



MIKE DA COSTA | BUSINESS PLATFORM CEO

UNDERGROUND MINING

PLATFORM
REVIEW

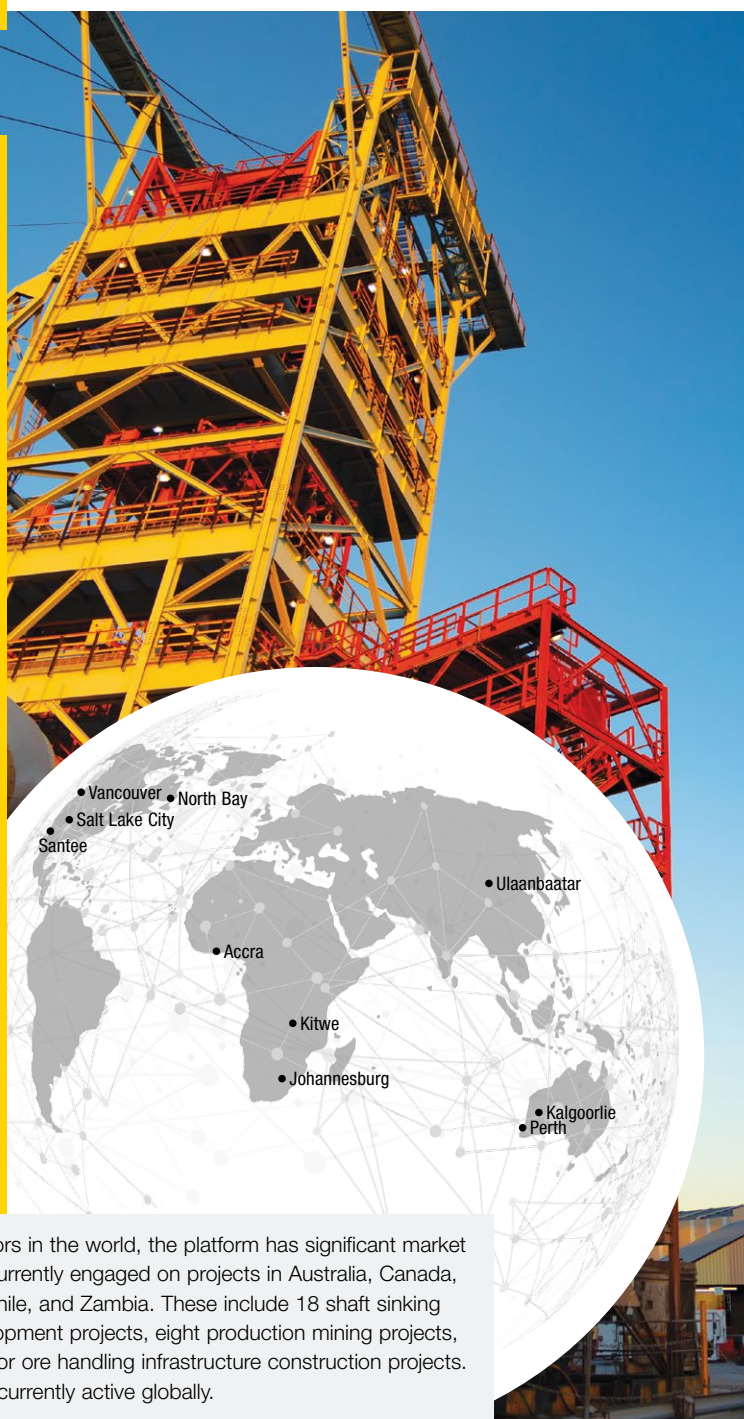
OVERVIEW

The Underground Mining platform operates globally and its service offering spans the project life cycle, including feasibility studies, specialist engineering, vertical and decline shaft construction, mine development, specialist mining services such as raise boring and grouting, and contract mining.

The platform's businesses are:

- 1 **CEMENTATION NORTH AMERICA**
 - **Cementation AG**
 - Salt Lake City, USA
 - **Cementation Canada**
 - North Bay, Canada
 - **Cementation USA**
 - Salt Lake City, USA
 - **Terra Nova Technologies**
 - San Diego, USA
 - **Merit Consultants International**
 - Vancouver, Canada.
- 2 **MURRAY & ROBERTS CEMENTATION**
 - Johannesburg, South Africa.
- 3 **RUC CEMENTATION MINING**
 - Perth, Australia.

As one of the largest underground mining contractors in the world, the platform has significant market share in the jurisdictions in which it operates. It is currently engaged on projects in Australia, Canada, Indonesia, Mongolia, South Africa, USA, Mexico, Chile, and Zambia. These include 18 shaft sinking and equipping projects, 21 decline and mine development projects, eight production mining projects, 13 support and construction projects, and two major ore handling infrastructure construction projects. Of a total fleet of 56, 40 raise drilling machines are currently active globally.



PERFORMANCE

Commodity prices have generally held the gains they made in the last two years. This has improved the balance sheets of many mining companies. Although few greenfield projects have come to market, companies have invested in brownfield projects on existing mines. This has been largely in commodities associated with the development of electric vehicles such as copper, cobalt, nickel and manganese. In addition, investment in gold mining operations in North America and Australia has increased.

The platform has been able to capitalise on these conditions, with meaningful growth in the order book and significant year-on-year growth in revenue and earnings. Revenue of R10,9 billion was up 36% on the prior year, and operating profit of R814 million grew significantly by 73%. The order book was R22,8 billion at year end and the pipeline of tender opportunities is strong.

Cementation North America delivered an outstanding performance, more than doubling its EBIT contribution. In the past 18 months, the business secured several large projects, including Glencore's Onaping Depth in Canada, Nevada Copper's Pumpkin Hollow, and Rio Tinto's Resolution #9 Shaft in the USA. These gains were slightly offset by the client's decision to discontinue the Hermosa decline, a South 32 project in the USA.

Murray & Roberts Cementation had a challenging year. One of its biggest contracts, a contract mining project for Northam Platinum at Booyssendal, came to an end in the previous year. The business was nonetheless able to maintain its EBIT contribution, a solid performance under the circumstances. The start of the Kalagadi contract mining project midway through the previous year helped to offset the loss in earnings from the Booyssendal project. Excellent project management resulted in no loss-making projects.

RUC Cementation Mining delivered a remarkable result, more than doubling its EBIT contribution. The securing of a significant shaft sinking contract for two large diameter vertical shafts for Rio Tinto at its Oyu Tolgoi mine in Mongolia supported this performance. Further scope growth in the contract with Freeport in Indonesia, and the exceptional efficiencies achieved by this project team contributed significantly to earnings. Smaller contract wins in Australia for Ramelius Resources, Edna May, Grange Resources and Savage River also contributed.

BUSINESS MODEL RESILIENCE

The Underground Mining platform businesses share a common vision to deliver profitability-centered growth by safely providing services across the mining value chain and life cycle in all relevant geographies.

Three strategic objectives underpin the achievement of this vision:

Growth

The platform targets a mix of organic and acquisitive growth. Organic growth comes from improving the efficiency of project delivery, thereby optimising margins, and from growing market share. As the platform is already a significant participant in the global underground contracting market, there is only incremental potential for organic growth. More significant growth depends on mergers and acquisitions that diversify the platform's revenue stream by geography, capability and value chain. Value chain expansion includes increasing the proportion of revenue derived from contract mining, which tends to be a more secure source of revenue during down cycles in the market.

Acquisition/joint ventures in the year included:

- ✚ Terra Nova Technologies, specialising in the design and building of ore handling infrastructure in the USA, provides capability and geographic diversification.
- ✚ Boipelo Mining Contractors, a coal cutting services joint venture in South Africa, provides life cycle expansion into contract mining.
- ✚ Insig Technologies, a technology company in Australia, with in-house capability to support the implementation of digital technology, provides capability diversification.

Engineered Excellence

This philosophy is a major driver of efficient project delivery. Sharing best practices supports platform-wide efficiency improvements in critical areas, focusing on:

Safety and risk management standards

- ✚ Best-in-class systems and practices across the Group, as well as in the broader industry, are assessed and customised for application in the platform.

Asset performance

- ✚ We are applying technology to improve overall asset management by developing fit-for-purpose asset maintenance systems, implementing advanced predictive maintenance models, gathering and analysing asset performance data and implementing machine learning and automation.

Strategic procurement

- ⊕ We continue to capitalise on the platform's global presence for favourable procurement terms.

Productivity enhancement

- ⊕ Achieved through leadership and technical training for management and supervisors, enhanced operator training and the introduction of technology to improve machine performance and enable remote operation and automation.

Innovation

The platform is driving several innovations to commercial maturity and continuously monitors technological innovation. The following applications are being explored:

- ⊕ Mechanical blind sinking
- ⊕ Mechanised sidewall support for shaft sinking
- ⊕ Remote control and automation
- ⊕ Battery powered equipment
- ⊕ Virtual and augmented reality.

CONTRACTOR OF CHOICE

Towards Zero Harm

The platform delivered an excellent safety performance and completed the year with no fatalities. Murray & Roberts Cementation has operated for three years and nine months without a fatality, Cementation North America has operated for four years and six months without a fatality and RUC Cementation Mining for 20 months without a fatality. The LTIFR for the platform improved by 43% to 1.08 (FY2018: 1.89). TRCR improved by 19% to 6.41 (FY2018: 7.91).

The MAP/CRM programme has been rolled out to all projects and the quality of implementation is audited regularly. The platform participated in the Group safety culture survey which indicated a positive shift towards a more interdependent safety culture among the businesses.

The focus in the year ahead will be to:

- ⊕ Complete the Neuroleadership programme pilot at the Kalagadi project and determine a platform-wide implementation plan.
- ⊕ Effect improvements identified during the safety culture survey.
- ⊕ Continue leadership and supervisory training.
- ⊕ Reduce the project-level safety risk profile by continuously assessing work practices, equipment and the role of technology.
- ⊕ Emphasise risk assessment and pre-work hazard identification and planning among supervisors and work teams.
- ⊕ Improve the frequency of incident reporting.



Project delivery

Murray & Roberts Cementation

South Africa:

DE BEERS VENETIA MINE

Project to construct the required infrastructure to transition the mine from an open cast to an underground mine. The sinking of two 1 080m shafts is progressing well, with both approaching final depth. The production and service shafts are underway.

KALAGADI MANGANESE MINE

Project to construct the mine's underground infrastructure, ore development, production ramp-up and contract mining for the first five years of operation. The first period of the contract presented challenges and required the de-bottlenecking of the existing underground and surface ore handling infrastructure. As a result, the ramp-up is slightly behind schedule, but good progress is being made.

PALABORA MINING COMPANY PALABORA MINE

The project is to sink a 1 000m ventilation shaft. Progress is on schedule with the ground consolidation work and surface civils completed.

A CHROME MINE ON THE EASTERN LIMB OF THE BUSHVELD COMPLEX

Contract awarded to construct the decline shaft access infrastructure, ore development, production ramp-up with contract mining for five years. Work is set to commence in September 2019.



Cementation North America

Canada:

● GLENCORE ONAPING DEPTH SHAFT

Project involves the detailed design and construction of headworks, sinking plant, permanent hoisting plant, shaft, furnishings and conveyances. This is a sub-vertical shaft that has its collar elevation at 1 150m below surface and will be sunk to a depth of 1 480m below collar. Progress is slightly behind schedule with the headworks excavation nearing completion, and the equipping of the headworks and installation and commissioning of the hoisting plant to follow before the main sink commences.

USA:

● RIO TINTO RESOLUTION COPPER #9 SHAFT

Project involves the detailed design of the sinking plant, surface infrastructure, shaft, furnishings and conveyances, as well as the reconditioning and deepening of the shaft to a depth of 2 134m below surface. Work is progressing on schedule with the rehabilitation portion of the work complete and deepening begun.

● NEVADA COPPER PUMPKIN HOLLOW SHAFT

The project entails a 36-month construction and operation period with potential to extend production mining services. Scope includes the sinking of the main shaft to a depth of 655m below surface, sinking a ventilation shaft from surface to a depth of 580m, equipping and commissioning the main shaft, ore development and production mining. The project is progressing well with the main shaft having reached the loading pocket and development towards the orebody having commenced on the two main production levels. Good progress is being made on the sinking of the ventilation shaft.

RUC Cementation Mining

Australia:

● DACIAN GOLD MOUNT MORGANS MINE

Project to develop three underground declines, ore development and production mining, as well as mining support services. This operation has proven challenging, but the client mining plan has been optimised to address the challenges.

● RAMELIUS EDNA MAY GOLD MINE

Project to develop an underground decline shaft, ore development and production mining, as well as mining support services. Site establishment and the initial phase of contract execution has progressed well and is currently ahead of schedule.

Indonesia:

● FREEPORT OPERATIONS

Project entails the shaft operation & maintenance and construction & installation of support and rail chutes at the Grasberg Block Cave operation, shaft operation & maintenance and production mining at the Big Gossan operation. The scope of work on these contracts increased further in the year, based on the project team's excellent performance in safety, quality and efficiency.

Mongolia:

● RIO TINTO OYU TOLGOI MINE

Part of the GCR JV contract to construct the surface infrastructure, sinking and associated infrastructure for two large-diameter shafts and the construction of underground crusher and ore flow infrastructure. Surface infrastructure was successfully completed during the year, with the other works progressing well.

Technology

The acquisition of 30% of Insig Technologies provides preferential access to their consulting and advisory services, big data acquisition and analytics, IoT platform services, and technical and industry solutions. The partnership agreement with Insig aims to accelerate the application of digital technology for competitive advantage. The partnership has already delivered a successful proof of concept in Australia, where RUC Cementation are executing a full production mining contract. This has enabled multi-machine remote control from the surface and Wi-Fi coverage to underground works. The success of this project provides the credibility to expand the utilisation of digital technology, first within RUC Cementation's domestic mining operations and then further afield across the platform. We have begun the process of identifying projects in Africa and North America where these technology solutions can be applied.

Other examples of the application of digital technology include the use of virtual reality for training purposes, the use of augmented reality to present engineering designs to clients and to conduct constructability assessments on engineering designs.

EMPLOYER OF CHOICE

Leadership and succession

Platform chief financial officer, Trevor Naidoo, resigned at the end of July 2019 to pursue an international opportunity. A process to find a successor for Trevor is underway.

Leadership development is critical to *Engineered Excellence*. To this end, businesses have development programmes for all levels of management. A robust talent management process is in place to identify high-performing employees. A personal development plan is then formulated and progress is monitored through regular engagement with senior executives. The development plan is reinforced by an effective mentorship programme which supports talented employees to advance to executive level.

Best people practices

Training and coaching ensures that employees are equipped to work effectively. A structured Group-wide performance management system is in place. Employees and their managers or supervisors agree on performance contracts and development plans which are evaluated twice a year and linked to appropriate performance-based rewards.

The strong recovery in mining activity in Australia and North America over the past few years has led to increased competition for skills in these regions. In Southern Africa, shaft sinking and mechanised mining skills are scarce. These factors, together with the demand for mine owners and contractors to employ from communities in close proximity to mines, make effective training and development essential.

The platform has a strong training and development ethos and its two world-class training facilities, one in South Africa and a recent addition in Mongolia, have been recognised for their significant contribution to skills development in their respective regions.

Employee relations are sound in all business units. In South Africa, where the workforce is unionised, management have professional and constructive relationships with union representatives and officials. Wage negotiations were concluded during the second quarter of the financial year, notwithstanding a protracted strike by the National Union of Mineworkers at the Venetia project. An agreement was reached for the next three years.

REPUTATION

Diversity and localisation

The business units employ diversity policies appropriate to their regions of operation.

In South Africa, Murray & Roberts Cementation met its transformation targets for FY2019, achieving a Level 4 BBBEE score and HDSA representation of 50% in senior management, 22% in middle management and 51% in junior management.

The Department of Minerals and Energy in South Africa recently published Mining Charter III, the legal framework for BBBEE in the sector. The most material impact on Murray & Roberts Cementation is that it will be contractually obliged to meet the local employment and procurement targets required of its clients. For single-asset junior companies, Murray & Roberts Cementation provides the only means for them to meet their charter obligations.

In North America, Cementation Canada has joint ventures with First Nations groupings, which tender for work in the territories where they are resident. The business has a diversity policy with a diversity work group established to identify barriers that inhibit diversity in the organisation.

In Australia, RUC Cementation has also developed a diversity policy. Their workforce is diverse and where the company operates outside of Australia, for example in Indonesia and Mongolia, a high percentage of the workforce is comprised of local residents.

PROSPECTS

Capital expenditure forecasts for mining and mining services show that after the recovery period from 2017 to 2020, expenditure is set to level off until 2022. This will limit prospects for organic growth. Growth in commodity prices should be reasonable for gold, platinum, diamonds, copper and nickel, but price growth will be more subdued in other commodities. The platform therefore expects to maintain earnings at current levels for the medium term, with upside potential for modest growth.





OIL & GAS

PLATFORM REVIEW

PETER BENNETT | BUSINESS PLATFORM CEO

OVERVIEW

The Oil & Gas platform is headquartered in Perth and operates under the Clough brand. It delivers projects across the full project life cycle, including specialist engineering, construction, EPC, commissioning, and operations and maintenance, on new build and operating facilities.

The platform's businesses are:

- 1 **BOOTH WELSH** – Ayrshire, Scotland
- 2 **CLOUGH** – Perth, Australia
- 3 **CLOUGH COENS** – Busan, South Korea
- 4 **CLOUGH ENERCORE** – Calgary, Canada
- 5 **CLOUGH USA AND CH•IV** – Houston, USA
- 6 **e₂o** – Adelaide, Australia.

The platform is targeting oil and gas opportunities in international markets including Canada, Kazakhstan, Mozambique, PNG and the USA, where meaningful growth is anticipated in the medium term. The platform has extended its services to opportunities in the growing infrastructure and mining markets in Australasia.

The Jakarta and Cape Town offices were closed in the year due to a lack of opportunities in these regions.



PERFORMANCE

Revenue was down 21% to R6,7 billion in the year (FY2018: R8,5 billion), predominantly due to multi-year commissioning and engineering projects in Australia coming to an end without any significant replacement projects. In a challenging transition year, the platform incurred an operating loss of R98 million (FY2018: profit of R209 million). This was mainly due to the delay of several Australian construction projects, losses incurred on two largely completed fixed-price contracts and difficult market conditions in the United Kingdom and Canada.

Overhead costs were well managed and included integration costs in relation to the acquisition of Clough USA. In the context of a tough oil and gas market, about 30% of overhead costs were incurred in business development and tenders to secure new work. This yielded good results and significant inroads were made into the infrastructure and mining markets in Australasia.

These efforts drove the order book to R23,1 billion (FY2018: R6,4 billion), the highest since June 2013 at the peak of the LNG construction boom. The order book is made up of diverse projects across multiple sectors and countries, and positions the platform for growth over the next few years. Projects in Australia make up the highest proportion of the order book, although a significant EPC project in the USA was added after year end.

During the year, the joint venture between Clough and Italian hydro power and tunnelling specialist Salini Impregilo, was awarded the multi-billion dollar civil and electro-mechanical contract for the iconic Snowy 2.0 Hydro-Electric project in New South Wales, Australia. This is a landmark project and cements Clough's position as a tier one contractor in this sector.

Clough also secured additional mining contracts, including BHP's South Flank Iron Ore development and Rio Tinto's Koodaideri development, both in Western Australia. A number of significant tenders are underway in this sector, which is expected to provide a strong pipeline of future projects. Clough, as part of the GCR Mongolia joint venture with RUC Cementation Mining and Gobi Infrastructure Partners, is also participating in Rio Tinto's Oyu Tolgoi project in Mongolia.

Two major commissioning contracts on the INPEX LNG development were completed in the third quarter of the year. Minor contracts to support the operation of the facilities are ongoing, although these are expected to conclude in a few months.

BUSINESS MODEL RESILIENCE

To achieve sustainable growth through the cycle, the platform has three key strategic objectives:

- Target growth markets in Australasia
- Maintain core capability in oil and gas sector
- Achieve focused growth in international oil and gas.

Significant progress has been made in Australia, with Clough recently awarded several contracts in the Australian infrastructure market. A major investment boom is being experienced in this market, with a government-funded programme expected to last for the next 10 years, particularly on the East Coast. Although this market is not as large, West Coast infrastructure contracts are also being pursued.

The iron ore sector in Australia continues to provide a large and reliable pipeline of projects, as mining companies seek to maintain production output by extending existing mines or developing new ones. Clough has continued to build on its mining capabilities with several contracts underway in the Pilbara region, and many opportunities being tendered for.

A major milestone for the platform was the acquisition of Saulsbury's Gulf Coast EPC downstream and chemical business unit in February 2019 for US\$8,5 million. Clough USA now provides a base from which to extend the platform's EPC service offering to the growing oil and gas and petrochemical sectors in North America. Integration is underway to implement the platform's business systems and best practices. Clough USA's management team combines existing personnel, management from Australia with extensive Australasian oil and gas experience and new appointments.

The shale gas and shale oil resource boom in the USA has established a competitive feedstock source that is stimulating new midstream and downstream processing plant developments. There is a large long-term spectrum of potential projects for Clough USA and this business is expected to contribute significantly to the platform's earnings in the near term.

PNG's long-awaited LNG expansion is a key focus area for the platform, given its over 40-year track record of successful project delivery in this country. With three major gas gathering and conditioning plants to be developed, in addition to a major expansion of the existing LNG facility, this market will provide significant project opportunity in the next three to five years.

The platform continues to target opportunities in the international oil and gas market with its global clients, and is pursuing contracts in Canada, Kazakhstan and Mozambique. The latter represents the single largest potential investment in the southern hemisphere, with indications of an acceleration in project opportunities.

CONTRACTOR OF CHOICE

Towards Zero Harm

The platform's pursuit of *Engineered Excellence* is underpinned by its commitment to setting new benchmarks in its world-class HSE performances. The platform achieved a LTIFR of 0.17 (FY2018: 0.14), in line with last year and the TRIR performance improved to 1.47 (FY2018: 1.71). The platform achieved 11 consecutive months without a lost time injury and delivered seven projects with Zero Harm during the year.

Clough's HSE leadership training applies cognitive neuroscience to improve better communication within project teams resulting in safer outcomes and ultimately Zero Harm. All line managers, employees and subcontractors participate in HSE programmes. The MAP/CRM programme, aimed at critical controls to prevent major accidents, has been implemented and is proving effective across all Clough-managed project sites.

Technology

The platform is adapting its IT architecture to support the complexity of a growing business and rapid changes in the technology landscape. A three-year strategy has been developed to lay the foundation for a digital platform. This strategy follows a hybrid approach, focusing on scalable technology to meet the demands of a global EPC business.

Project delivery

NIUPOWER POM POWER STATION

Clough, in consortium with Wartsila, delivered the EPC contract on the power station near Port Moresby in PNG. The project presented challenges such as remote location, high-risk activities with a relatively low-skill labour force, complex immigration coordination and the management of a large workforce. The project was successfully completed during the year without any injuries.

BHP SOUTH FLANK PROJECT

Clough is developing the ore handling plant and non-process infrastructure projects. Site mobilisation for the ore handling plant and the non-process infrastructure is expected to reach practical completion in October 2020, with more than 90% completion expected by June 2020. The project will replace production from the 80Mtpa Yandi mine, which is reaching the end of its economic life.

RIO TINTO IRON ORE KOODAIKERI PROJECT

Awarded in April 2019 to the Acciona Clough JV, the project involves the civil works for the construction of the northern rail formation of this greenfield mine development in the East Pilbara mining region. Site mobilisation commenced in July 2019 and completion is expected by November 2020.



SNOWY 2.0 HYDRO-ELECTRIC PROJECT

The project involves linking two existing Snowy Scheme dams through underground tunnels to depths of up to one kilometre, and constructing an underground power station with pumping capabilities. It is in its early works phase, with main construction expected to commence in late FY2020. Snowy 2.0 will add 2 000 megawatts of energy generation and provide 175 hours of energy storage for the national electricity market, enough to ensure the stability and reliability of the system during prolonged weather events, such as wind or solar droughts.

RIO TINTO OYU TOLGOI PROJECT

As part of the GCR joint venture, the project involves construction and commissioning of two large-diameter shafts and the underground material handling system, expected to be completed in April 2020 and April 2021, respectively. Situated in the southern Gobi Desert of Mongolia, Oyu Tolgoi contains reserves and resources that make it one of the world's largest known copper and gold deposits.

ENTERPRISE ETHYLENE DEHYDRATION PROJECT

Acquired through Clough USA, this project is expected to be completed by October 2019, and is on track to achieve Zero Harm.



EMPLOYER OF CHOICE

Leadership and succession

Developing the capacity and capability of the platform's leadership and management teams is critical to achieving its strategic goals and objectives.

Clough's Training Academy programmes are an integral part of its strategic initiative to build capability across the business. Through its Construction Management Academy and Project Management Academy, employees with leadership potential are encouraged to develop skills for their own career advancement and for the long-term success and evolution of the business. The academies apply transparent selection criteria and prepare participants for the next steps in their careers.

Clough recognises that an effective succession plan is dependent on the attraction and retention of employees and is committed to develop young professionals with leadership potential. The Young Professionals Group was established in the year for employees with less than 10 years' experience, to provide them with an opportunity for shared development across a range of learning activities.

Clough also runs a Graduate Programme and Internship Programme. The structured, three-year Graduate programme is designed to provide a challenging and rewarding career start that supports the development of core competencies and capabilities through experience and training. The Internship programme offers students in their penultimate year an opportunity to gain practical experience in their field of study and prepare them for future employment.

Best people practices

Formal performance reviews are held annually to ensure employees are achieving specific goals that support overall business objectives, and to identify their development needs. The human resources function has developed a reward and recognition programme aimed at identifying and rewarding high-performing staff on a more frequent and less formal basis.

An employee engagement survey across all business functions was undertaken in the year. The survey identified areas for improvement, with new processes and programmes actioned to address these. New IT and management systems have also been implemented to improve process and workflow issues identified in the survey.

All employees are required to renew their Code of Conduct training annually and to foster an environment that encourages ethical behaviour. Breaches or suspected breaches must be reported to management or to an external confidential hotline, available to all employees.



REPUTATION

Diversity and localisation

Gender and cultural inclusion are receiving attention across the platform. The aim is to create a culture that embraces and encourages diversity as a core value, while working towards an employee profile that more accurately reflects the local communities in which it operates. Specific targets are set for participation by women and indigenous employees in its projects.

Working alongside the Workplace Gender Equality Agency, Clough has conducted research to measure equality in the workplace and to inform initiatives for improvement. Support is provided to all employees, regardless of gender, to help them balance careers and family responsibilities.

Numerous initiatives are underway to increase the participation of indigenous communities. The platform is committed to developing indigenous business and individual employment experience beyond low-skilled roles.

In Australia, Clough has been working to create opportunities for Aboriginal and Torres Strait Islander People and recently developed a Reconciliation Action Plan to increase diversity in all operations. The plan outlines Clough's actions, responsibilities and accountabilities, and aims to build strong relationships and facilitate connections with these communities.

Clough has been delivering projects in PNG for over 40 years and is one of the most experienced contractors in the region. Good community relations play a critical role in the successful delivery of projects. Clough's specialised community relations professionals have extensive experience in working with the local communities and have earned their respect and trust through effective consultation and engagement. Community engagement plans support project delivery and community benefits; such as local employment and procurement of goods and services, business development, improvements in local infrastructure, utilities and services, and community support initiatives.

The Clough Foundation focuses on improving the lives of people living in communities where it operates. Overseen by a semi-independent board, the trust supports organisations and communities that provide sustainable benefits to society and represent the company's diverse operations. An example is ChildFund, which provides maternal and child health care, health clinic upgrades and immunisation patrols to remote regions in PNG.

PROSPECTS

After a difficult year for the platform, the substantial order book secured will provide the revenue base for a return to profitability in the new financial year and growth thereafter. Infrastructure projects in Eastern and Western Australia, and in the Western Australian mining sector, will provide opportunities in the short term. Internationally, the platform's history of successful project delivery in PNG positions it well for oil and gas and mining opportunities there. Several near shore marine opportunities are being pursued in the LNG market in Africa and North America. Clough USA will continue to expand its market presence and is developing a strong pipeline of petrochemical project opportunities for FY2020 and beyond.

The buoyancy of Australia's infrastructure and mining markets, coupled with the LNG market in PNG and North America, gives the platform clear visibility of its pipeline of work and confidence in its return to a substantial earnings contribution to the Group.



STEVE HARRISON | BUSINESS PLATFORM CEO

POWER & WATER

PLATFORM
REVIEW

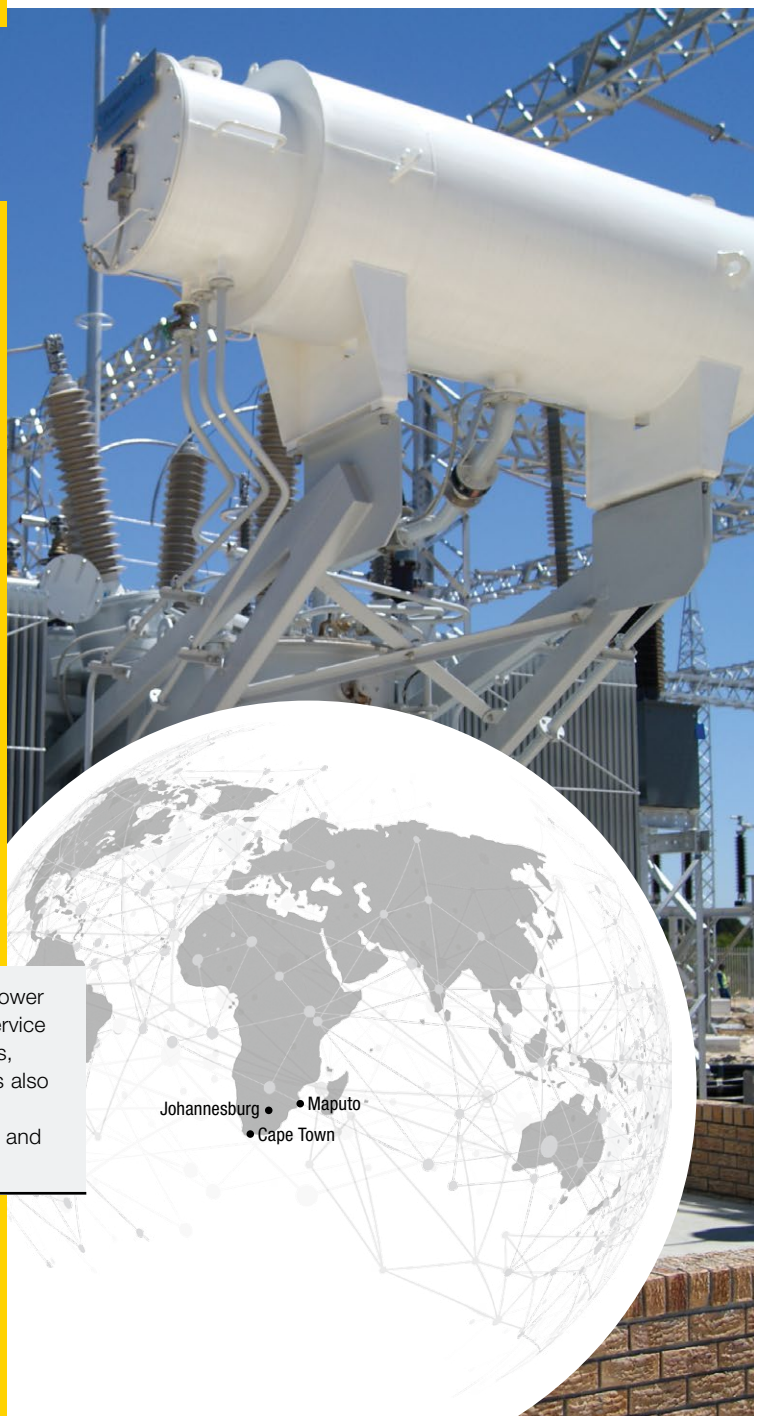
OVERVIEW

The Power & Water platform operates predominantly in South Africa and sub-Saharan Africa. Its service offering includes feasibility studies, detailed engineering, procurement, construction, commissioning, and repairs and maintenance work.

The platform's businesses are:

- 1 **AQUAMARINE WATER TREATMENT**
- 2 **MURRAY & ROBERTS COSMOS MOZAMBIQUE LIMITADA**
- 3 **MURRAY & ROBERTS POWER & ENERGY (MRPE)**
- 4 **MURRAY & ROBERTS WATER (MRW)**
- 5 **OPTIPOWER PROJECTS.**

Given the challenging state of the South African power and water sectors, the platform is extending its service offering to other markets, including petrochemicals, metals and minerals, and paper and pulp. There is also substantial growth potential in the transmission, distribution and substation sectors in South Africa and sub-Saharan Africa.



PERFORMANCE

With the Medupi and Kusile power station projects nearing completion and in the absence of large replacement projects, revenue for FY2019 decreased to R2,5 billion (FY2018: R4,8 billion) and the order book declined to R0,9 billion (FY2018: R1,5 billion). The platform incurred an operating loss of R32 million compared to a R134 million operating profit in the prior year. This was primarily due to losses incurred at Sasol's CTFE project in Secunda, a dispute has been declared. Operational performance was satisfactory on all other projects.

Overhead costs were reduced in line with the anticipated lower future revenue stream. The restructuring was undertaken without compromising the platform's ability to deliver on its strategic objectives, service the current order book and develop its project pipeline.

MRPE's work on the Medupi and Kusile power station projects is nearing completion and focus has shifted to provide repair and maintenance services to Eskom's ageing fleet of power stations. There is substantial growth potential in the transmission, distribution and substation sectors in South Africa and sub-Saharan Africa and to position the business for this opportunity, specialist contractor OptiPower Projects was acquired for R38 million on 1 July 2019. OptiPower Projects owns specialised plant and equipment needed to undertake transmission and refurbishment projects.

In line with the platform's strategy to pursue opportunities in complementary markets, structural, mechanical and piping construction contracts were secured from Anglo Platinum at its Polokwane smelter and from SAPPI at its SAICCOR complex at Umkomaas.

MRW remains small and needs to develop critical mass, but is well positioned to take advantage of opportunities in the water and wastewater treatment sector, driven by water shortages. During FY2019, the benefits of the Organica Water technology were successfully proven at the Verulam wastewater treatment plant in the eThekweni Municipality. The demonstration facility hosted visits from prospective public and private sector clients, funding institutions, consulting engineers and other key water sector stakeholders. It is important that the business achieves a breakthrough in securing wastewater treatment projects that apply this innovative technology.

Murray & Roberts Cosmos Mozambique Limitada, a subsidiary of Murray & Roberts Mozambique Limitada, was formed in the year to position the platform for opportunities in Mozambique, especially in LNG.

BUSINESS MODEL RESILIENCE

Given market uncertainty and the lack of transparency in procurement processes for local government projects, the platform continues to refine its strategy to ensure its future sustainability. Some of the initiatives aimed at accessing broader market opportunities include:

- + Geographic diversification
- + Diversification into new market sectors
- + Right-sizing in line with market demand
- + Leveraging digitalisation in execution.

Implementation plans include a focus on project development and investment through an EPC model with funding options where appropriate. Platform leadership continues to develop the necessary capacity and strategic partnerships with local and international service providers to offer turnkey project solutions. A key differentiator in the sub-Saharan Africa market is the ability to offer funded turnkey EPC solutions.

A formalised relationship with project development finance institutions and commercial lenders has been established and term sheets are under discussion with energy ministries in several sub-Saharan Africa countries.

For MRPE, the best opportunity in the short term is in the transmission sector. The primary driver for transmission and substation demand is low electrification rates and access across African economies including South Africa and Angola. The secondary driver is cross-border interconnectivity to enable power trade between countries in sub-Saharan Africa. The platform's acquisition of OptiPower procured entry into the high and medium voltage transmission, distribution and substation sectors in South Africa and sub-Saharan Africa. OptiPower's technical capability combined with MRPE's capacity, make for a compelling combination to unlock market potential.

Notwithstanding the ailing water infrastructure in South Africa, the water sector remains very inactive with few opportunities coming to market. However, it should be only a matter of time before the platform's licensed Organica Water technology will achieve a breakthrough for the first time in Africa. Aquamarine Water Treatment has been relocated from the Western Cape to Gauteng with expectations for considerable geographic growth, albeit from a low base. Along with its traditional design and assembly business, a new focus on chemical sales and components was established with several distribution agreements signed. During FY2019, MRW operated and maintained small water treatment plants to treat borehole water to potable standard (SANS 241) at two Life Healthcare hospitals and five additional projects are expected to commence in FY2020.

The ageing refining and petrochemical infrastructure in South Africa presents an opportunity for the platform to diversify into other market sectors. The platform is engaging with satellite operations of the large oil and gas majors, to offer a value proposition for the long-term sustainability of their operations in refining, fuel storage and distribution. Opportunities are being explored in renewable energies, as well as structural, mechanical and electrical services for mining projects.

In Mozambique, emphasis is on the LNG developments in the Rovuma Basin. MRPE is working with the Oil & Gas platform and various partners to respond to opportunities in what promises to be the single largest potential investment in the southern hemisphere.

The platform provides project services to market sectors which, domestically and internationally, are characterised by complex commercial relationships between clients and contractors, often leading to disputes and litigation. Platform leadership is committed to engage with prospective clients with the objective of proposing alternative but established contracting models that require a more collaborative approach to project delivery. These models include alliance-type contracts, which establish closer cooperation between clients and contractors with the ultimate objective of enhancing project outcomes.

CONTRACTOR OF CHOICE

Towards Zero Harm

Safety is paramount and the platform is committed to the Group's vision of Zero Harm. A safety culture survey undertaken during the year showed improved levels of safety maturity on major projects. A Neuroleadership programme has been rolled out at Anglo Platinum's SO₂ Abatement Project in Polokwane. Further application of this programme will be aimed at improving an already impressive safety performance.

The platform's health and safety performance for FY2019 was industry leading. The LTIFR increased to 0.40 (FY2018: 0.12), primarily due to a significant reduction in hours worked as the Medupi and Kusile projects come to an end. This rate equates to three lost-time injuries incurred over more than eight million work-hours. The TRCR at 1.19 (FY2018: 0.98), was a world-class result. The MAP/CRM programme is fully entrenched and all projects continue to show a significant improvement in their total incident rate.

All businesses are ISO 45001, ISO 9001 and ISO 14001 certified. In FY2019, the platform maintained the prestigious South African Institute of Welding ISO 3834 accreditation.

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Project delivery

MEDUPI AND KUSILE POWER STATION PROJECTS

Construction work is complete at Medupi, with units 2, 3, 4, 5 and 6 generating power. Unit 1 is expected to be synchronised to the grid during the first quarter of calendar year 2020. Electrical and instrumentation services at Medupi continued throughout FY2019. At Kusile, units 1, 2 and 3 are providing power to the grid and planned maintenance outages on these units were successfully executed during the year.

SAPPI VULINDLELA AND ANGLO PLATINUM SO₂ ABATEMENT PROJECTS

Both projects are under construction with scheduled completion for FY2020.

SASOL CTFE PROJECT

Commercial challenges resulted in significant project losses. The project is in the handover stage and should be completed by October 2019.

Technology

The engineering and construction industry has been a late adopter of digital technologies, but digitalisation will be a key requirement for future success. The platform has developed a digital strategy, which will be executed in two phases over the next two-and-a-half years.

The first phase is focused on digital enablement – the implementation of an integrated digital/software platform to enable core project and support functions, which will also provide the opportunity to critically re-engineer certain processes. Mobile solutions, particularly in the field, will replace inefficient paper-based systems. Benefits will include productivity improvements and cost reductions.

The second phase will focus on digital transformation. This will add digital technologies to the integrated software platform to improve project delivery, increase productivity, flexibility and adaptability, and more efficient asset management. Furthermore, innovative client solutions have been identified.

EMPLOYER OF CHOICE

Leadership and succession

During FY2019, a comprehensive talent review was undertaken at senior and middle management levels. High potential employees have been identified and will participate in specific development programmes, with an emphasis on leadership and management development. A mentorship programme has been implemented for talented black employees, with specific plans to develop them for leadership positions.

Best people practices

As the power programme comes to an end, there has been a significant reduction in the workforce, mainly due to the demobilisation of project employees.

The platform's employment model provides for flexibility and a high proportion of employees are engaged by way of project-specific limited duration contracts. In FY2019, R18,5 million (FY2018: R42,2 million) was invested in skills development, of which 96% was allocated to these employees. The majority of the platform's training investment has been focused on technical training of artisans.

The platform intends to develop a core group of artisans and supervisors, who will benefit from ongoing investment in their career advancement. These permanent employees will be supplemented by employees with limited duration contracts to meet project requirements.

REPUTATION

Diversity and localisation

MRPE achieved a Level 3 BBBEE rating in FY2019 and is targeting Level 2 in FY2020. This is an outstanding performance and the improvement will be primarily achieved in areas such as preferential procurement, skills development and CSI.

The platform's employment equity profile improved during the year, particularly at middle management level. Representation of black employees was stable or improved across all levels: senior management at 27% (FY2018: 25%); middle management at 57% (FY2018: 47%) and junior management at 93% (FY2018: 93%). The platform continues to develop young black talent through its talent management programmes.

Localisation is a strategic imperative and although it presents significant challenges, innovative solutions are employed. Major challenges relate to experience and skills in local communities, as well as employment and economic investment expectations. The platform works closely with clients, local community forums and leaders to manage expectations and to provide support for local suppliers.

PROSPECTS

While the Medupi and Kusile power stations were under construction, platform leadership worked hard to establish a sustainable business that could make a meaningful contribution to Group income. Unfortunately these efforts have not yet yielded the desired outcome, mainly due to a lack of investment and therefore project opportunities in the South African economy. Consequently, the platform has had to prepare itself for becoming a smaller business by rationalising cost structures, while maintaining growth capacity for the future.

The platform has strategically positioned itself for identified short- to medium-term project opportunities, and its future performance will be largely determined by the extent of investment in its target market sectors. These opportunities include:

- ✚ Repair and maintenance work on Eskom's ageing power station fleet
- ✚ The renewable energy sector, including wind, solar & biomass and gas-to-power
- ✚ Transmission, distribution and substation projects in South Africa, as well as sub-Saharan Africa
- ✚ Opportunities in the resources and industrial, and paper and pulp industries
- ✚ Opportunities in the refined fuel storage sector in South Africa and the LNG sector in Mozambique
- ✚ Water infrastructure in South Africa, especially wastewater treatment.

Considering its capacity to deliver projects in the South African power and water sectors, and with both sectors in dire need of investment, the platform should return to profitability in the medium term, making a more meaningful contribution to Group income.