largest supplier of thermal coal to South Africa’s power generation entity Eskom. “We will build on our coal portfolio, since we are very strong in bulk mining; and specifically in beneficiation and downstream through the value chain right through to the end use by our customers.”

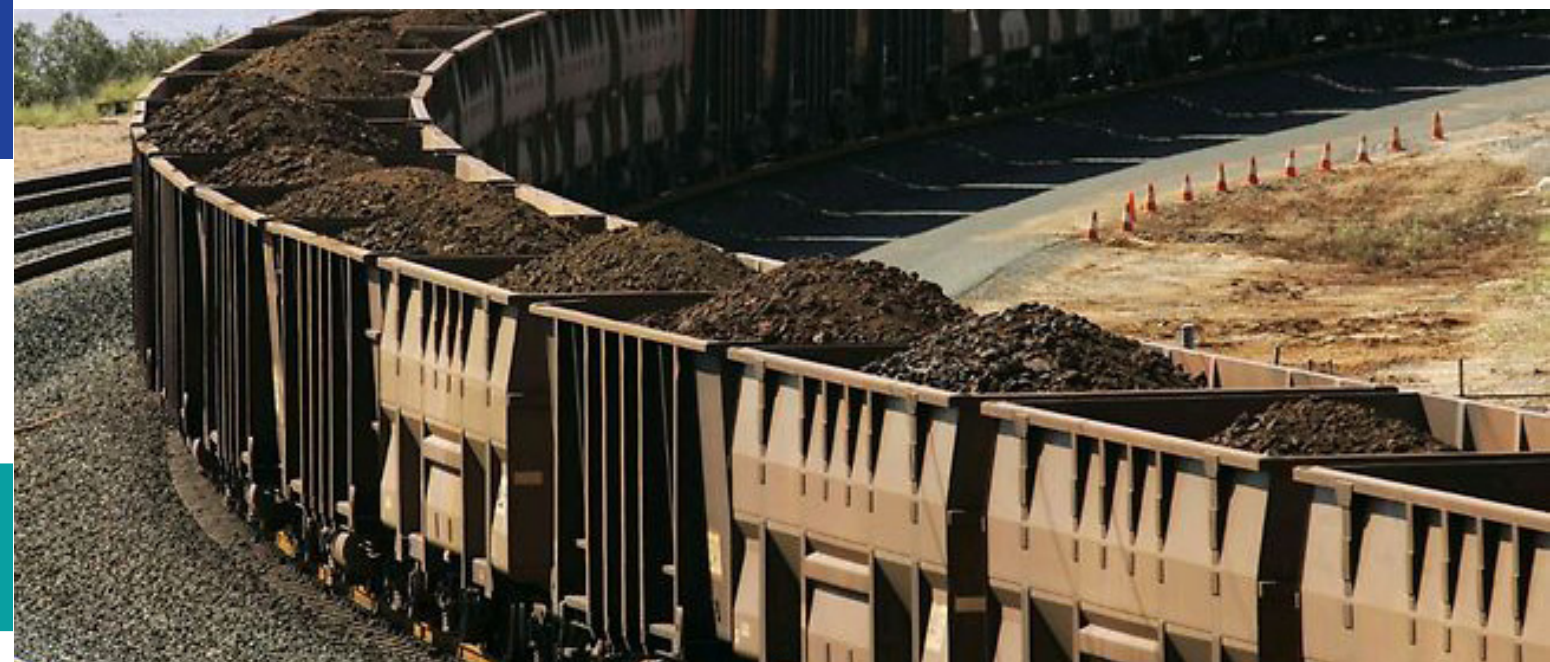
Exxaro wants to play a greater part, though, in addressing Africa’s energy demand/supply gap than just by supplying coal for thermal power stations. “We decided there should be a place for us to play

**Fraser Alexander**

Fraser Alexander Mineral Processing provides mineral processing solutions on a build, own operate and maintain (BOOM) or operate and maintain (O&M) basis to the coal, platinum, ferrometals and diamond industries.

The Division is part of the Fraser Alexander Group, owned by Royal Bafokeng Holdings—making it a 100% BBE owned company.

Exxaro Resources has contracted FAMP at two of its operations, both on a BOOM basis. These are Leeuwan Colliery, a 150tph cyclone plant that works in line with Exxaro’s jig plant, and NBC Belfast, a 200tph drum and 200tph cyclone plant, upgrading ROM to produce an Eskom product.







## Leaders in Slurry Systems Engineering

Paterson & Cooke is a recognised leader in the design of slurry pipeline systems and associated technology. We are currently completing the detailed design and engineering of one of the world's largest ore slurry pipelines together with Turkish companies Afrasia Mining & Energy and Tekfen Construction. The pipeline will transport 38 MTA of ore a distance of 187 km and is due for commissioning in 2013.

Our service capability includes the following key areas of expertise:

- Slurry testing services – behaviour analysis, sedimentation tests, rheology, wear rates, pump performance and pipe loop tests.
- Thickener circuit design – unit sizing and selection, control philosophy, water recovery estimates.
- Pipeline design – slurry flow modelling, steady state and transient flow, stress analysis, route selection.
- Mine Backfill – from design, testing and studies to contracted placement.
- System engineering – detailed design and engineering of slurry preparation plants, pump stations and pipelines.
- Construction supervision and commissioning.
- Pilot plant facility design and operation.
- Equipment development, design and evaluation.
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- Specialized training courses.



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in the energy market and create an energy company that could thrive in a low-carbon economy. This will be a cleaner energy company with its focus on wind, solar, renewable energy and co-generation." Realistically, even though these solutions are expanding fast, massive amounts of coal will still have to be burnt; but Exxaro intends to make sure it uses clean coal technology such as CCTS (clean coal technology and storage), Venter asserts.

For the present, the principal revenues continue to come from coal extracted from mines like Grootegeluk in Limpopo province. Grootegeluk has a massive beneficiation complex where 9,000 tonnes per hour of run-of-mine coal is upgraded in six different plants. This is already the world's largest coal beneficiation complex; but such are

### Paterson & Cooke

Paterson & Cooke, since its inception in 1991, has become one of the world's leading slurry pipeline companies with offices in South Africa, the USA, Canada and Chile. Our core competencies are based on a thorough understanding of slurry flow behaviour, and include clay behavioural analysis, solid-liquid separation and the analysis and design of slurry concentrate and ore pipelines, thickened and paste tailings pipeline systems, and mine backfill systems. We have extensive experience in the pumping of mineral sands and have been closely involved with Exxaro's Hillendale Mine since commissioning, and continue to work with Exxaro on their other mineral sands operations.



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the demands from the industry, particularly the new though. The deposit lends itself to a variety of different coal products for niche markets, of different coal products for niche markets, that its capacity is being doubled. The \$1.3 billion principally related to metallurgical coal, says Grootegeluk Medupi Expansion Project (GMEP) will Venter. "We need to beneficiate and wash the increase throughput to 14,000 tonnes per hour, and coal to produce specific graded metallurgical supply Medupi with 14.6 million tonnes per annum of coals for the iron and steel reduction industry and also the PGM (platinum group metals) coal for 40 years.

GMEP is much more than a feeder plant for Eskom, industry in South Africa." The project will



# UMT Consulting SA makes a difference in the Mining Industry

## Project Controls Office Management for Exxaro Medupi Expansion Project

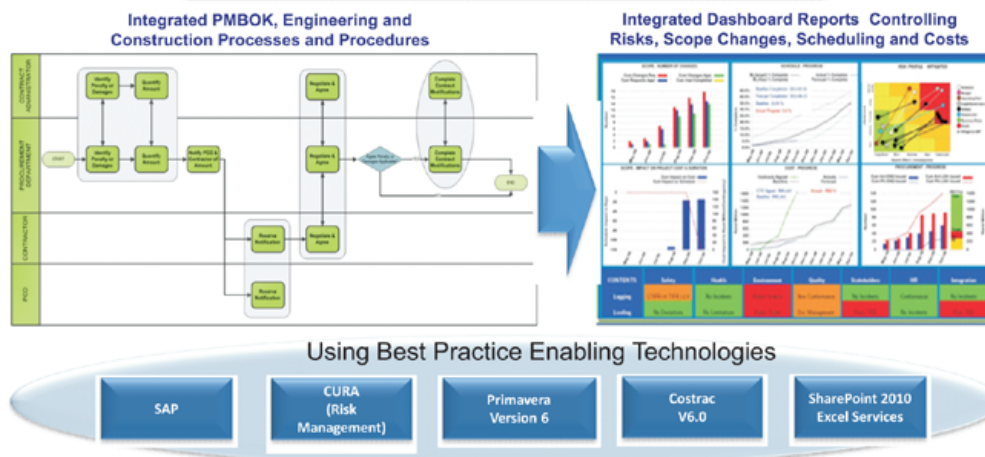
UMT Consulting SA (UMT SA), the leading Project Portfolio and Program Management company in South Africa, assists mining, construction and engineering companies to control their project spend more carefully by establishing Project Control Office (PCOs) management.

To keep pace with increased competition and tougher economic conditions in a fast-paced global economy, mines must do more using fewer resources. To this end, PCO is the fastest growing concept in Project, Portfolio Management (PPM) today and is very important for the effective implementation of projects across mining and engineering.

The PCO solution and unique processes that were implemented by UMT SA, with templates enabling people governance and product/system integration, is currently operational and used by the stakeholders of the project. This PCO solution provides Medupi management team and Exxaro with accurate information in supporting pro-active decision making.

The PCO solution demonstrated in the integrated model below is one of a kind in South Africa in the mining industry and shows value through hosting integrated processes supported by best practice enabling technologies:

Establishment of a Project Control Office (PCO) - Management solution to:-  
 Host and Maintain PMBOK, Construction and Engineering Processes  
 Provide trusted management information dash boards to assist during status reporting on:-  
 • Cost (Control Project Spend across Project Life Cycle)  
 • Scheduling (Controlling the entire WBS)  
 • Quality (Assurance and Control)  
 • Risks (Identification, Analysis, Monitor and Control)  
 • Scope (Control Baseline and Changes)



Exxaro recognised the capability of UMT SA and engaged with us to setting up and implementing integrated PCO for their Mega Medupi Expansion Project. Exxaro is a South African-based mining group listed on the JSE Limited. Exxaro has a diverse and world-class commodity portfolio in coal, mineral sands, base metals and industrial minerals, with exposure to iron ore through a 20% interest in Sishen Iron Ore Company (SIOC).

As one of South Africa's largest, diversified mining companies, Exxaro is well positioned to grow domestically, and its existing operational interests in Namibia, Australia and China and strong project pipeline provide a base for growth in international markets.

UMT SA used best practice and a workable business solution to control the project. The PCO environment created is a single communication portal with key information for an entire project and Exxaro to follow the Medupi project's strategic intent, direction and to make sure decisions are supported by trusted dashboard reports across all systems (Planning, Costs, Risks and Quality).



## UMT SA is setting up an Enterprise Project Management Organisation for Exxaro Head Quarters

As a result of due to its successes on the Medupi project, Exxaro decided to appoint UMT SA as the prime contractor to assist with the implementation of its Enterprise Project Management Organisation (EPMO). This is another key project for Exxaro to further enhance its project delivery capabilities. UMT SA will use its experience in this specific space and will implement EPM2010 and SharePoint 2010 to support overall controls and collaboration in their projects.

Optimisation of Resources: Having a global view that also provides an in-depth familiarity with all projects and programs is necessary before efficient enterprise-wide resource levelling and optimisation can occur. An EPMO has this capability because it is the focal point that gathers, analyses, monitors and reports the current state of all projects, programs and portfolios on a regular basis.

The key success factor for both UMT SA and Exxaro will be to achieve the objectives as depicted below.

The main objective of this project is to:

### Institutionalisation of Project Management Principles and Practices

The EPMO becomes the functional owner of project business management development, implementation and monitoring. It also directs continuous improvement of the PBM policies, processes and procedures across the organisation.

### Provides a Global View of the Enterprise's Initiatives and Projects

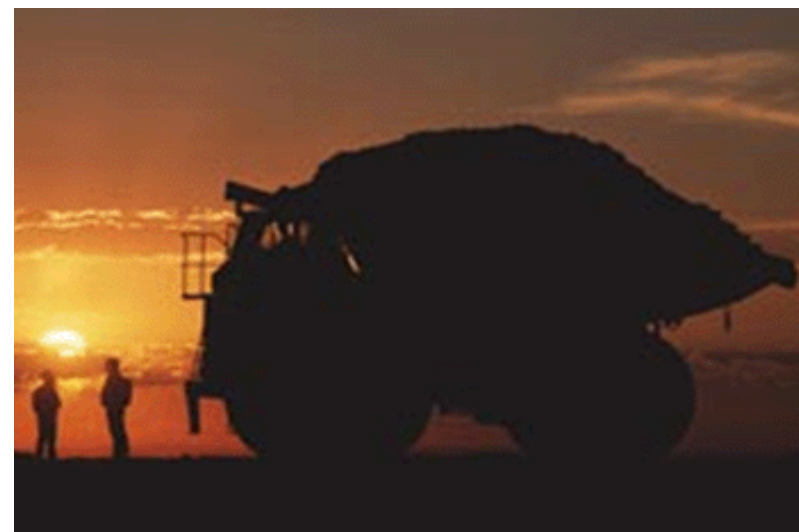
An EPMO provides an environment in which all planned project-related enterprise initiatives can easily be summarised and rolled-up across the enterprise to provide a single global view. Being available to all management, a global view of the status of planned initiatives and portfolios, programs, and projects in-progress is critical to the strategic and tactical planning processes.



start delivering coal in May 2012, increasing over the subsequent two-and-a-half years as Medupi ramps up. "The plant has been designed on a modular basis to spread the capital investment."

The new plant represents Exxaro's accumulated expertise in coal treatment and it creates an opportunity by investing more capital in beneficiation facilities to produce more metallurgical coal, increasing its share of the metallurgical coal market in South Africa,





in which it is already the biggest player. It also plans to increase its coal footprint in Australia, and to extend its activities to other parts of Africa, such as Mozambique and Botswana where the resources are immense, though some of the infrastructure like water supply and rail freight are wanting. Even in South Africa, rail capacity is holding back Exxaro's ability to export, he says. "The Richards Bay terminal has a throughput capacity of 91 million tonnes, with currently only 68 million tonnes going through. We are busy de-bottlenecking

that and we will be partnering with the government to invest in our own rolling stock to get the coal out." In the next 10 years Exxaro will turn its attention to other tier one markets. It wants to establish its own iron ore operations in Africa and Australia and get involved with ferromanganese production. "We are in a joint venture with Assmang, testing new technology that will enable us to treat low grade manganese ore and convert it in a more energy efficient way at nearly half the cost of the current technology." If the demonstration plant under construction is successful, Venter hopes to see Exxaro entering the

ferromanganese market by mid-2012.

To complete the tier one picture, Exxaro wants a presence in copper too. Joint ventures and acquisitions are probably the route to expansion in these non-core but strategic commodities; and in the case of copper, Exxaro will look for a company with assets close to production in Zambia or the DRC.

The mineral sands business has strengthened since Exxaro listed, at which time it was performing poorly. "We believed that if we took a long-term view, the fundamentals would change; and indeed, prices for chloride slag and pigment feedstock that we produce have risen up to 40 per cent." The business produces monazite that contains rare earth minerals and titanium-rich rutile, ilmenite and other minerals used downstream in the white goods industries that are booming with demand from India

and China. "We are currently the world's third largest producer of pigment feedstock, and we plan to be the largest by 2025."

Exxaro's foundations rest on dirty old coal—but it aspires to thrive in a low-carbon economy, so the business will have to look very different in 15 years' time. That's less of a paradox than it appears. "To de-risk your launch into unknown territories like nanotechnology and nuclear power you need to relate your future strategy to your existing business," says Venter. "We must create our own future—not wait for it to create us—and build today the skills we will need tomorrow. If we stand on the hill and look back in 2025 to where we started, Exxaro must be unique. It must have the look and feel of an innovative company," he concludes. [www.exxaro.com](http://www.exxaro.com) ■

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