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Over the last few weeks, we have had the pleasure of visiting a number of manufacturing facilities. Understanding the tough conditions, it is exhilarating to see and experience the commitment and investment that is being made and to see a sustainable turnaround in local capability and capacity. We have in issue 5 a few more of these tours planned and if you would like your company to be included, please let the team know.

Opening of Bombardier's South African propulsion equipment production facility

Page 34

Galison site tour

Page 26

Alstom Ubunye site tour

Page 20

Our cover this issue does not have a feature story attached to it, but our team took brilliant footage of this very serious workhorse – see it in action, and I believe that there are a few in stock. (http://www.surtees.co.za/products/trackmobile-1)

Issue 4 offers some interesting insight into developments in the railway industry in Africa, including a look at a fascinating project in Guinea and the latest developments in Nigeria's standard gauge railway as well as Vale's current challenges in Mozambique. The issue also offers in-depth coverage of some of the continent's biggest players in rolling stock manufacturing including Galison and Bombardier. There is a feature on Huawei's signalling systems being implemented on the continent's new standard gauge railway systems among others as well as a look at the latest developments in Bolloré's Blueline project in West Africa.

I hope that you enjoy an engaging and informative read.

Phillippa Dean

Phillippa Dean
Railways Africa - Editor

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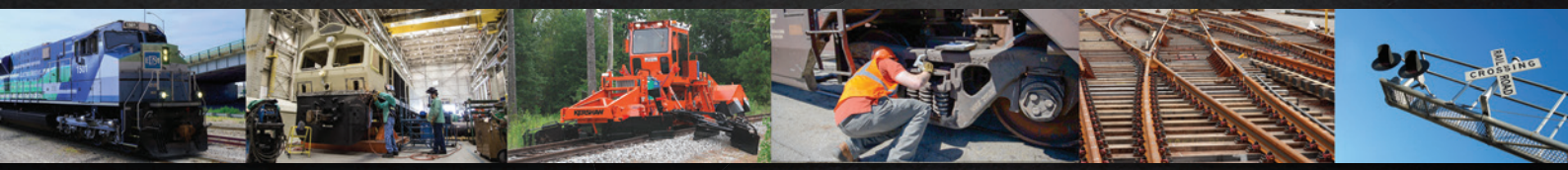

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In this issue

TAZARA - Africa's Freedom Railway Celebrates their 40th

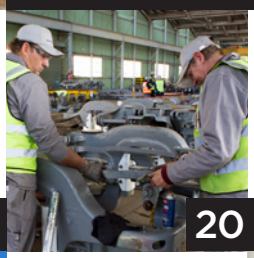
6

African Railways Enter Into The Digital Age

14

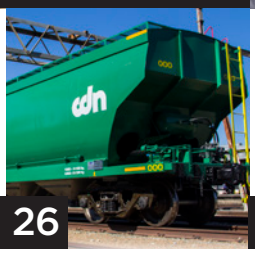
West African Rivalry

18



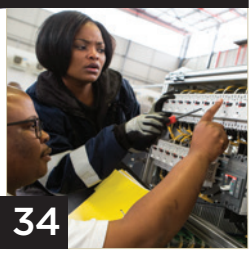
Alstom Increases Their South African Footprint

20



Galison: South African Company Takes On The Global Market

26



Bombardier Opens New South African Production Site

34

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TAZARA – Africa's Freedom Railway Celebrates their 40-year Anniversary

On 14 July 1976, the Chinese government handed over one of the largest infrastructure construction projects to be undertaken on the African continent since the end of WWII, bringing on-line the Tanzania-Zambia Railway Authority (TAZARA).

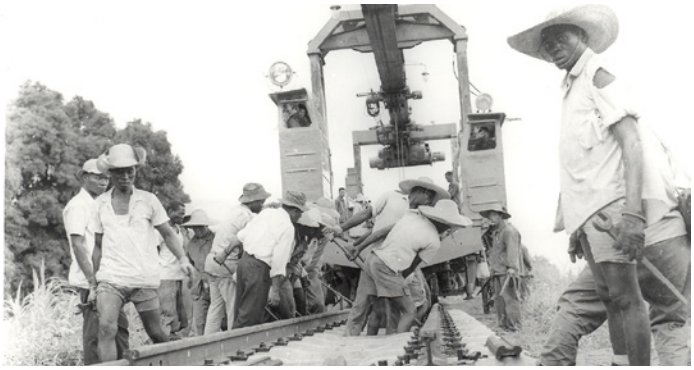
The 1,860km line runs from Dar es Salaam, Tanzania's largest city on the coast of the Indian Ocean to Kapiri Mposhi, a town in central Zambia's Copperbelt Province.

The TAZARA line was the first railway project to be undertaken by China on the continent and the first mega infrastructure development project to be initiated by independent African States after gaining their independence in the 1960s. As such, TAZARA has long been a symbol of freedom for post-colonial Africa. Just as the continent's socio-political revolution from colonial control to independence has been fraught with hardship, conflict and fluctuating success, so TAZARA has had an arduous journey through their 40 years of operation. In the 2014/15 financial year, the railway authority reported their lowest ever traffic volumes, with operations so severely degraded that services almost ground to a halt.

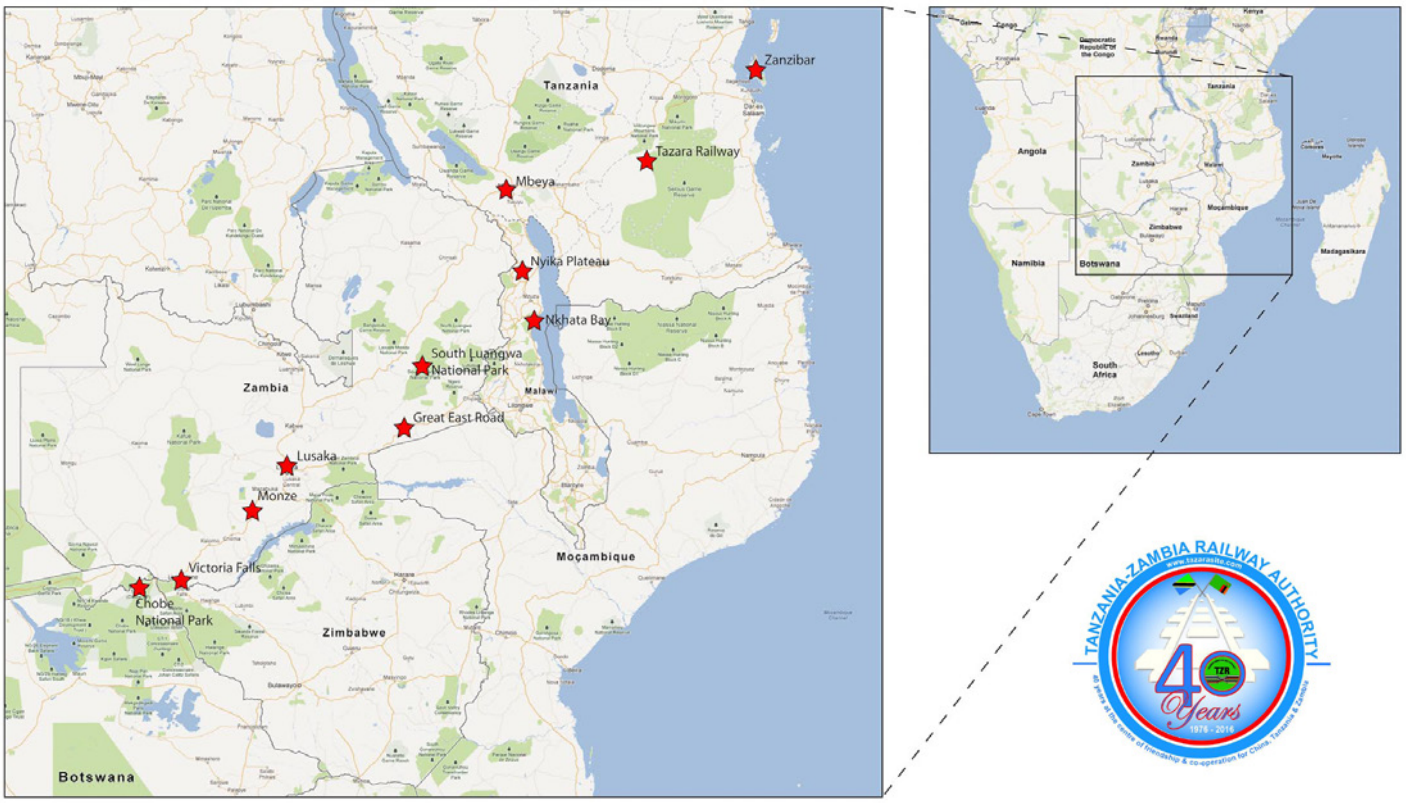
However, as with so many stories about the remarkable resilience of the African spirit, latest developments at TAZARA seem to promise a victory emerging from the jaws of defeat. The East African operator is celebrating their anniversary with the sentiment: "Life begins at 40", reflecting the TAZARA management team's renewed vision and optimism in re-establishing the operator as the leading service provider in the rail sector for the region.

How It All Began – Historical Foundations Of TAZARA

The original construction of the TAZARA railway line was deeply entrenched in post-colonial politics and in many ways the story of TAZARA closely mirrors the story of African Nationalism as a whole. In 1960, the political milieu in

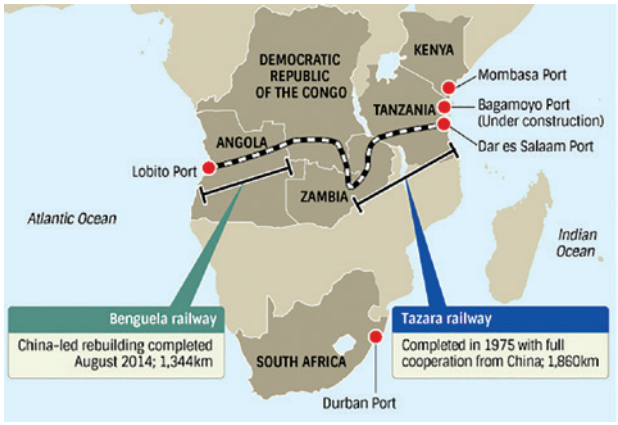


Laying of track. Over 50,000 personnel were employed during the construction that lasted five years.



sub-Saharan Africa was structured along a dichotomous axis, with white, colonial rule on the one hand and newly established independent African states on the other. By 1964, Mozambique, South Africa and Southern Rhodesia were still under non-black control, while Northern Rhodesia had become the independent state of Zambia. This independence was undermined by the fact that Zambia remained economically dependent on the white controlled South. The young state's economy was based on copper mining, and to export copper ore Zambia had to use the services of the colonial Southern Rhodesian Railways to access the Portuguese controlled port of Beira in Mozambique[1].

The newly elected Zambian president, Dr Kenneth Kaunda, eager to lessen the country's dependence on the South, commissioned the World Bank to investigate the possibility of building a new railway through Tanzania, which had gained its independence in 1961, to link the country's copper mines with the port of Dar es Salaam. A feasibility study was undertaken but reports were not positive, predicting that by the year 2000, only 87,000 metric tonnes of cargo would be carried between Zambia and Tanzania[2]. Unable to get backing from the capitalist West, Kaunda travelled to Peking in 1967 and received an offer from the communist Chinese state to build the TAN-ZIM Railway as a turnkey project.

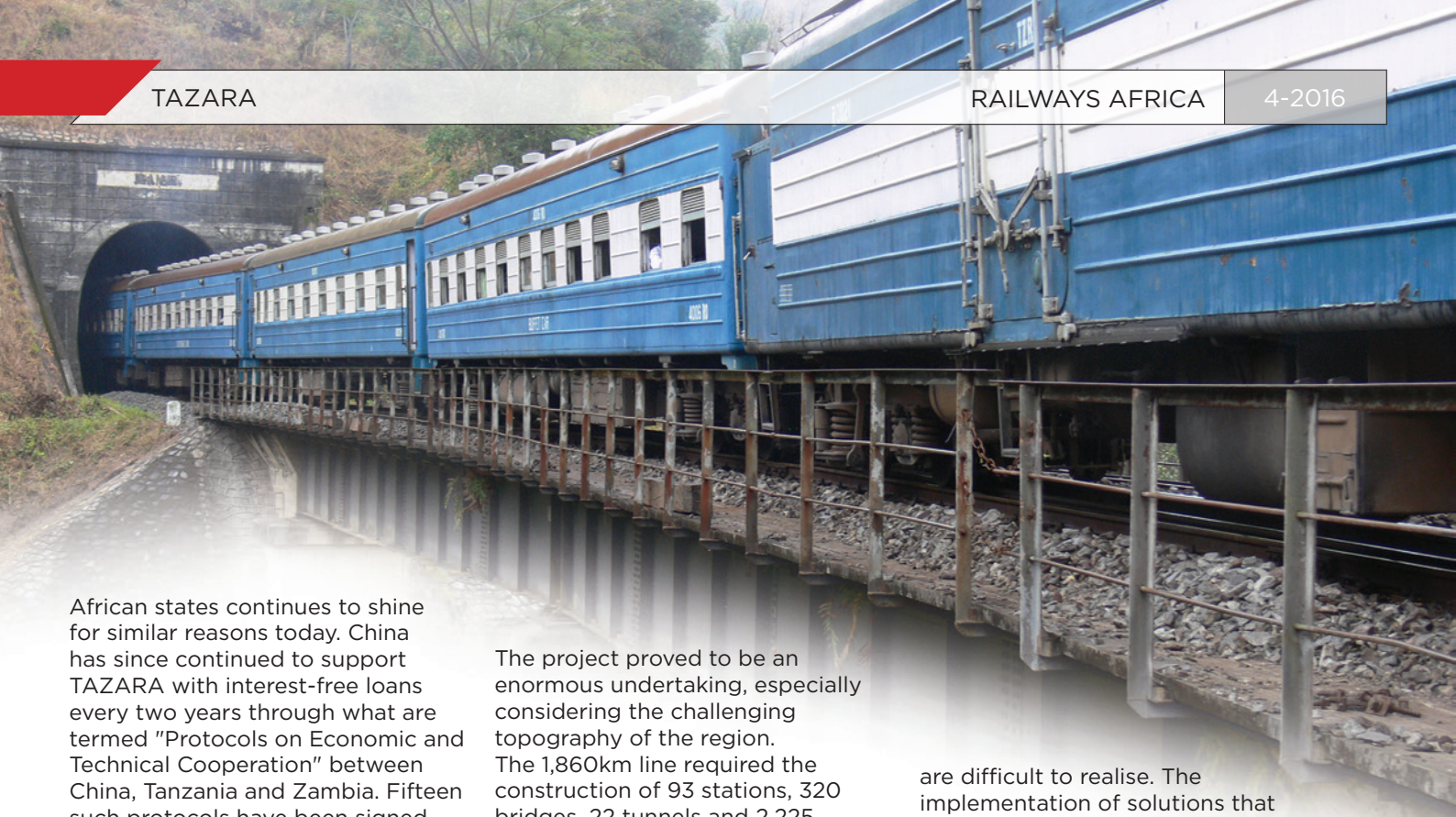


On 5 September 1967, Zambian and Tanzanian ministers signed a deal with China in which the latter agreed to construct the TAN-ZAM railway, providing an interest free loan of RMB988 (approximately $US150 million), to be repaid after 30 years[3], which would cover the cost of construction, supporting infrastructure, motive power, rolling stock and staff training.

The development project came at a time when tension between the capitalist West and communist East was at the forefront of world politics. Western powers, including Britain, the USA and Western Europe, deeply mistrusted Maoist China's motives for backing the development project, suspecting that they had ulterior motives for seeking access to the newly independent African states. In response, the United States eventually funded the Tan-Zam highway between 1968 and 1973 to compete with the railway[4].

China, however, did not impose any political conditions on the investment and provided unquestioning support for the development of African infrastructure, despite the fact that China, under the dictatorship of Mao Tse-Tung, was dealing with development challenges of their own. Julius Nyerere of Tanzania best illustrated his position at the time by stating at the signing of the agreement in Peking: "All the money in the world is either Red or Blue. I do not have my own Green money. I am not taking a cold war position. All I want is money to build."

China's non-political approach has not changed much in the 50 years since this initial investment in Africa, and the "Rainbow of Friendship" – as it was coined in Chinese media – between China and



African states continues to shine for similar reasons today. China has since continued to support TAZARA with interest-free loans every two years through what are termed "Protocols on Economic and Technical Cooperation" between China, Tanzania and Zambia. Fifteen such protocols have been signed over the past 40 years, to the value of RMB Yuan 2.6 million.

The Mountains Overcome – The Construction Of TAZARA

The Tanzania - Zambia Railway Authority (TAZARA) was officially established in March 1968, with construction commencing on the line in 1970. The Chinese Railways Engineering Corps, then part of the socialist state's enormous military engine the People's Liberation Army, together with the Chinese Ministry of Railways, provided much of the technical expertise and labour force. Incidentally, both of these organisations continue to deliver on infrastructure construction projects in the region under their new titles: China Railway Construction Corporation (CRCC) and China Civil Engineering Construction Corporation (CECC), respectively[5].

It was agreed from the outset that the line would be constructed in the cape gauge of 1,067mm, in order to ensure that the new line would connect seamlessly to the existing Zambian railway system, as built by the Rhodesians. The Tanzanian Railways however, was built on the meter gauge as implemented by German colonial government prior to WWI. The closeness of the two gauges eliminated the possibility of trains running on a section of duel gauge track, which meant that the existing line out of Dar es Salaam could not be used.

The project proved to be an enormous undertaking, especially considering the challenging topography of the region. The 1,860km line required the construction of 93 stations, 320 bridges, 22 tunnels and 2,225 culverts. During construction, 330,000 tonnes of rail steel needed to be moved, along with 89 million cubic meters of earth and rock[6] through some of Africa's wildest savannah and mountainous terrain. The project relied heavily on manual labour and to this end China sent 50,000 workers between 1965 and 1976, who were assisted by as many as 60,000 local labourers over the duration of the build. Conditions were notoriously difficult, with 160 workers dying in construction accidents over the course of the project.

After one year of trial operations, in an official ceremony held on 1 July 1972 at Kapiri Mposhi, the Chinese government officially handed the TAZARA line over to the governments of Zambia and Tanzania and commercial operations begun on 14 July. The project was the largest infrastructure construction ever undertaken in the region, and on completion was the longest single railway line on the continent at the time. The railway soon became known as the "Great Uhuru Railway" – Uhuru being the Swahili word for freedom – signifying the symbolic significance of the project for the African Nationalism movement.

Operational Difficulties - A False Start

Most development specialists will tell you that projects that rely heavily on imported technology are difficult to realise. The implementation of solutions that have been hugely successful in their countries of origin most often fail when introduced into new environments because of diverse local factors that are often not taken into account during the planning phase of a project. The difficulties experienced by the TAZARA railway line since its inception in the 1970s serves as a perfect example of why localisation and effective skills transfer lie at the heart of successful development project implementation.

Driven by the Confucian work ethic that permeates the Chinese culture on every level, contractors were driven to complete the TAZARA line in record time, thereby demonstrating the enormous strength of the Chinese workforce, a principle strongly supported by Chairman Mao's foreign policy. Unfortunately, this resulted in very little time being invested in training local people in the effective operation of their state-of-the-art railway system.

The diesel hydraulic locomotives provided by China for operation on the line were incapable of hauling heavy loads up the steep escarpment between Mlimba and Makambako[7] and by 1978 as many as 27 of the new locomotives intended to run on the line were out of operation. While maintenance schedules were put in place, these were not always followed as a result of lack of funding and a lack of local experience in managing

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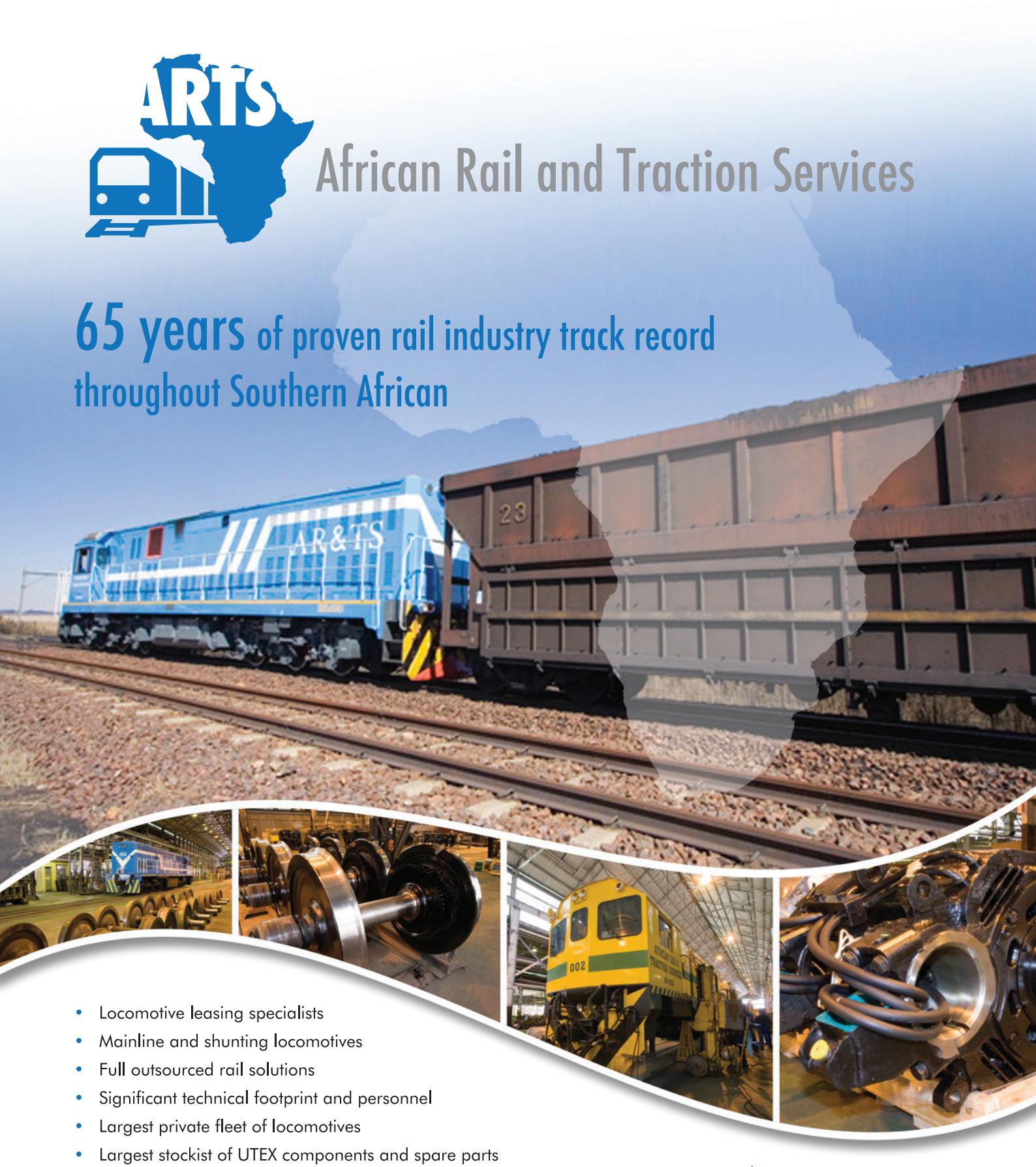

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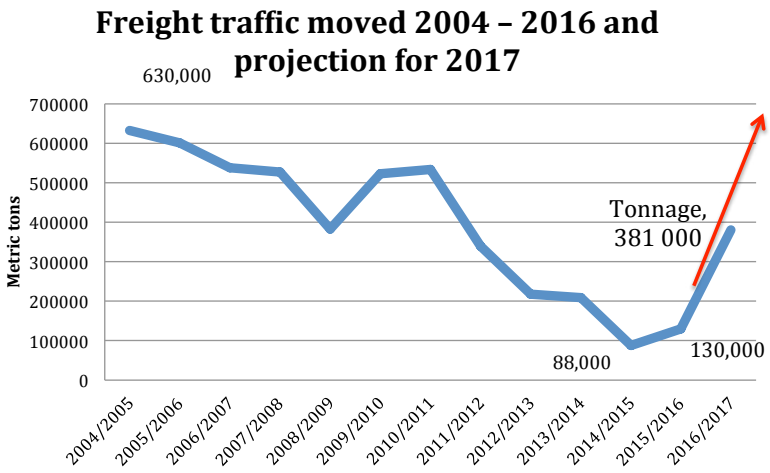
infrastructure of this nature. In addition, the rail operator almost immediately experienced labour difficulties. TAZARA was dealing with an inexperienced workforce who were battling a multitude of socio-economic challenges with little support. Poor work ethic and criminality seemed to dominate, with 20 staff members dismissed for theft in 1978 alone.

As a result of poor maintenance, breakdowns, insufficient capacity, human resource difficulties and inefficient management, the TAZARA line failed to realise the efficiency and volume of traffic that was hoped for at inception. As a result, in 1983, the Tanzanian and Zambian governments invited the Chinese back to assist in managing the railway, which resulted in some 250 Chinese managers being stationed at railway bureaus along the route[8]. Under this foreign management, the railway did manage to gain some ground in the return to profitability, with effective revenue generation in place.

This intervention was, however, unsustainable as maintenance costs continued to undermine gains made, and China extended another interest-free loan to the operator to pay for spare parts and rehabilitation of the track. In 1985, several European countries also came to the assistance of the railway, extending an additional $US150 million in loans between 1987 and 1993. Once again, this funding served to plug the hole



but failed to address the fundamental lack of a sustainable maintenance plan for railway infrastructure and the local skills development needed to ensure the effective management of operations.

By 1990, the dramatic political shifts in Southern Africa changed the economic climate to further undermine the profitability of TAZARA. With Namibia gaining independence in 1990, and the end of Apartheid in South Africa, the political advantage of TAZARA was diluted as routes opened up via road to ports in the newly liberated South. In an ironic twist, according to 2014/2015 financial year reports, by mid-2015, TAZARA was hauling the meagre 88,000 tonnes of cargo predicted by the World Bank's 1964 feasibility study. The rail operator has however made significant gains in the last year, pulling traffic back to 381,000 metric tonnes in the 2015/16 cycle.

Life Begins At 40 - A Turnaround Plan

In the forty years since TAZARA initiated operations in East Africa, the authority has never been able to reach its full potential capacity of transporting 5 million tonnes of cargo across the territory. The reasons for this are complex and diverse, and include political turmoil in the region, shifting markets and inefficient management of the company to name a few. The rail authority has been the recipient of millions in international funding over the years, however, failing to change the organisational structure and business plan of the operation has resulted in rescue plans consistently yielding poor results.

China, once again, has shown a willingness to extend the help that TAZARA desperately needs to pull operations back to profitability. In 2011, China signed off approximately 50% of TAZARA's debt in an attempt to lessen pressure on the falling revenue of the operator. Between 2010 and 2011, China extended an additional $US80 million in interest-free financing to provide for new locomotives, shunting locomotives, maintenance equipment and parts for existing rolling stock in need of repair. In November 2015, TAZARA received four new diesel-electric mainline locomotives and 18 new passenger coaches valued at $US 22.4 million, which came into operation in

Tanzania-Zambia Railway Authority received delivery of four diesel-electric locomotives and 18 coaches from China late November.

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"Our 40th Anniversary has come at a time when we are not only emerging from years of challenging times, but it is also a time when we are determined to look forward and assure the world that we are back, and back with strength. We are determined to turn this company around. We shall reclaim our position as the best transportation company in the region. That is our vision."

January 2016. A total of 40 wagons were rehabilitated between 2015 and June 2016 and the company has also invested in two new rescue cranes, significantly improving the state of TAZARA's current operational rolling stock and support equipment.

While yet another rescue plan for TAZARA may seem like throwing good money after bad, one cannot ignore the renewed energy and political will that is driving the current recapitalisation programme. The appointment of Bruno Ching'andu to the chief executive officer position is the first in many positive moves made by TAZARA management. Ching'andu is a highly qualified engineer, with post-graduate qualifications in management and business administration, which positions him to understand both the technical and managerial aspects of running a successful railway authority. Having worked for Zambia Railways Limited (ZRL) for more than 18 years, Ching'andu has a wealth of experience and a grassroots understanding of the complexities of railways management in the African context. After leaving ZRL, he entered the private sector, holding senior management level positions at General Electric and Bombardier, representing these multinational railway companies at a regional level.

Since his appointment to the CEO position, Ching'andu has injected TAZARA with a renewed vision to establish the operator as a customer-centric, highly efficient and competent service provider for East Africa. He has engaged directly with TAZARA employees across designations, outlying his high expectations for a renewed work ethic and a spirit of cooperation between management and staff, while setting clear expectations regarding delivery of service: "I dream of a TAZARA whose workers are proud and happy to be working for this company," he declared, when addressing 500 members of staff in Dar es Salaam in June of this year, however adding that: "I refuse to pay people, to keep people on account of attendance. You will not remain at TAZARA by attending TAZARA. You will remain at TAZARA by performing," he cautioned.

With the solid, home-grown leadership that has for so long been missing at the helm of TAZARA in place, the stage has been set for the first meaningful re-launch of the East African operator. Already, customers are returning to TAZARA with the Malawian Government placing an order to move 48 million litres of petroleum products in the next 12 months on the line, starting in July. The Zambian government has also shown interest in using TAZARA for the transportation of fuel from the Port of Dar es Salaam to Zambia and the authority recently announced a deal with African Fossils Limited of Tanzania to move 18 million litres of petroleum products to the Democratic Republic of Congo (DRC) over the next year.

In another strategically sound move, officials from Zambia, Tanzania and China met in May to discuss opening TAZARA up to private investors, allowing private operators to run their wagons on government owned track for the first time. The inclusion of the private sector in state-run railway operations offers many opportunities for capital investment, skills sharing and effective revenue generation models being implemented. Ching'andu, however, has indicated that the authority will proceed with caution, stating in a statement to Railways Africa that: "Concessions have not done well

The Tanzania-Zambia Railway Authority (TAZARA) Tripartite Meeting between the shareholding Governments of the United Republic of Tanzania (URT), the Republic of Zambia (GRZ) and their partner, the Government of the Peoples Republic of China, was convened from 9th to 12th May 2016 in Dar es Salaam, Tanzania.

"In the next 15 months, TAZARA plans to rehabilitate 360 wagons and procure new furnaces for the production of mill balls. There are plans to upgrade the reinforced concrete sleeper plant as well as the quarries. Investment will be made in a new shuttle train between Kasama and Nakonde after rehabilitation of coaches at the Mpika workshops in Zambia. TZR will undertake the rehabilitation of track and motive power."

in some countries. For instance, countries where they were applied such as Zambia and Tanzania, railways were repossessed due to unsatisfactory performance. TAZARA is open to partnerships and has allowed open access arrangements. It is currently in talks with various entities that would like to partner with it," he said.

TAZARA management has also acknowledged the importance of investing in their workforce to ensure efficient service provision on the line. Between 2014 and 2015, the operator was severely handicapped as a result of on-going industrial action on both the Zambian and Tanzanian side of the track, when more than 3,000 workers downed tools over non-payment of salaries, costing the operator millions as a result of interrupted services. Upon taking office, Ching'andu immediately communicated his commitment to worker's rights: "As TAZARA management, it is our responsibility to ensure that we earn enough money to pay ourselves and pay the workers." In the same acceptance speech, Ching'andu acknowledged his workforce as the most important asset of the company, a statement that was ratified in his support for the establishment of internal organisations that champion worker's rights.

108TH Meeting of the TAZARA Board of Directors, comprising the Permanent Secretaries responsible for Transport, in Tanzania and Zambia, as Chairperson and Co-Chairperson, respectively, together with three other Board members from both countries. 29 July 2015, Lusaka, Zambia.

An Exciting Future On The Horizon

Ching'andu presents a solid business case for the future of TAZARA, with projections to move between 1.5 and 2.5 million metric tonnes of freight traffic annually in the next five years. Speaking to the operator's plans for reinvestment, Ching'andu says: "In the next 15 months, TAZARA plans to rehabilitate 360 wagons and procure new furnaces for the production of mill balls. There are plans to upgrade the reinforced concrete sleeper plant as well as the quarries. Investment will be made in a new shuttle train between Kasama and Nakonde after rehabilitation of coaches at the Mpika workshops in Zambia. TZR will undertake the rehabilitation of track and motive power."

In a media statement marking the anniversary of the operator, the authority has made their position clear: "Our 40th Anniversary has come at a time when we are not only emerging from years of challenging times, but it is also a time when we are determined to look forward and assure the world that we are back, and back with strength. We are determined to turn this company around. We shall reclaim our position as the best transportation company in the region. That is our vision."

The struggle for Africa is a theme that has plagued the continent for most of modern history. From colonial rule at the start of the century, to dependence on foreign aid at the close, the dialogue around who wants a piece of Africa still persists. While the continent still relies heavily on international funding to provide the capital needed to start the industrialisation of the continent, a new African Nationalism seems to be emerging, in which Africans are starting to take responsibility for their own interests and future. The Freedom Railway signified Africa's first attempts to overcome foreign rule, and again TAZARA's new approach seems to be signalling Africa's willingness to throw off the "beggar mentality" – to use Ching'andu's own words – that has dominated for the past 40 years and adopt an attitude of self-reliance. This certainly bodes well for the Tanzania-Zambia Railway Authority, as it does for the continent as a whole.

[1] *Ball, Peter The Heritage Portal: The Tanzania-Zambia Railway: http://theheritageportal.co.za/article/tanzania-zambia-railway*

[2] *Bailey, Martin (1976) Freedom Railway: China and the Tanzania-Zambia Link. London Rex Collings*

[3] *Hall, Seymour, Peyman, Hugh (1976). The Great Uhuru Railway: China's Showpiece in Africa. Gollancz.*

[4] *Altorfer-Ong, Alicia (2009). "Tanzanian 'Freedom' and Chinese 'Friendship' in 1965: laying the tracks for the TanZam rail link" (PDF). LSE Ideas (London School of Economics (LSE)): 655–670. Retrieved 2016-07-21.*

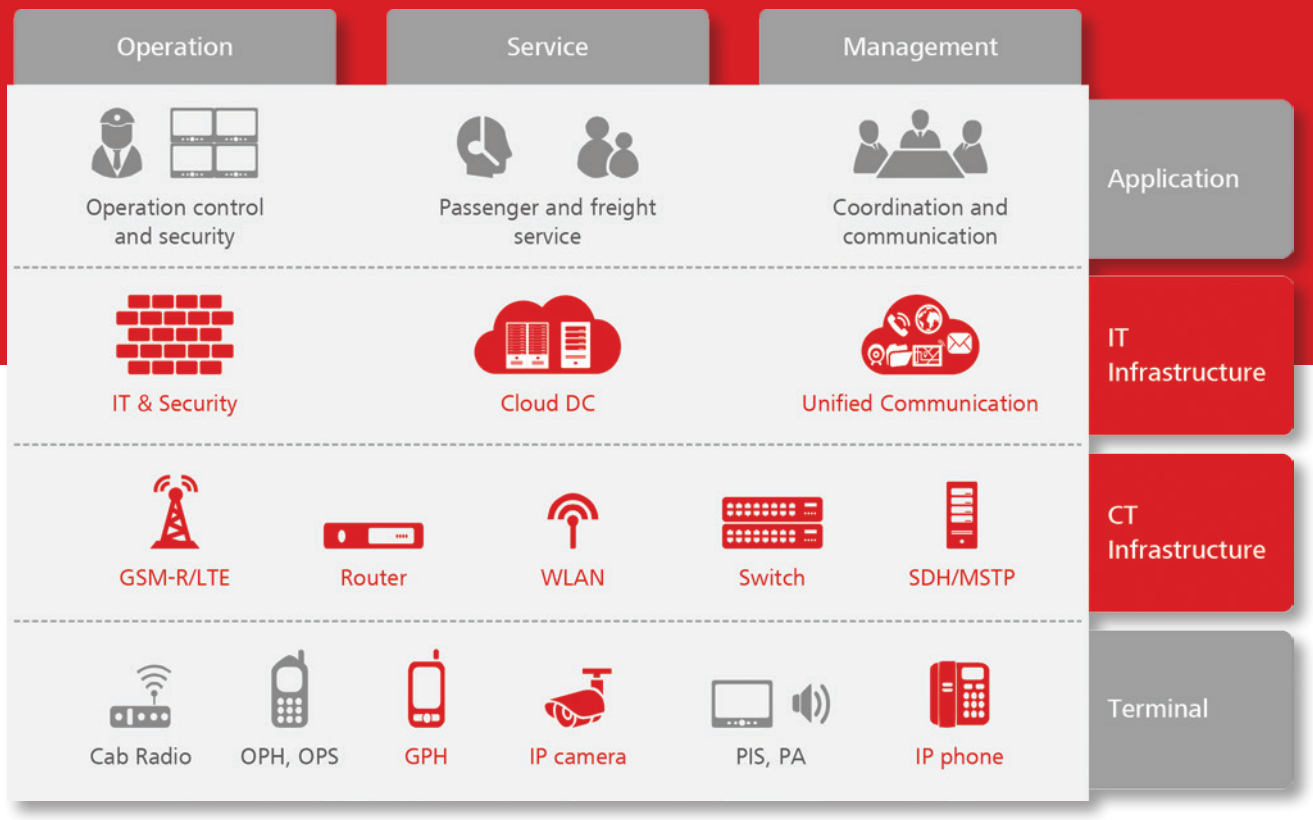
[5] *Brautigam, Deborah (2010). The Dragon's Gift: The Real Story of China in Africa. Oxford University Press.*

[6] *Monson, Jamie (2009). Africa's Freedom Railway: How a Chinese Development Project Changed Lives and Livelihoods in Tanzania. Indiana University Press.*

[7] *Jamie Monson, "Freedom Railway: The unexpected successes of a Cold War development project" Boston Review*

[8] *Brautigam, Deborah (2010). The Dragon's Gift: The Real Story of China in Africa. Oxford University Press.*

African Railways Enter Into The Digital Age
-Huawei brings intelligent Railways to Africa



The dawn of the technological era has challenged the rail sector across the globe to move from a traditional modality of operating railways to one which embraces the plethora of technologies available to enable intelligent, integrated and technologically advanced services on both freight and passenger railways. The modern customer wants efficiency, reliability and connectivity when using rail services and operators are challenged to implement the systems necessary to keep railways relevant in an ever-changing world.

The answer to reaching some of these goals lies in the effective implementation of Intelligent Communication Systems (ICS), which makes managing logistics on a transport corridor possible. In addition, the implementation of standardised information systems that offer a high level of interoperability across multiple platforms to facilitate information sharing is of great importance to both efficiency and the customer experience. To this end, telecommunication specialists such as Huawei are offering rail specific solutions on a global scale that have the potential to forever alter the way that communication and data are managed in the sector.

Standardised Wireless Communication

Historically, railway operators utilised in-track cable and analogue railway radio networks for track-to-train communications. These radio-based communication systems were not standardised, resulting in individual operators adopting unique systems that were incompatible with systems on neighbouring infrastructure. For example, by the late 1990s, as many as 35 different analogue railways radio systems were being used by rail operators across the European Union alone.

In 2000, under the European Funded Mobile Radio for Railways Networks in Europe (EIRENE-MORANE) project, the specifications for the first standardised, interoperable communication system for use on railways were finalised, which resulted in the establishment of Global System for Mobile Communications – Railways (GSM-R), the first cost-efficient digital communication system designed for implementation in railways in the EU. GSM-R is a secure platform for voice and data communication between railway operational staff, including drivers, dispatchers, shunting team members, train engineers and station controllers. The system allows for group calls, voice broadcasts, location-based connection and call pre-emption in the event of an emergency. The implementation of wireless track-to-train technology has positively affected train speeds, increased capacity and assisted in safety on the railway networks that have adopted the technology.

"We at Huawei strongly believe that GSM-R is ideally suited for Africa because all regions could benefit from inter-mobility between different countries working on the same technology. Additionally, with GSM-R in place we can improve both safety and efficiency for passenger and cargo transportation on a continental level and rail operators stand to benefit from a competitive GSM-R market, with a wide choice of manufactures and specialised products."

Norman Frisch, Huawei - Global Business Devlopment

Currently, GSM-R based communication systems have been awarded in the European Union, Russia, China, India, Australia, Middle East, North Africa, Zambia, South Africa and most recently in Kenya. Many of these systems have been in place for some years, with the earliest systems being implemented in 2002. Telecommunications firm Huawei, a top public GSM provider, started to develop its GSM-R product based on its in-house public GSM portfolio, with the addition of the functionality specified through the EIRENE-MORANE specifications. Today, Huawei's GSM-R has been selected for use along 46,000km of railway lines globally.

Huawei GSM-R Solutions Offerings

Huawei is a leading global ICT solutions provider, with sales revenue of CYN245.5 billion ($US37 billion) in the first half of 2016 alone. Over the past two decades, the company has successfully promoted the adoption and application of ICT solutions in the railway industry through the implementation of telecommunication solutions such as eLTE, GSM-R, cloud computing, BYOD, and agile network solutions. Huawei has successfully implemented ICT solutions on numerous international railways projects in partnership with several leading global railways corporates, covering more than 100 countries.

Huawei's GSM-R solution enables full wireless radio coverage along the railway tracks, inside train stations, marshalling yards and other areas where railway operation requires accurate voice and data communication. The solution enables a rich choice of options to ensure the highest reliability through redundancy concepts such as geo-redundancy, hot standby and others, across all network elements (NEs).
The GSM-R system architecture consists of core network devices, such as the mobile switching centre (MSC), and access network components such as the Base Station Controllers (BSC), which offer geographical redundancy, and transceiver redundancy. To address the considerable distance between railway stations, the GSM-R solution leverages industry-leading power boost technology (PBT) and "soft-splitter" technology to expand base station coverage by more than 25%. Dual-channel microwave transmission replaces optical fibre transmission, reducing customer construction costs while ensuring system availability.

The solution seamlessly integrates through gateways with UHF and VHF wireless networks and makes full use of existing communication resources, such as towers, equipment rooms, and power supply systems, assisting railways to migrate easily from their existing systems into GSM-R technology.

Huawei GSM-R Enters the African Market

One of the first African countries to adopt a GSM-R based communication system on a regional railway line was Zambia Railways Limited (ZRL). Early in 2014, the Zambian government granted $US120 million to upgrade the signal-tracking capability of the Chingola-Livingstone railway line, one of the key railway lines operated by ZRL. The 980km line was built in the early twentieth century and connects Lusaka with Chingola, a city in the northern copper-mining region, and Livingstone, the tourism centre for Victoria Falls. The project was awarded to international rail industry leader Bombardier, in partnership with global information and communications technology solutions provider Huawei, with the aim of delivering a cost-effective, robust communications solution for track-to-train communications.

The train signalling technology was designed and implemented by Bombardier using their Bombardier Interflo 550 communications-based signalling system with full automatic train protection (ATP). Huawei provided the design and implementation of GSM-R, including the company's cutting edge IP based ATCA core network and distributed base stations connected through a sophisticated Microwave Transmission (MT) system reducing the need for ground based infrastructure.

Prior to 2014, ZRL was using ultra high frequency (UHF) and very high frequency (VHF) wireless networks for track-to-train communications on their network, which has poor voice quality, low operational efficiency and severe co-channel

interference. To achieve a cost effective upgrade, Huawei's GSM-R design took advantage of the existing infrastructure without compromising on system reliability. After a detailed analysis of options available, taking into consideration reliability and feasibility, Huawei offered a GSM-R solution that was compliant with the latest European Train Control System Standards (ECTS), but that remained affordable in the African context (ETCS Regional).

ETCS requires standard trackside equipment and a standard controller within the train cab. All line-side information is passed to the driver electronically, removing the need for line-side signals, which at high speeds could be almost impossible to see or assimilate. To uniformly carry ETCS regional signal data and scheduling services, Huawei's GSM-R system comprising of the industry's Advanced Telecom Computing Architecture (ATCA) soft-switch core network and Distributed Base Stations (DBS) technology. Multiple Huawei patented technologies, such as enhanced automatic frequency control (AFC) and network assisted cell change (NACC) are also employed to construct a highly reliable GSM-R track-to-train communication platform. Using a design approach specially developed for Zambia, Huawei utilised microwave technology to provide transmission channels for GSM-R signal data and the video surveillance system, rather than fibre, which reduces the risk of vandalism.

By applying microwave transmission, the need to deploy optical fibre between train stations was eliminated. Radio transmission nodes (RTNs) deliver reliable backhaul of data over a maximum distance of 100km and base stations support an extended ultra-long distance coverage of 15.3km, which reduced construction costs on the project by as much as 50%. As the MA signals of trains are transmitted using the GSM-R wireless transmission technology, a lower total cost of ownership (TCO) is ensured for the entire system while increasing reliability through extensive use of redundancy measures.

Fan Wen, managing director of Huawei in Zambia said of the project: "For railway lines with underdeveloped fixed networks and rare optical resources, a reliable wireless network solution is crucial for achieving enhanced safety and management efficiency." The project went live in 2015, and has significantly enhanced capacity on the Livingstone-Chingola Railway line.

Huawei Deploys GSM-R in South Africa

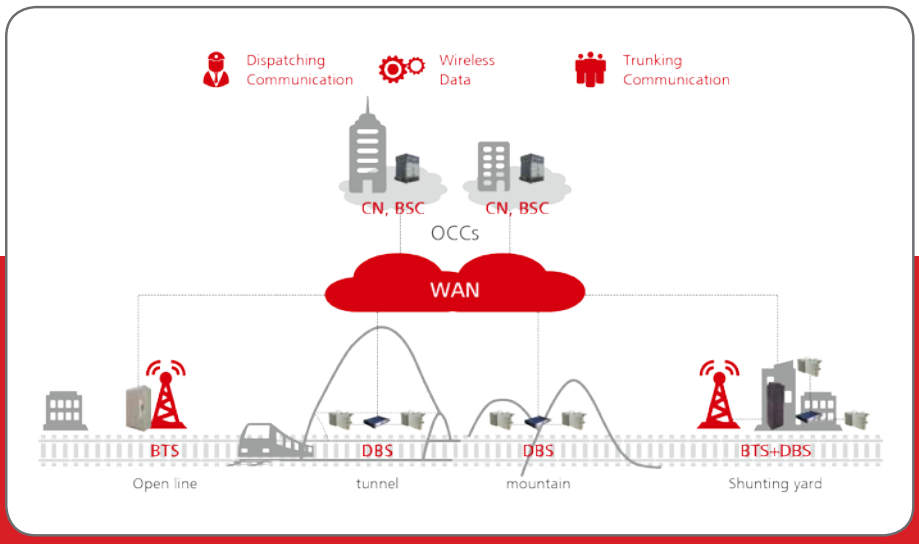
In March 2013, Huawei, together with local partner Altech Alcom Matomo, was awarded a contract to bring GSM-R technology to the South African passenger railway network.

The newly implemented GSM-R system will cover Cape Town, Durban and Gauteng, along 1200km of railway, including 196 stations. The solution designed by Huawei leverages an impressive array of technologies, including intra-frequency co-site and dual-network coverage, as well as Synchronous Digital Hierarchy (SDH) transmission technology to ensure service continuity and maximised asset utilisation. In addition, the solution utilises distributed base station technology to implement quick and flexible network coverage in diverse scenarios, such as tunnels and crossing lines along the Cape Town, Durban, and Gauteng railways.

Cutting edge softswitch core network products dramatically improve data transmission efficiency, simplify network management, reduce operating costs, and support smooth evolution from the old to the new system. Also, the multi-RRU (Remote Radio Unit) co-cell technology expands cell coverage, reduces cell switchovers, increases quality of service (QoS), and saves a large amount of optical fibre resources.

The implementation of the EIRENE-MORANE specifications in South Africa marks an important development for railway integration across the Southern African region, as it opens the market in South Africa up to a wide range of products designed to operate on the European Standard. Speaking to Railways Africa, Norman Frisch, who holds the reigns for Huawei's global business development unit explains: "Simply by having a standardised product, the customer automatically benefits from a wider supply chain," he says. "There will always be additional technology and customers will have a wider range of options on their systems in comparison to the propriety systems implemented in the past, which limit the customer's ability to extend or expand their existing functionality."

Frisch goes further to explain that while operational integration between countries in the SADC



region, or across the African continent as a whole, is by no means a reachable goal in the medium-term, the implementation of standardised ICS solutions such as GSM-R on the continent's diverse railway networks may pave the way for greater logistical integration across Africa in years to come.

Kenya Standard Gauge Railway Project Selects Huawei for GSM-R Implementation

Arguably, the most ambitious railway project currently underway on the African continent is Kenya Railways Corporation's ultra modern, high-speed capacity standard gauge railway (SGR) line for passengers and cargo transportation. The first phase of the project, due for completion in mid-2017, runs from the port of Mombasa to Nairobi, and comprises 472km of single-line standard gauge railway track. The mega construction project, currently being implemented by Chinese contractors, includes construction of the main freight and passenger exchange stations at Mombasa and Nairobi, construction of intermediate passenger stations at Mariakani, Miaseny, Voi, Mtito Andei, Sultan Hamud and Athi River and construction of 33 crossing stations. Included in the contract is the supply of 56 locomotives, 40 passenger coaches and 1,620 freight wagons to run on the line.

Based on Huawei's growing portfolio of successful implementation of ICS solutions for the railway sector on the continent, it comes as no surprise that the company has been selected to provide telecommunications solutions for the flagship SGR project. In April of this year, Huawei announced in a media statement that the company would be supplying an end-to-end wireless railway communication system for the Kenyan SGR line including the GSM-R dispatching communications network, the backbone optical transmission network, clock and synchronisation system, and power and environmental monitoring system.

"After completion, the Mombasa-Nairobi railway line's GSM-R network will carry multiple communications tasks, including mission-critical train dispatch, emergency communications, section maintenance communications, and transmission of train control data along the entire line," the company said.

ICS Solutions for the African Continent

The African Union has set out some well-defined goals for the continent in an effort to fully realise poverty alleviation, prosperity and sustainable economic growth. Many of these goals focus directly on adopting ICT integrated regional and continental programmes and projects pertaining to information and communication technologies that will bridge the digital divide and bring the continent online with the global technological era.

The implementation of GSM-R solutions for African railways falls directly within the scope of solutions that the AU is looking for. Frisch makes a solid case for the continent-wide adoption of EIRENE-MORANE standard GSM-R for the effective management of railway communications across the continent by highlighting: "We at Huawei strongly believe that GSM-R is ideally suited for Africa because all regions could benefit from inter-mobility between different countries working on the same technology. Additionally, with GSM-R in place we can improve both safety and efficiency for passenger and cargo transportation on a continental level and rail operators stand to benefit from a competitive GSM-R market, with a wide choice of manufactures and specialised products."

With countries such as Kenya staking a large proportion of their development goals on the effective implementation of mega-infrastructure projects such as the SGR line, it is essential that they are able to make their investments work for them in the most efficient and cost effective manner. "It would be a waste of money to invest so heavily in railways, and then not operate the infrastructure to its maximum capacity." Frisch explains. "By implementing effective GSM-R and signalling systems you are able to run more trains on the line safely. This is essential for profitability," he concludes.

With the number of railway infrastructure upgrade projects on the rise, it is clear that GSM-R technology will continue to be deployed by operators across the African continent. Frisch explains that unlike in the EU, the adoption of GSM-R standards are not legislated in Africa as yet, but it remains a good business decision. With the benefits of interoperability, flexibility and improved safety standards that are now within reach for African railway operators as a result of railway specific ICT technology, the future of intelligent railways in Africa looks bright.

In March the Bolloré Group transported more than 200 people on a ride from Cadjèhoun Saint Jean station to Central Station Cotonou, both completely renovated.

West African Rivalry

By Mandy Thompson

In 2014, Bolloré launched the 2,700km West Africa rail loop project – commonly known as the Blueline. The project proposes to connect Côte d'Ivoire, Burkina Faso, Niger, Benin, Togo and Nigeria via a regional rail network. The project is expected to be completed within the next seven years, at an estimated cost of between €2 and €2.5 billion.

Initially designed to facilitate moving minerals from mines to ports, the new rail project has the potential to drive further economic development with exports predicted to rise from 109,000 tonnes per year to 3.4 million tonnes per year by 2030. The new rail network will combine newly constructed tracks together with upgraded existing tracks.

Bolloré has been present in Africa for more than 50 years, and has been operating Sitarail's 1,200km network that links Côte d'Ivoire and Burkina Faso since 1995; Camrail's 1,000km rail network in Cameroon since 1999; and was recently awarded Benirail in Benin. The group holds concessions to operate container terminals in at least nine nations including Senegal, Guinea, Côte d'Ivoire and Ghana. Additionally, the company runs dry ports in landlocked nations such as Burkina Faso.

As part of the planned project to build a railway link between the five countries, Bolloré signed a concession agreement to build and rehabilitate a 1,065km railway connecting Niger and Benin. However, on 5 November 2015, French engineering company Geftarail filed a petition at the International Court of Arbitration of the International Chamber of Commerce to request the immediate cessation of the works, which had already begun in Niger and Benin.

Geftarail insists that it holds the rights to build a railway through Benin, Niger and Burkina Faso in terms of a concession granted in 1999 by the three governments (which was later extended to include Togo). The complaint filed by Parisian law firm Betto Seraglini specifies that Benin, Burkina Faso and Niger, later joined by Togo, contracted Geftarail to "implement a legal concession structure in charge of building and operating the interconnected railroad network."

It is stated that in 2002 Geftarail and these African states created Africarail – 90% owned by Geftarail - which obtained "the right to build along the outline of the railroad between the cities of Kaya (Burkina Faso), Niamey (Niger) and Parakou (Benin)."

The defendants in the suit are the governments of the two countries, not Bolloré itself. In the filing, the plaintiffs argue that the governments of Niger and Benin granted Bolloré rights to the Benin-Niger link that overlap with their own Africarail project.

Recently, Niger signed an agreement with Geftarail stating that the company still holds the rights to build the West Africa railway network. According to Geftarail chairman Michel Bosio, the agreement fully recognises the 1999 deal to build the railway link. "It is the recognition of the law, of the international law and of an agreement signed collectively by four African states," he stated.

Under the agreement signed by Niger, Geftarail says it will drop the arbitration request, while Niger will ask Benin to approve the Geftarail accord.

However, according to Mohamed Moussa, permanent secretary for public-private partnerships at the office of Niger's prime minister, they are two different perimeters.

Geftarail intends to build a line linking Kaya (Burkina Faso), Niamey (Niger) and Parakou (Benin). Bolloré's line from Niamey to the port of Cotonou forms part of a planned 2,800 km network linking Côte d'Ivoire, Burkina Faso, Niger, Benin, Togo and Nigeria.

"If Geftarail wants to build its railway, they are most welcome. That will not, in any way challenge, Bolloré's perimeter," stated Moussa.

The West Africa Rail Loop (Blueline) project proposed by Bolloré

Geftarail's planned route for a West African Railway

According to a statement issued by Moussa, Bolloré remains Niger's sole partner on the rail link between the capital Niamey and Cotonou in Benin. "Niger reiterates that the Bolloré group remains its only credible partner for the realisation of the railway between Cotonou and Niamey," Moussa said. "It has all of the rights under the construction and operating concessions duly signed by the state of Niger."

Bolloré says that the group is not concerned by prior commitments made by the African states. "It is a major West African project. [The project] dates back to 1904, as part of the railroad loop has already been built and was stopped in the 1930s. Since then, many studies were conducted on projects to renovate the existing network and build the new stretches, but they never came through," says Ange Mancini, advisor to Vincent Bolloré.

"At Bolloré, we have shown that we can do things and more importantly, we invest in equity funds," he added.

Geftarail has yet to find funding for its project some 16 years after it obtained concession rights to build a regional railway. According to Bosio, Geftarail hopes to attract Chinese investment in its construction.

Alstom Increases their South African Footprint

-Railways Africa visits the Alstom Ubunye manufacturing plant in Nigel, Gauteng

Alstom has been present in South Africa for more than a century, contributing significantly to the development of the country's power infrastructure and transport technology. Since selling its power assets in 2015 to GE South Africa, the company has become a major contributor to the country's ambitious plans to rejuvenate passenger rail services in the country. In 2013, Alstom signed a landmark contract with the Passenger Rail Agency of South Africa (PRASA) to establish an Alstom-lead joint venture (now known as Gibela) to supply 600 X'Trapolis Mega passenger trains for the South African passenger railway network.

Only three years into the project and Gibela has already made significant progress in providing PRASA with a state-of-the-art fleet of passenger trains, specifically designed for the local market. More impressive, however, is the commitment the company has shown to empowering the local South African economy through an aggressive localisation programme, skills transfer and the establishment of a robust and world-class local supply chain for the manufacture and supply of parts for not only the X'Trapolis trainsets being manufactured using Alstom technology but also for the international market.

In April of this year, Alstom further cemented the growing partnership between South Africa and the company by acquiring a 51% stake in the South African train manufacturing company Commuter Transport and Locomotive Engineering (CTLE), formally known as Union Carriage and Wagon. At the time of acquisition,

"Our primary objective in developing Alstom Ubunye is to honour the mandate handed to us through the Gibela project of supporting the rejuvenation of the South African railway industry. Our objective is to establish an engineering platform in South Africa that is able to deliver Alstom technology to the sub-continent."

- Yvan Eriau, chief executive officer, Alstom Ubunye

CTLE was a 100% black-owned company made up of a consortium between Commuter Transport Engineering (CTE) and the Industrial Development Corporation (IDC). The new entity has been branded as Alstom Ubunye – an isiZulu word for "unity". Both CTE and IDC have retained shares in the company. In addition to the shareholding between Alstom and IDC and CTE, there is also an employee benefits scheme as a shareholding entity (15%).

Union Carriage and Wagon (UCW) was established in the 50s to serve the South African rolling stock market in both the passenger and freight sectors. The company delivered the first electrical locomotives to the South African market, namely the 5E1, and then built the fleet of 5M2A electrical multiple units for passenger rail services in the country between 1962 and 1985. Commuter rail services in South Africa continues to rely heavily on the trainsets built by UWC, with the original 5M2s being rebuilt to the 10M3, 10M4 and 10M5 classes at the company's facilities in Nigel, Gauteng. In the early 1990s, Murray and Roberts (M&R) acquired ownership of the company through its acquisition of Standard Engineering. While operating within the M&R stable, UCW assembled units for the Gautrain, as well as continuing to refurbish 5M2s for PRASA. The company was also involved in manufacturing rolling stock for the freight industry. In 2013, M&R sold its interests in the business to the CTLE consortium. The decision by Alstom to establish Alstom Ubunye represents not only an investment in the future of the South African railway industry but also an acknowledgement of the country's long legacy of manufacturing excellence.

Alstom Ubunye recently hosted the Railways Africa team for a guided tour of their facility, which has officially been under new management since June of this year. We were met by Yvan Eriau, the new chief executive officer of Alstom Ubunye, who also serves as the managing director of Alstom South Africa, and Craig Holden, formally of UCW, who is now serving as the industrial director of services and rolling stock for the company. The 80,000m^2 facility is situated in Nigel, on the eastern most edge of the Gauteng Province. The workshops and factory have been in active operation for more than 50 years and offers the ideal setting for a modernised and revamped world-class train manufacturing plant.

BEFORE: EXPOSED PIT WITH NO SAFETY RAILINGS

Eriau explains the strategic importance of Alstom's decision to purchase the business: "Our primary objective in developing Alstom Ubunye is to honour the mandate handed to us through the Gibela project of supporting the rejuvenation of the South African railway industry. Our objective is to establish an engineering platform in South Africa that is able to deliver Alstom technology to the sub-continent."

The Alstom-lead Gibela project has very stringent localisation requirements worked into every level of implementation, a commitment the company is taking very seriously. The new X'Trapolis trainsets that will be built at the manufacturing facility currently under construction in Dunnottar (some 13km away from the Alstom Ubunye facility) will have a minimum of 65% local content, Eriau explains. To achieve this, Alstom needs to establish a robust local supply chain for locally manufactured parts and components to be used in the project. "Having PRASA as a sole customer will not be sufficient to organise a sustainable local supply chain," Eriau says, "So, buying another platform, such as Alstom Ubunye, will extend the business parameter for local suppliers."

Eriau remains confident about Alstom's decision to further invest in the South African market. The company is a world leader in providing sustainable urban mobility solutions across diverse geographies. With rapid urbanisation and the emergence of megacities in Southern Africa, the company foresees a number of investment opportunities emerging in the future. The Alstom Ubunye facility will ensure that Alstom has the capability to deliver on projects not only in South Africa but within the subcontinent as well. Alstom Ubunye will have access to the vast array of Alstom IP, as well as the international's processes, skills-base and standards of operation. Craig Holden explains what this will mean for the South African business: "This is the best aspect of the deal," he says, "We now have access to the best factories, technology and processes in the world." Eriau goes further to say that: "We want to bring all the Alstom processes, tools and skills to ensure that Alstom Ubunye is a part of the global Alstom manufacturing world."

The Alstom Ubunye management team are in the process of implementing a very carefully considered change management programme at the facility. The company has embarked on an aggressive recruitment programme, to ensure that they have the best people in the correct positions. One of the new appointments, Xolisa Manqele, who has taken the role of HR director for Alstom Ubunye states that: "There are a lot of opportunities here, but also quite a bit that still needs to be put in place. We have the people with the skills who are willing to work, we need to ensure our structures support that delivery. We are grateful that our people are willing to adopt change for the better under our parent company – Alstom."

ALSTOM GLOBAL STANDARDS: SAFETY RAILINGS

In the three short months that the Alstom management team has been onsite, the company's stringent health and safety standards are already evident in the workplace. Management has contracted a team of architects to do a full assessment of the facility, looking at infrastructure, machinery and factory floor layouts to ensure efficiency in production processes and safety. The company has already invested in new safety equipment such as PPE, and all current staff members are undergoing extensive health, safety and environment (HSE) training.

Zolelwa Bixa, another new recruit in the health and safety portfolio explains: "Our biggest challenge has been a lack of defined procedures and a lack of awareness regarding safety on the plant. The team has made significant progress in the journey towards improving the HSE culture at Alstom Ubunye". Management is taking a leading and active role in the implementation of HSE, which includes the management team taking daily walks to monitor critical aspects of health and safety on the plant. Alstom Ubunye is adopting an Alstom Zero Tolerance approach to deviations related to high-risk activities and this is driven through the Alstom Zero Deviation Plan (AZDP) and Life Saving Rules. The Alstom Ubunye leadership team is working hard to impart these rules and practices across every level of the organisation, ensuring buy-in from every member of staff, which they believe is the first step in aligning the plant to the Alstom Global standards.

The company is currently in the process of delivering on three major contracts for the South African railway market. Alstom Ubunye have retained their market position as the most qualified and experienced in the continued maintenance and refurbishment of PRASA's fleet of class 5M2s and class 10M4s, which are still carrying the bulk of the country's commuter traffic. At the most extreme end of refurbishment, class 5M2 coaches are stripped down to

'Extreme train makeover' at Alstom Ubunye.

Skill development at the Alstom Ubunye welding school.

the underframe and are then completely rebuilt to 10M4 specifications using the underframe as a base. In addition, coaches that are damaged through accidents, vandalism and normal wear and tear are offered various levels of overhaul, based on condition. Holden explains that the motor coaches and locomotives currently undergoing refurbishment at the factory are the same units that were initially manufactured at the site 30-40 years ago. "The coaches here were refurbished 12-14 years ago. Some of these coaches have returned for their second overhaul." Holden remarks.

In addition to the ongoing work that the company is doing for PRASA, Alstom Ubunye is currently manufacturing cab units for the General Electric (GE) / Transnet locomotive contract currently underway. "The locomotive cabs that GE are doing with Transnet are made up of five modules. Alstom Ubunye is making three of the five," The company is also manufacturing for Bombardier.

While Eriau emphasises that the company's short to medium term goals are to deliver on current contracts and ensure a smooth transition into the Alstom stable, the potential for growth is clear.

While Alstom is primarily involved in passenger rail in South Africa, Alstom Ubunye plans to position themselves to service all sectors of the market in years to come. The local supplier base being actively developed by the Gibela consortium under the mandate of the PRASA contract will provide these suppliers the opportunity to broaden their customer base through projects undertaken at Alstom Ubunye, which bodes well for the railway manufacturing industry in the country.

Ensuring that products provided by local suppliers meet the stringent Alstom standards is a key focus of the quality control process in place at Alstom Ubunye. Nathi Mabaso, Alstom Ubunye's quality control manager audits local suppliers wishing to supply products for use on Alstom Ubunye projects. Suppliers are obligated to meet clear targets with regards to ISO accreditation, quality control, and manufacturing capability before being approved. When parts arrive on site, a stringent receiving inspection is carried out to ensure that parts are of the required specification before being accepted. The implication is that Alstom's standards that demand engineering excellence filter down the supply chain, lifting manufacturing standards through the line.

The company is committed to developing a strong local skills base and has a fully accredited welding school on site, which not only provides training for staff employed by Alstom Ubunye, but also takes learners from the local community and provides them with both practical and theoretical training in welding, ending in an international accreditation after a three-month internship in the company's workshop. Manqele states that "We have just started with the new intake for the welding school and we use the welding school in a number of capacities, firstly to grow our own skill and secondly to empower the local community. The skills developed here will be used both for Alstom Ubunye and for the Gibela project," she explains.

Initiatives such as the welding school as well as a bursary programme for the children of Alstom Ubunye staff members further concretises the importance that Alstom is placing on local empowerment in the implementation of projects in South Africa.

The French MD sums up his aspirations for the Alstom Ubunye project best by stating that: "With the Alstom manufacturing processes backed by Alstom IP, Alstom Ubunye has the potential to become a world-class manufacturing facility, and a strong competitor – even within the Alstom work base." These positive sentiments are much needed in a South Africa plagued by unemployment and skills shortages. Taking into account the job creation and skills development potential of the Alstom Ubunye and Gibela projects together, Alstom seems capable of transforming not only passenger rail services in South Africa, but the economic landscape of the country as a whole.

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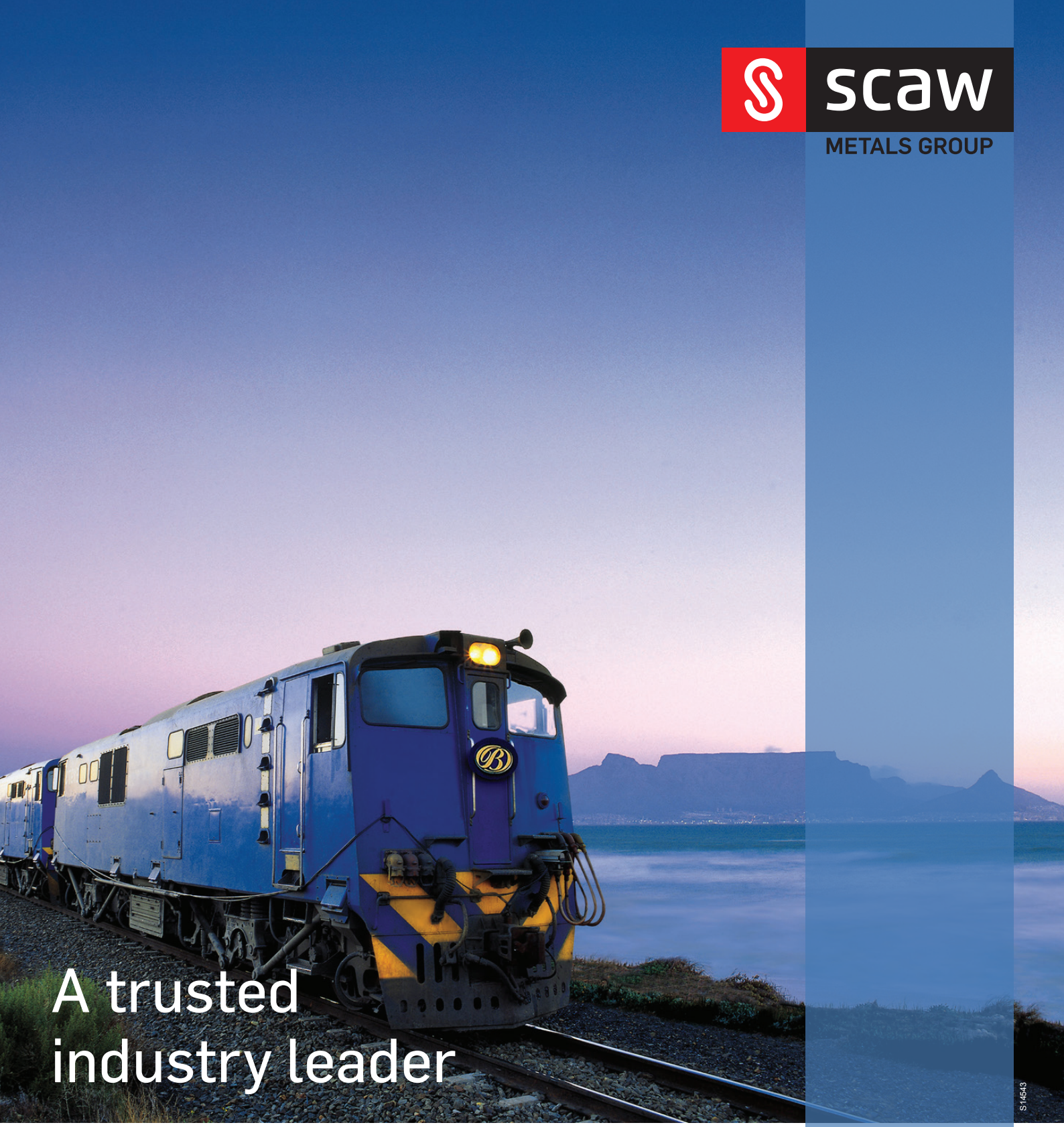

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South African Company Takes On The Global Market

Galison Manufacturing (Pty) Ltd is a South African owned business that has established itself as a major original equipment manufacturer for the mining sector nationally, regionally and abroad. The company manufactures more than 50% of the rolling stock for underground and surface mining operations in South Africa and supplies the majority of privately run railways with rolling stock. Galison is also a leading supplier of railway equipment for mining and industrial operations throughout the SADC region and has exported extensively to the international market.

Railways Africa recently visited the company's extensive facilities in Welkom, situated in South Africa's Free State province. Andrew Thorburn, the company's chief executive officer, took the time to brief the team on the company's humble beginnings, rapid development and the projects that Galison is currently working on, not only for the local market but also for the African continent and major international entities.

A Story Of Growth

In 1977, mechanical engineer Peter Thorburn left a management position at a mining equipment supply company to open a small workshop specialising in scrapper runners for the mining sector. In five short years, Galison – named after Peter's children-quickly grew into a leading supplier of rolling stock, scrapers, grizzlies and chutes for the mining industry. From a small jobbing shop, the fast-growing operation moved to a manufacturing plant in Welkom, where the company now has a number of facilities and continues to manufacture today under the leadership of Gary Wilson.

In 1985, Peter expanded the company to incorporate Galison Drilling, which allowed the company to add the supply of steel drill to the company's growing list of product offerings, establishing themselves as a major supplier of drill steel to the gold mining industry and followed this with the manufacturing and supply of rock drills for use in development and in-stope drilling.

Following the privatisation of the copper mines in Zambia, Galison extended their operations beyond the South African borders by establishing Galison Zambia in 2000. The Zambian operation, under the directorship of Graham Thorburn, quickly grew to become the primary manufacturer and

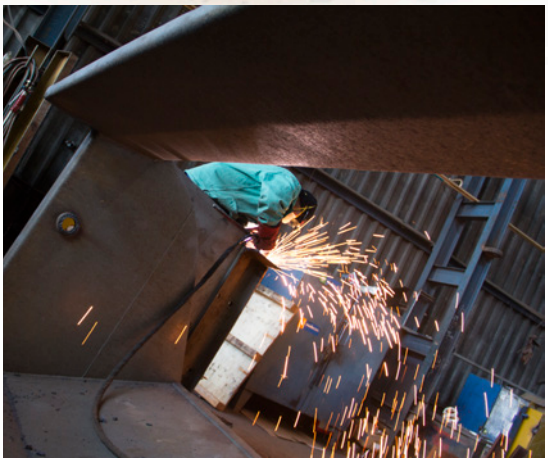
supplier of rolling stock and hand-held drilling equipment for the private mining sector in the country. The company's latest acquisition in 2008 saw the addition of Galnorth Drilling to the stable. The subsidiary, run by Johan Fourie, is based in Rustenburg and services the platinum mining industry with drilling consumables and functions as a manufacturing base for Galison Manufacturing in the North West.

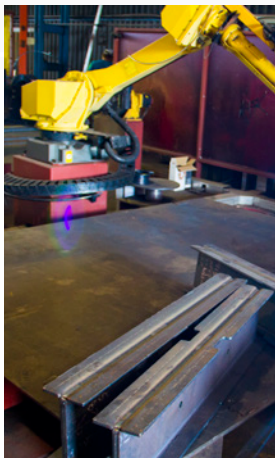
In addition to their impressive service offering for underground rolling stock, the company is also a leading provider of surface rail wagons for privately run railway services in the heavy industry sector. In 1996, Hunslet Hudson, a local railway equipment manufacturer, went into liquidation and Galison purchased the IP for the Hunslet Hudson designed rolling stock. In addition to acquiring the company's patents for underground wagons, Galison also gained the right to manufacture the company's railway equipment for surface use in the mining sector. At the time, Anglo Platinum was in need of 60-ton ore wagons and Galison, having the IP and the facilities to do the job, decided to take the project on.

Andrew Thorburn explains that the company has since become as adept at delivering on wagons for surface use as it is in manufacturing underground rolling stock. "We are now the owners of the original drawings for all the Hunslet Hudson designs. These are almost all of the wagons used on private rail networks in the region, including Anglo Gold, Anglo Platinum, Harmony Gold, Arcelor Mittal, Botswana's BCL, Zambia's Mopani Copper Mines and a number of companies in the cement industry."

The company's product offerings are extremely diverse, ranging from the hand operated 1m^3 cocopans used in the simplest of operations to the state-of-the-art 20m^3 fully automated train systems being sold by Galison to China. The company has their own design team and is capable of manufacturing to specification, based on each customer's unique needs and resources. Galison's start-to-finish railway solution includes the design, manufacturing, assembly and quality control of a wide range of products. All work is done in line with the company's ISO 9001/2000 listing, to meet international quality standards.

Galison not only supplies the local South African private railway market but also exports extensively, supplying operations in Zambia, Botswana, Zimbabwe, Ghana and Tanzania with underground and surface rolling stock. In line with the company's driving mission to design and manufacture world-class products, Galison has delivered railway equipment for the mining sector in the USA, Canada, Russia, Australia, Fiji and most recently China.



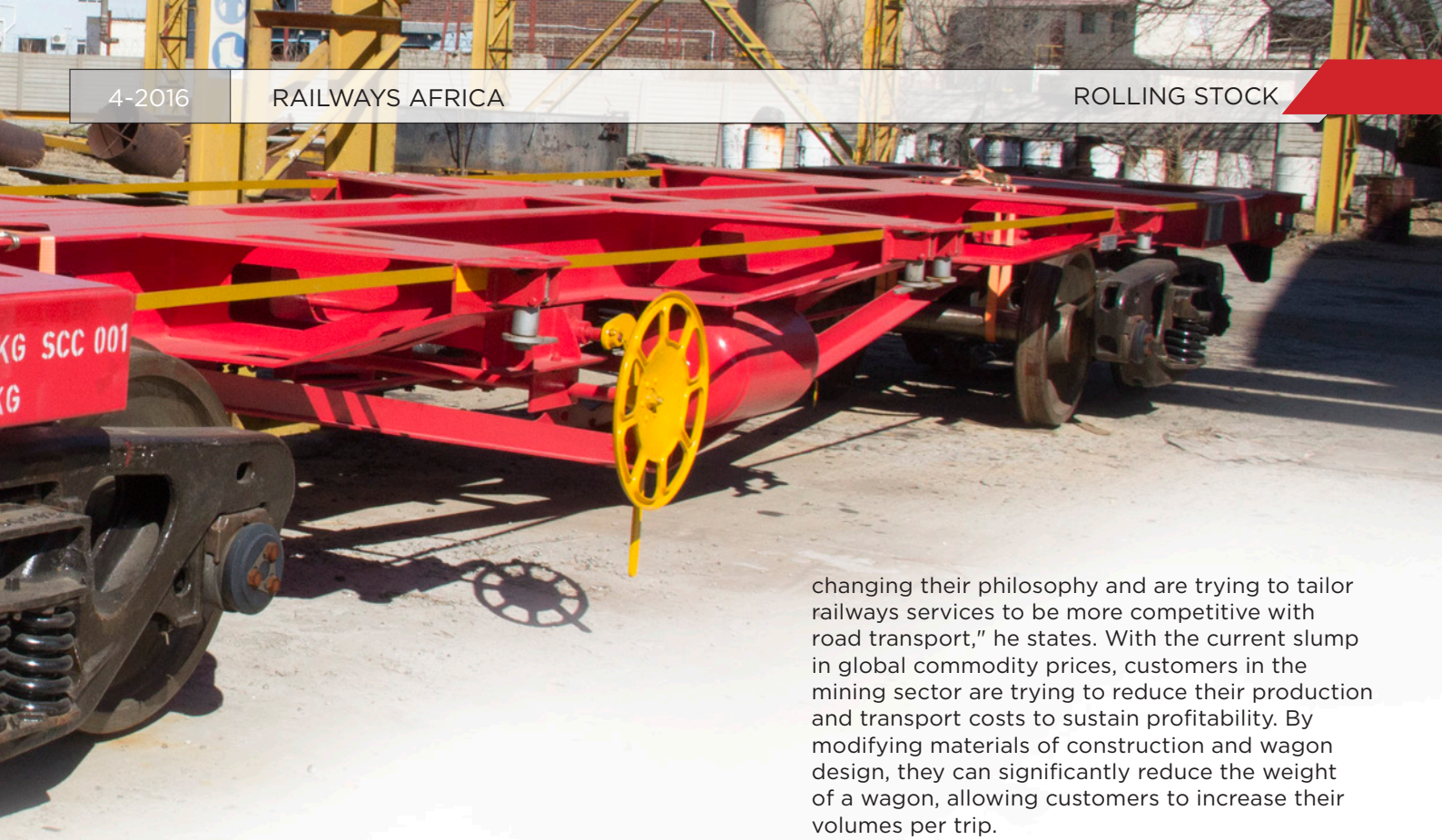


A tour of the manufacturing facilities reveals a number of sites, totalling almost 25 000m^2 under cover. Twenty-five overhead cranes from 5t to 40t capacity serve these workshops. Galison does their own parts preparation with large high-definition plasma profilers, 400 tonne CNC press brakes, four roll CNC plate rollers, automatic saws, punch shear and cropping machines as well as a range of other modern equipment used for heavy and medium fabrication.

The assembly workshops are well equipped with assembly jigs and a number of welding manipulators that can rotate through 360 degrees, complete 14m long wagons. Welding is done by a large number of MIG welders and Fanuc Robotic welders for repetitive jobs. Brakes are fitted in-house and the company is accredited to do their own single-wagon brake testing. Painting is done to customer requirements and the factory boasts an impressive 18mx6mx6m spray booth.

Current Projects

Galison is currently undertaking a number of projects in their railway division. Andrew Thorburn explains that the company is focused on responding to market demands and industry trends to ensure that their service offerings meet the needs of their customers. "Customers are



changing their philosophy and are trying to tailor railways services to be more competitive with road transport," he states. With the current slump in global commodity prices, customers in the mining sector are trying to reduce their production and transport costs to sustain profitability. By modifying materials of construction and wagon design, they can significantly reduce the weight of a wagon, allowing customers to increase their volumes per trip.

Galison, in partnership with Grindrod, has produced a lightweight container wagon intended for use in Africa. The wagon is constructed using weather-resistant, high-strength steel and the design will reduce wagon weight by between three to five tonnes in comparison with the wagons built to current Transnet specifications. Thorburn explains that the reduction in weight will have a tremendous impact in countries with minimal axle load capacity. "In countries such as the Democratic Republic of the Congo (DRC), railways are limited to a 16 tonne axle load, which is much lower than the 21 tonne axle load on South African's Transnet network. By reducing the weight of the wagon, customers are able to transport more material per wagon. This is going to make a significant difference to the profitability of the mining and general freight sectors in these areas."

In October 2015, Galison received an order for 100 grain hopper wagons from GPR Leasing, a subsidiary of Grindrod, for use on the Nacala corridor in Mozambique. The deal between GPR, Galison and Corredor De Desenvolvimento Do Norte (CDN) constitutes one of the first of its kind in Africa. All parties remain confident that the leasing of wagons by operators will become a preferred model moving forward as it removes the burden of raising capital funding for the purchase of rolling stock and maintenance from the railway operator, allowing them to focus on their core business.

Galison has employed the latest technology and used advanced materials in the design and manufacture of the grain wagons to ensure that they comply with the highest safety standards and are more economical than their older, heavier predecessors. Supply to CDN has started, with the final delivery of all 100 units expected to be complete by the end of this year.

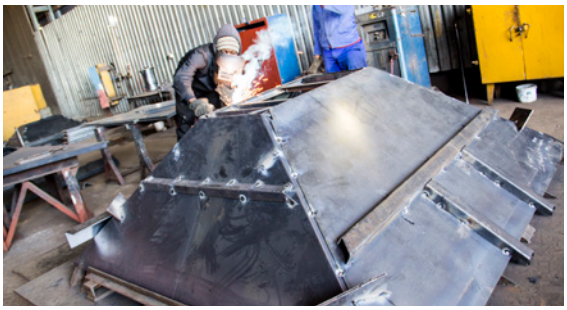
Galison – Taking On The International Market

While Galison's track record for delivering rolling stock on the African continent is notable, perhaps more impressive is their growing global reach. In 2006 the company made headlines by clinching a $US2 million contract from a Canadian company for the design, manufacture and delivery of 100 rock-flow ore cars. The company has also delivered products around the world to clients in Peru, Fiji, Australia, the USA and Russia. "With the Rand at its current level, we are very competitive in the global market," Thorburn explains. With the company's internationally recognised standards and access to cutting edge technology and state-of-the-art fabrication, they are positioned to challenge competitors from around the world.

Perhaps the most ambitious project currently underway at Galison is the 20m^3 automated train system being implemented at the Pulong Copper Mine in China. Thorburn explains how Galison won this contract: "China wanted the best underground rolling stock in the world. They approached us and a company in Sweden, together with our partners, we won the tender."

The Chinese delegation conducted a site inspection prior to awarding the contract and Galison fulfilled all the requirements of the project. Galison is, therefore, the first African company to supply China with rolling stock - an ironic development in light of the current influx of Chinese-made rolling stock in Africa.

According to Thorburn, the Pulong Copper Mine underground train will be a fully automated, driverless train system, which will be operated from the mine surface. The train system will incorporate the latest technology and constitutes the best in underground railway solutions the world has to offer.



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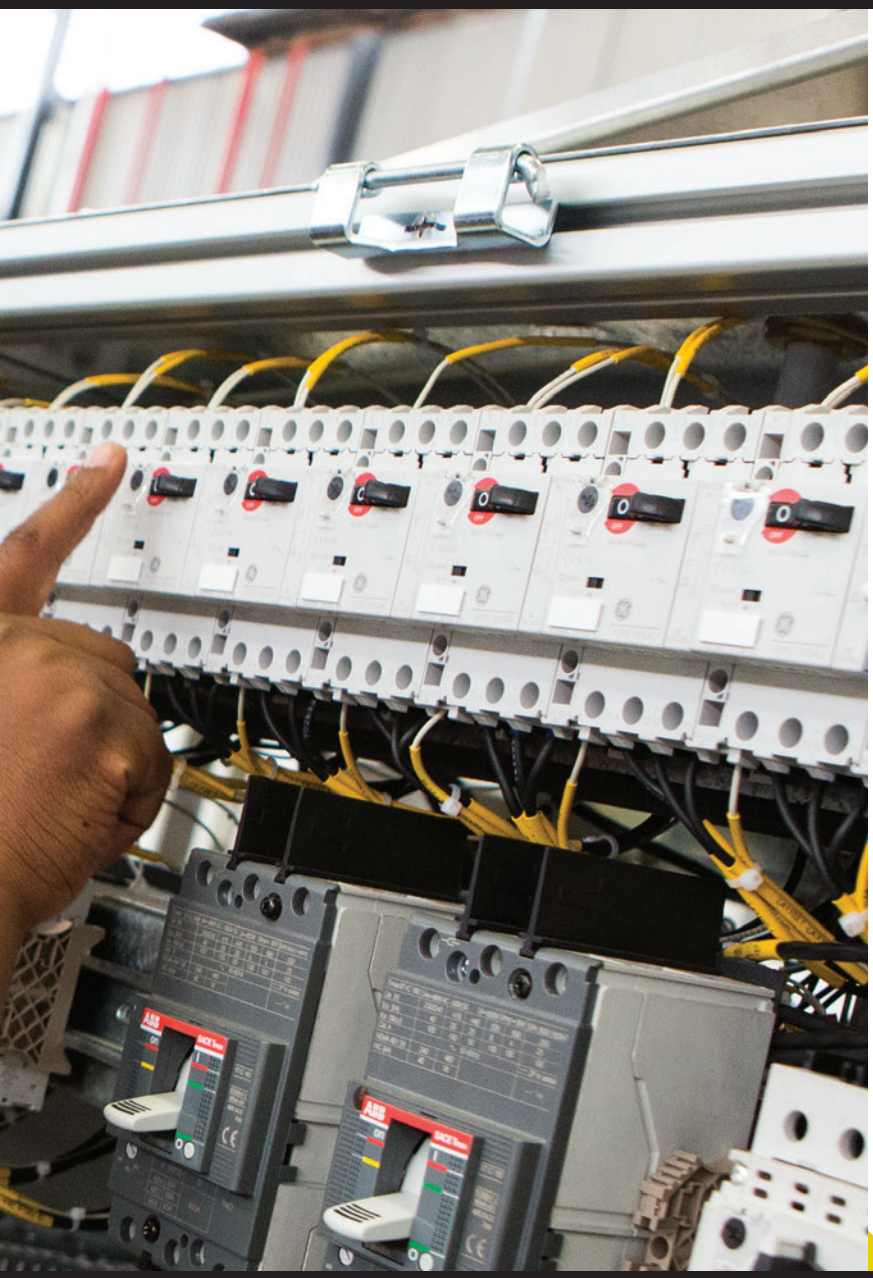
Bombardier Opens New South African Production Site and Headquarters



Rail technology leader Bombardier Transportation has inaugurated their new South African propulsion equipment production facility in Isando, Johannesburg on 25 August.

In April 2014, South African state-owned freight and logistics company Transnet awarded Bombardier a contract for the supply of electric locomotives as part of a R50 billion contract. The majority of the locomotives are being built at Transnet Engineering's plants in Koedoespoort, Pretoria and Edwin Swales in Durban. All bidders are committed to stringent localisation requirements, including technology transfer, supplier development and job creation.

Commenting on the milestone, Transnet group chief executive, Siyabonga Gama said, "Bombardier's production facility was an integral step in driving localisation, transformation and economic empowerment. The successful partnership with Bombardier serves a crucial purpose in enhancing and embedding our Market Demand Strategy - and the role Transnet plays in growing our economy."

President of Bombardier Transportation, Western Europe, Middle East and Africa, Per Allmer added, "We are proud to play such a large role in the development of the country's mobility evolution and transformation and look forward not only working closely with our South African partners but also to delivering outstanding quality and unrivalled reliability to the region with our proven technologies."

The new 6,000m^2 facility will produce Bombardier MITRAC high-power propulsion equipment for use in the Transnet locomotives project, for which Bombardier is delivering 240 Bombardier TRAXX Africa locomotives. The site will also be home to a testing centre for high power traction converters and electrical cubicles and will become the headquarters for Bombardier Transportation in South Africa from October this year.

"Bombardier's production facility was an integral step in driving localisation, transformation and economic empowerment. The successful partnership with Bombardier serves a crucial purpose in enhancing and embedding our Market Demand Strategy - and the role Transnet plays in growing our economy."

- Transnet group chief executive, Siyabonga Gama

"We are proud to play such a large role in the development of the country's mobility evolution and transformation and look forward not only working closely with our South African partners but also to delivering outstanding quality and unrivalled reliability to the region with our proven technologies."

- President of Bombardier Transportation, Western Europe, Middle East and Africa, Per Allmer

Bombardier is committed to engaging with the African transportation market through job creation and skills transfer. Speaking at the event, Allmer stated, "We believe we can achieve at least 60% localisation and that's a new best. I think we are going to get even higher as we move forward." General director of the Public Enterprise Department Richard Seleke echoed these sentiments when addressing attendees at the event, highlighting the fact that the new locomotives being produced already exceed the 60% local content target set by the government's recent instruction note.

The company's facilities in Europe will actively support the transfer of technology and skills to the South African rail industry through close collaboration and training programmes. The company currently employs 100 staff members at the site, of which 40% are women and the company expects to more than double its staff compliment in the next year. Bombardier is also partnering with technical colleges to ensure that staff members are provided with the opportunity to strengthen and diversify their skills and qualifications.

Bombardier's on going commitment to the country is highlighted through a strong local supply chain that will ensure a sustainable future for the nation's industry. More than 60% of the Transnet contract scope is localised, ensuring investments in local manufacturing capacity, training and further improving the skills development of local employees, while working with local partners to achieve the same objectives.

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CROSS-BORDER LOGISTICS PLATFORM TO LINK ANGOLA TO DRC AND ZAMBIA

Angolan minister of transport Augusto da Silva Tomás, recently announced that Angola, together with relevant stakeholders, are planning to invest in a cross-border logistics platform which will link Angola to the Democratic Republic of the Congo (CDR) and Zambia via the Benguela railway.

The announcement was made at the National Logistics Platform Conference, held in Uige Province, Angola. The Government of Angola has been actively developing logistics platforms through the country's National Network of Logistics Platforms program since 2014, in an effort to support import and export trade to boost the country's economy.

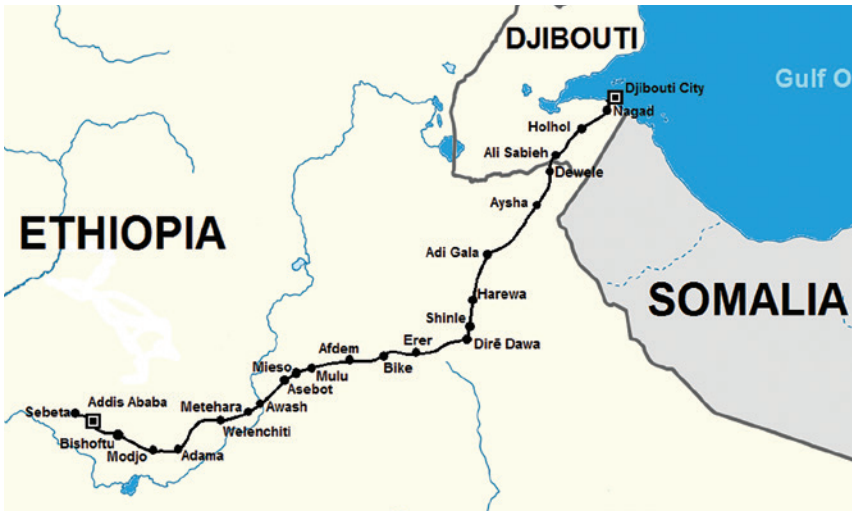
Speaking after the event, da Silva Tomás stated that: "The success of the National Logistic Platform Network in Angola depends on the active participation of every party involved, with stress on the business sector. We must join forces and techniques to reach the desired results proposed in this project."

In reference to the cross-border application of the logistics platform, the minister stated that: "Construction of this infrastructure is vital, because many countries in the Great Lakes region and other southern African countries do not have maritime borders," The minister stressed that effective integration of logistics in the region may play a decisive role in attracting both imports and exports from the international market.

ADDIS ABABA-DEWELE RAILWAY LINE NEARS COMPLETION

The Ethiopian Railway Corporation has announced that the 656km Addis Ababa-Djibouti Railway Project, which connects Sebeta, Mieso and Dewele, is 98% complete. According Getachew Betru, chief executive officer of ERC: "We are close to getting electricity supply and to commence operation at the beginning of the new year," adding that: "Upon going fully operational, the line will play a significant role in boosting Ethiopia's tourism sector, in addition to expediting import/export trade."

Ethiopia's standard gauge railway (SGR) has been constructed by the China Railway Engineering Corporation (CREC) and the China Civil Engineering and Construction Corporation (CCECC), with financing from the Exim Bank of China, the China Development Bank and the Industrial and Commercial Bank of China[1]. The new railway line runs parallel to the Ethio-Djibouti Railway, which was constructed by the French in 1917. The 781km meter gauge railway is jointly owned by the governments of Ethiopia and Djibouti and was operated by Chemin de fur Djibouti Ethiopien (CDE) before the line deteriorated to the point that it was no longer operational, cutting landlocked Ethiopia off from port facilities in Djibouti. To address this situation, the Ethiopian Railway Corporation signed a contract with CREC and CCECC in 2011,



1. Maasho, Aaron (December 17, 2011). Ethiopia signs Djibouti railway deal with China. Reuters.

opting for a new SGR, which would be compatible with other major railway infrastructure projects in East Africa, rather than rehabilitating the existing Ethio-Djibouti Railway.

The Addis Ababa - Dewele railway line comprises a 107km double track from Addis Ababa to Adama and 549km of single track from Adama to Dewele. Major stations on the line, comprising both passenger and cargo stations, include Sebeta, Lebu, Indode, Bishftu, Modjo, Adama, Metehara, Awash, Mieso, Mulu, Afdem, Bike, Erer, Dire Dawa, Shinle, and Dewele. The line will continue from Dewele on the Ethiopian boarder into Djibouti, ending at the Djibouti port station. The new route will reduce travel time from Sebeta to the port of Djibouti by more than 50% and will form an important part of the East to West Africa Railway Network. The line will support both freight and passenger traffic.

The Addis Ababa-Djibouti Railway Project is one facet of a much larger national plan being implemented by the Ethiopian government to overhaul transportation infrastructure in the country. The government's five-year Growth and Transformation Plan (GTP) has among its aims the overhaul of the national transport network by connecting to adjacent countries to improve export and import capabilities, provide sustainable transport solutions for the country's growing urban population and boost the country's economic development.

Railway Projects Highlighted For Possible Development Include:

Route Number	Route Name	Estimated Length (km)
1	Addis Ababa-Modjo-Awash-Dire Dawa-Dewele	656km
2	Modjo-Shashemene-Arbaminch-Konso-Moyale Including Shashemene-Hawasa and Konso-Weyto	905km
3	Addis Ababa-Ijaji-Jimma-Guraferda-Dima including Jimma-Bedele	740km
4	Ijaji-Nekemet-Assosa-Kumruk	460km
5	Awash-Kombolcha-Mekele-Shire	757km
6	Fenoteselam-Bahirdar-Wereta-Weldia-Semera-Elidar	734km
7	Wereta-Azezo-metema	244km
8	Adama-indeto-Gasera	248km
Total		4744km

The Addis Ababa-Dewele line constitutes the first project in the first phase of the NRNE programme and is scheduled to come into operation later this year. The Lebu railway station in Addis Ababa, also constructed by CREC, was officially opened in September 2015 and will serve as the main railway station for the new SGR infrastructure, linking the capital to the rest of the country.

RAILSERVE TO SUPPLY GABON

In response to market demand for a cost-effective locomotive for rail yard switching, Atlanta-based company Railserve jumped at the opportunity to supply a solution to Gabon.

The majority of locomotives in service today are used for long-haul trips and are not suited to in-plant rail switching, a process that uses locomotives to safely move railcars within industrial, manufacturing, and production facilities. The price tag of purchasing a long-haul locomotive is prohibitive for many in the sector, who are primarily moving railcars within their own facilities. In line with the company's client centred approach, Railserve took on the challenge of designing a cost-effective, lower-horsepower, ultra-low emissions genset locomotive for in-plant rail switching.

The first Railserve LEAF® (Lower Emissions And Fuel) Gen-Set Locomotives were built at Railserve's facilities in Longview, Texas and placed into service in 2008. At the time, the company used the LEAF locomotives in their own fleet, providing third party switching services to major manufacturing companies in the US and Canada. Demand for the locomotives grew among switching customers and expanded to other facilities where customers were using their own employees to operate the LEAF.

In 2013, Railserve came to the Export-Import Bank of the United States (EXIM Bank) to finance an export sale to a buyer in sub-Saharan Africa. The EXIM Bank agreed to finance the sale of Railserve's LEAF locomotives to Societe d'Exploitation du Transgabonais (SETRAG), a railway operator in Gabon, Africa. The Bank guaranteed a $US10 million loan, extended by American Trade & Finance Company (Atrafin) to facilitate the export.

EXIM's loan guarantee mitigates the potential risks associated with selling to foreign buyers. The product provides competitive financing options and flexible repayment terms for international buyers that otherwise may not have been available from lenders. The EXIM Bank has a congressional mandate to support the export of US–made goods and services to sub-Saharan Africa. In line with this mandate, the bank authorised more than $US2 billion in financing to support such exports in 2014, the largest total in the Bank's 81-year history.

"With this transaction, we have not only levelled the playing field for an American manufacturer in a highly competitive global market," said EXIM Chairman and President Fred Hochberg.

Railserve was able to outbid market competition with the assistance of the EXIM Bank. As a result, the company's locomotives are now being used in Gabon as part of SETRAG's plans to improve railway operations.

"It's our first sale outside of North America so this is a big step for us,' says Mahoney, Railserve LEAF programme manager. "We're very pleased and we think it is going to open doors for us across Africa, where there is a lot of rail development underway," he concludes.

This is why South Africa so desperatly needs a similiar financial solution.

TAKORADI-SEKONDI SUBURBAN RAILWAY LINE AT 80% COMPLETE SAYS MINISTER OF TRANSPORT

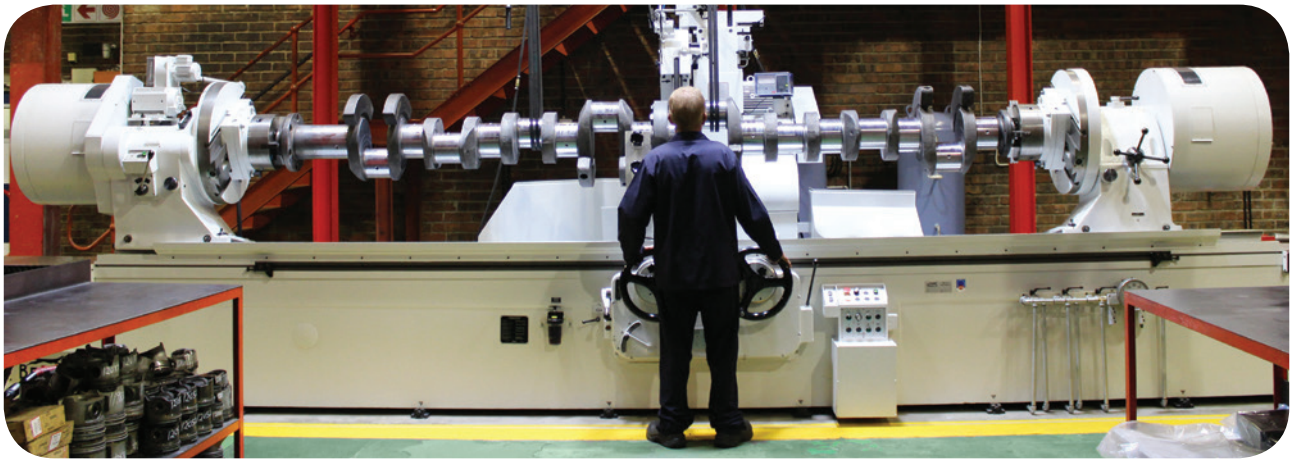
Speaking at a recent media briefing, minister of transport Fifi Kwetey announced that the Takoradi-Sekondi Suburban Railway Line is progressing well and is currently about 80% complete.

The project forms part of the Ghanaian Government's plans to rehabilitate the country's Western Railway Line, a $US1 billion plan which intends to modernise rail stations, terminals and ancillary services on the route which will run from Dunkwa to Awaso. The project is being implemented using a staged approach, with the new suburban service linking Sekondi and Takoradi being the first.

"The project will improve commuter services between cities and reduce congestion on the road," said Kwetey, adding that: "It will also provide a rail link from the port to a container depot at the Sekondi Railway Station area to ease the congestion at the Takoradi Port."

Local construction company, Amandi, is currently overseeing the construction of the line, with the track work from Sekondi to Kojokrom complete and work on the Kojokrom to Takoradi still underway. "The construction of the new Sekondi station building is almost completed while others at Butua, Takoradi and Kojokrom stations are at various stages of completion," the minister said.

With regards to the remaining phases of the rehabilitation of the Western Line, Kwetey stated that the ministry of transport was seeking other sources of funding and has tasked the Ghana Railway Development Authority with project execution.



Grinding of crankshafts with lengths of up to 4.7 metres and weights of up to 5 ton

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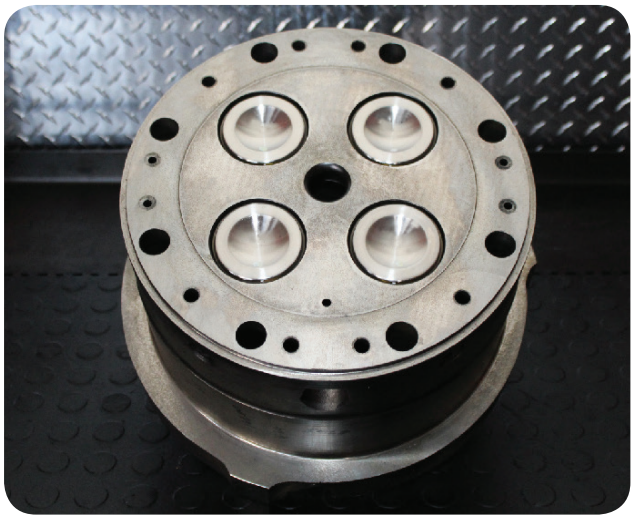
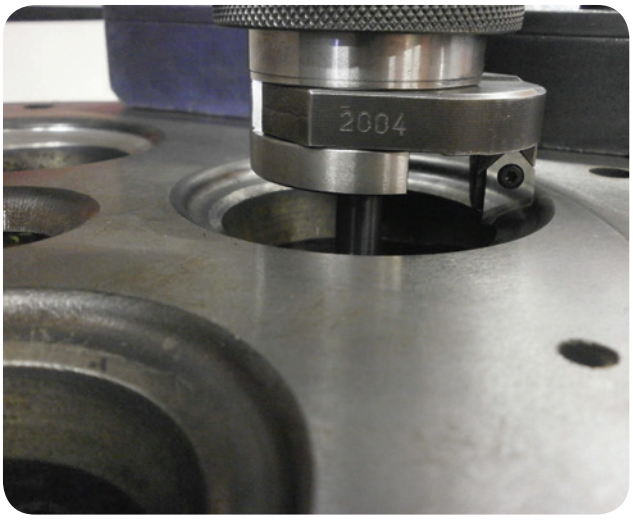
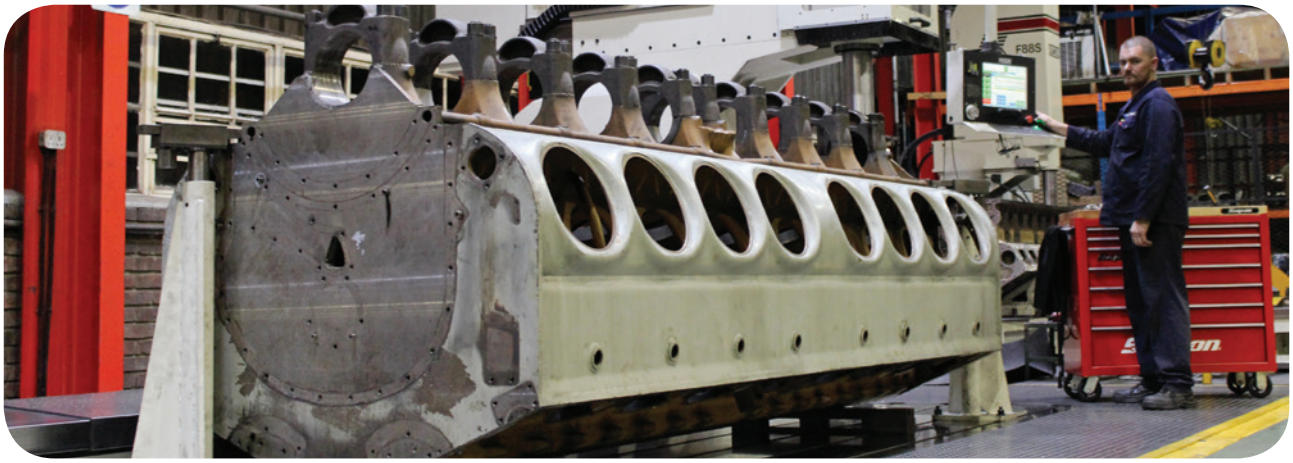




Zero hour cylinder head remanufacturing



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He said the ministry of transport was seeking other sources of funding to reconstruct the remaining sections of the Western Railway Line and has requested the Ghana Port and Harbour Authority to collaborate with Ghana Railway Development Authority (GRDA) for the execution of the project.

Established in 2008, the GRDA has the authority to grant investors licenses, concessions, and leases, which are necessary for the operation of railways and railway services in the country. In addition, the minister announced that a feasibility study has recently been completed for the rehabilitation of the Eastern Railway Line, which will link the Boankra Inland Port. Kwetey indicated that this project would soon go out for bidding to find what he terms a "strategic investor."

GUINEA LAUNCH A LICENCING ONE-STOP-SHOP

Guinea have launched a One-Stop-Shop facility for business procedures that will simplify and accelerate the processing of licenses, permits and other approvals for mining and infrastructure projects, the International Bank for Reconstruction and Development (IBRD) announced in a recent press release.

The government of Guinea established the One-Stop-Shop with support from the IBRD and the African Development Bank (AfDB), to improve the country's investment climate and encourage the development of the mining sector, which includes bauxite, iron ore, and other minerals.

The new facility should dramatically reduce the time needed to acquire licenses, permits and other approvals for activities including environmental assessments and road and railway construction. Caseworkers at the One-Stop-Shop will work with mining operators and government bodies to expedite the licensing process. A dedicated website, launched in conjunction with the One-Stop-Shop, provides users instant access to information on licenses and other relevant materials.

"Establishing a One-Stop-Shop for the processing of permits and licenses for integrated mining projects is an important step forward for the reforms launched by the government of Guinea to facilitate the efficient and rapid implementation of mining projects and to make our country's investment climate more attractive," said Abdoulaye Magassouba, the Guinean minister of mines and geology.

The IBRD is assisting Guinea to introduce business reforms that will increase efficiency, effectiveness, transparency and predictability when dealing with investors and operators. In addition, the IBRD has facilitated the government's efforts to improve the business regulatory environment in the country, making it easier and less costly for small and medium businesses to start, operate and grow informally. The collaborative project has included the implementation of reforms in areas such as launching and operating businesses, investment policy and tax reforms and the adoption of a new and modern investment code. These reforms will boost economic growth by directly benefitting small and medium businesses, with the view to creating much needed employment opportunities, as well as attracting foreign direct investment.

"We are pleased to supplement the government's efforts to lift binding constraints to private sector-led economic growth in Guinea," said Rashidi Radji, IBRD country manager for Guinea. "The establishment of the One-Stop-Shop is a decisive step forward in attaining Guinea's goal of improving the business environment in the country and will assist mining operators by saving time and money, which will support economic growth," concluded Radji.

GUINEA'S LARGEST JOINT INFRASTRUCTURE PROJECT PLACED ON HOLD

The Simandou mining project is situated along a 110km stretch in the southern Nzérékoré Region of Guinea, West Africa. The mountain range is home to some of the largest untapped high-grade iron ore reserves in the world, with estimated reserves of 2.4 billion tonnes of ore. The Pic de Fon and Ouéléba iron deposits are located approximately 4km from one another at the southern end of the Simandou Range, approximately 550km from Guinea's capital city of Conakry. The Simandou mine, once in production, is forecast to have a capacity of 350 million metric tonnes of iron ore per annum and has a potential mine life in excess of 40 years. The development of mining operations in the region, along with the railway infrastructure that will make mining operations feasible, has the potential to transform Guinea into one of the largest iron-ore exporters in the world.

Complex Business Dealings

The government of Guinea and the international mining group Rio Tinto reached a concession agreement in 2006, awarding the multi-national the rights to develop the Simandou mine. Rio Tinto conducted extensive studies in the area to establish the infrastructure needs in the region and began clearing the site, constructing roads and developing the infrastructure to support a large-scale mining operation shortly after signing the concession agreement in 2007[1].

In mid 2008, however, the Guinean government, under the leadership of Lansana Conté, decided that Rio Tinto has was not developing the area at a sufficient pace to begin production and stripped the company of the northern portion of the Simandou concession, east and southeast of Kerouane, which constitutes half of the area awarded in the 2006 concession.

These sections, known as Block 1 and Block 2, were awarded to an Israeli company, BSG Resources Limited, who, in turn, sold

a 51% stake in half the concession to Vale.

Rio Tinto opposed the seizure of this portion of the concession, claiming that BSG Resources Limited, together with its subsidiaries and affiliates purchased the concession through unfair business practices[2]. While Rio Tinto has pursued legal recourse against BSG Resources limited, along with their subsidiaries and affiliates, the company reached a settlement agreement with the Guinean Government in 2011 and entered into a deal with the Aluminium Corporation of China (Chinalco) to jointly develop the Simandou South Project[3].

A Country In Flux – Guinea's Political Transformation

The political landscape in Guinea has undergone a dramatic transformation over the past ten years, which has significantly affected the manner in which business is conducted in the African state. This has had a major impact on the brokering of the Simandou South Mining Project.

When the initial concession was signed in 2006, the country was under the authoritarian rule of Lansana Conté, a dictator who came to power after a military coup in 1984. According to Transparency International, a global anti-corruption coalition, Guinea was counted as the second most corrupt country in the world, after Haiti, during Conté's reign[4].

Following Conté's death in December 2008, the country saw its second successful military coup, which resulted in Captain Moussa Dadis Camara being inaugurated as the country's head of state. The army captain held onto power for nine short months, during which time he was implicated in a number of mass killings and human rights abuses perpetrated by the country's security forces under his authority. One year after seizing power Camara was attacked, sustaining serious injuries, and left his deputy General Sekouba Konate to rule the country in his stead. Konate, with the aid international agencies, organised the country's first democratic elections in 2010[5].

Following the nation's first free and fair election process in November 2010, Alpha Condé was declared the country's first democratically elected president. Prior to taking office, Condé spent decades opposing the country's military regime and was both imprisoned and exiled for his political activities. Throughout his first and second stint in office, the Guinean president has made significant strides in implementing good governance and rooting out some of the corruption that dominated business dealings in the past. Upon taking office, Condé pledged to broker deals to develop the country's untapped resources in such a way that it would benefit the people of Guinea and has sought advice from western governments, international aid organisations such as the International Finance Corporation (IFC) and high-level private businesses in the process.

Development of Simandou South Project

Rio Tinto, together with Condé's government

and the IFC established a joint-venture company that trades under the name SIMFER S.A with the objective of developing the southern Block 3 and Block 4 regions of the Simandou Project. Rio Tinto currently owns 46.6% of the company, with Chinalco Iron Ore Holdings, a consortium of Chinese state-owned enterprises lead by Chinalco, having a 41.3% shareholding. In addition, the IFC holds 4.6% and the government of Guinea 7.5% in the joint venture. Under the terms of the contract, SIMFER S.A holds the mining concession and functions as the project company. The government, however, retains the right to acquire up to a 35% interest in SIMFER S.A, under various option arrangements, as well as a 51% fully funded interest in the related Simandou infrastructure including both port and rail infrastructure.

The mining project involves three separate but intricately linked components. The first aspect of the project plan focuses on iron ore exploration and the construction of a conventional open pit mine, that will use conventional drilling, blasting, loading and haul methods. Secondly, the project provides for the construction of a 650km trans-Guinean railway line that will enable the transportation of iron ore from the Simandou Mine to a new deep-sea port, which will be located to the south of the country's capital city of Conakry, on the Morebaya River. According to the project plan, the mine's railway operation will have six locomotives, 240 transport cars and one crew car. The trainset is designed to be 2,500m long and will travel at 80km/h, carrying 30,000 metric tonnes of iron ore to the coast for export.

The railway line and port facilities will be constructed for multi-purpose and multi-user utilisation. Third parties will be encouraged to utilise these facilities to further the profitability of the railway operation and port infrastructure. The infrastructure development project falls outside of the contractual obligations of Rio Tinto and will be awarded to a separate infrastructure consortium. Finally, the project plan provides for the development of ancillary infrastructures, such as access roads, accommodation, power generation and water systems to directly support the Simandou project.

Localisation At The Heart Of Development

Collectively, the Simandou Project constitutes the largest planned, integrated, private sector driven mining and infrastructure development envisaged on the African continent. President Condé's commitment to ensuring that the development of the country's mining potential directly benefits the Guinean people has been built into the project from conceptualisation, through the involvement of the IFC as well as through strong localisation policies implemented at a government level.

The IFC, a key stakeholder in the Simandou Project, has a been working with small and medium enterprises (SMEs) in the country to advance the skills and capacities needed to facilitate the establishment of local supply chains for large-scale development projects in the country. The organisation started working with Guinean SMEs in 2008, delivering a flagship project titled "Guinea Linkages", which supports localisation by providing training and skills development at a local business level in critical areas such as business planning, financial management, marketing and compliance with health and safety. The aim of the project is to assist SMEs to improved their capacity and compliance with international standards so that they can participate in the local supply chain for projects spearheaded by major multi-national corporations. By 2012, the various interventions implemented by the IFC, together with their various partners, resulted in more than 100 local enterprises being awarded in excess of $US9 million in mining sector contracts.

In line with Rio Tinto's commitment to

[1] Klare, M (2012) The Race For What's Left: The Global Scramble For The World's Last Resources. Henry Holt and Company, New York

[2] Rio Tinto files Complaint in United States District Court in relation to mining concessions in Guinea (30 April 2014); http://www.riotinto.com/media/media-releases-237_10305.aspx

[3] www.news.com.au/ (19 / 03 / 2010) Rio Tinto, Chinalco, agree to develop Guinea iron ore field http://www.news.com.au/finance/business/rio-tinto-chinalco-agree-to-develop-guinea-iron-ore-field/story-e6frfkur-1225842910656

[4] The Guardian (23/12/2008) Lansana Conté profile: Death of an African 'Big Man' https://www.theguardian.com/world/2008/dec/23/lansana-conte-profile

[5] Reuters Africa (23/10/2012) FACTBOX – Guinea's violent politics; http://af.reuters.com/article/metalsNews/idAFL6E8L9KFQ20121023

sustainable development in host countries, the company has worked closely with multiple stakeholders to ensure that local development is realised through the Simandou South Project. According to an IFC statement: "A project such as Simandou offers complex business, development, and governance challenges that are unique to a remote project in a country with a new democracy and limited institutional and regulatory capacity. The project partners strive to create the highest likelihood that this project can achieve its development potential for the affected communities and the nation." This is good news for a country that is counted by the UN as among the world's least developed nations, with more than 50% of the population living below the poverty line.
The project planning approach taken by stakeholders in the Simandou Project serves as a potential blueprint for good practice in development planning for the successful monetisation of Africa's untapped mineral wealth. Guinea's unparalleled mineral wealth and concurrent underdevelopment, poverty and unstable political environment are exemplary of the paradox that has persisted on the continent for more than a century. However, through carefully considered project planning, as seen in the Simandou Project, African states are able to ensure local beneficiation through carefully constructed localisation plans that not only ensures the upliftment of local economies but also support profitability for private investors.

An Untimely End

In May of this year, SIMFER S.A submitted the mine and infrastructure bankable feasibility

studies for the Simandou South project for consideration. The report, based on a comprehensive analysis carried out over two years by SIMFER S.A, China Harbour Engineering Company (CHEC), China Railway Construction Corporation (CRCC) and other international mining and construction contractors, estimated that the project would need $US20 billion in capital investment to get off the ground.

In July, newly appointed Rio Tinto chief executive officer, Jean-Sébastien Jacques, announced that the depressed iron ore market was not conducive to the projects implementation. In the company's 2016 interim report, they stated: "Extensive engagement with potential infrastructure investors has taken place, but deteriorating market conditions have had a negative impact on investors' appetite

for the project and have prevented SIMFER S.A from assembling a funding consortium." Rio Tinto thereafter publically announced that it would be placing the Simandou Mining Project "on the shelf" until the market conditions were more supportive of investment.

This has come as a devastating blow to the Guinean people and particularly to Condé's government. According to news reports, the country has seen mass uprisings in Conakry, with protestors levelling the blame at Condé and his cabinet for what they have termed the "mismanagement" of the Simandou Project. Current political unrest is being lead by Condé's main political opposition leader Cellou Dalein Diallo, who is calling for Alpha Condé's resignation. Clashes between demonstrators and security forces have left one confirmed dead and multiple injured in recent weeks.

BOLLORÉ RAILWAYS LAUNCHES THE REHABILITATION OF THE ABIDJAN-OUAGADOUGOU RAIL NETWORK

Bolloré Railways has committed to investing €400 million, over a maximum of five years, to modernise the railway infrastructure and increase capacity on the Abidjan-Ouagadougou railway network, the company announced this September.

The planned work includes the renovation of the civil engineering structures, track rehabilitation and the rerouting of specific sections to optimise traffic flow and reduce journey times.

The station at Treichville, renovated by Bolloré Railways, was inaugurated at a ceremony attended by various dignitaries and will set the standard as the company focuses on enhancing passenger comfort levels. This will include the rehabilitation of stations, more than ten of which are located to the north of Bouaké and are currently closed to passengers. The renovated stations will be re-opened for passenger service once work has been completed.

"We are reviving rail transport with the rehabilitation of 1,260km of railway lines, enabling the renewal, modernisation and re-implementation of the rail safety system and improving journey times," says Michel Roussin, CEO of Sitarail.

In addition to the infrastructure-related investment, Bolloré Railways is already injecting approximately €15 million into the renovation of rolling stock, to increase the haulage capacity of line's the locomotives. The first six new locomotives of the fifteen due for delivery by April 2016 were handed over in Abidjan in 2015 and went into service in late August of this year. Sitarail will also be phasing in new air-conditioned passenger carriages to replace the existing rolling stock.

"The investments demonstrate the determination of Bolloré Railways to fulfil the long-awaited aspiration for a West African rail loop, comprising 2,740km of railway connecting Abidjan to Lomé via Ouagadougou, Niamey and Cotonou," the company stated in a recent media statement.

(For more on Bolloré's Blue Line project in West Africa, see "West African Rivalry" on Page 18).

KENYA OVERTAKES SA AS THE LARGEST INVESTOR IN FELLOW AFRICAN COUNTRIES

Kenya has overtaken South Africa as the largest intra-regional investor in Africa, in terms of the number of projects carried out in 2015. According to a recent report published by financial consulting firm Ernst and Young (EY), Kenya invested in 36 projects in other parts of Africa last year, while South Africa invested in 33.

It is notable that the majority of Kenya's intra-trade activity occurred in the East African Community (EAC). Analyses point out that the dynamic growth in this region can be attributed to recent oil and gas discoveries, a growing consumer base, an increase in regional integration and aggressive infrastructure development, most notably the interregional Standard Gauge Railway (SGR) Project between Mombasa and Nairobi. The SGR forms part of the broader Lamu Port-South Sudan-Ethiopia Transport Corridor (LAPSSET), which aims to connect East Africa via oil refineries, ports and railway lines.

The economic outlook in Kenya remains positive, despite trying times in global markets, the report indicates. Kenya posted a GDP growth rate of 5.6% in 2015, which is set to accelerate to 6% in 2016. The country remains the anchor economy in the East African region and is currently ahead of the kerb with regards to foreign direct investment (FDI). While the majority of African countries continue to show an increase in FDI projects in 2015, despite downward global trends in FDI (-5%), Kenya remains the leading gainer on the African continent. The country has more than doubled its FDI over the past year, moving the East African country into second place behind South Africa.

"Kenya mirrored its strong inward FDI project performance, more than doubling its outward FDI project investments into the rest of Africa. The country's ranking as a source of FDI also improved strongly, from 13th position in 2014 to 7th position in 2015," the report explains.

NIGERIAN PRESIDENT INAUGURATES THE ABUJA-KADUNA SRG LINE

Nigerian president Muhammadu Buhari officially inaugurated the newly completed Abuja-Kaduna railway line on 26 July. The 186km standard gauge line runs from Idu, near Abuja, to Kaduna, in the northwestern region of Nigeria. The line connects the country's federal capital city with the country's commercial capital, increasing mobility between the two cities for both goods and passengers.

Speaking at the inauguration of the line, President Buhari stated: "The construction of the Abuja-Kaduna standard gauge rail track commenced in 2009 and happily, we are on the threshold of presenting to Nigerians a standard gauge railway train service that will be safe, fast and reliable. The Abuja-Kaduna train service will provide the much needed alternative transport link between the Federal Capital Territory and Kaduna State, a corridor which has a huge potential for industries, agricultural activities and a growing labour force."

The Abuja-Kaduna standard gauge railway project is the first of its kind to be completed in the country, replacing the existing narrow gauge system that will allow high-speed train operations on the railway network for the first time. The contract was awarded to China Civil and Engineering Construction Company (CCECC) in 2006, as a part of the $US8.3 billion Lagos-Kano standard gauge railway project proposed by the previous Nigerian government.

As a result of funding difficulties, the project had to be downscaled, with the modernisation of segments of the track being implemented using a staged approach, the Abuja-Kaduna section being the first. Additional standard gauge line projects being considered by the federal government include:

- Lagos-Benin City (300km)
- Benin-Abakiliki (500km)
- Benin Obudu Cattle Ranch (673km)
- Lagos-Abuja high-speed (615km)
- Zaria-Birnin Koni (520km)
- Ega nyi-Otukpo (533km)
- Ega nyi-Abuja (Unspecified)
- Port Harcourt-Maiduguri line (1,657km)

Buhari reaffirmed his administration's commitment to following through with the country's rail rejuvenation programme, stating that: "I wish to reassure Nigerians that due attention will be placed on pursuing the 25-Year Strategic Railway Master Plan, which is aimed at rehabilitating the existing 3,505km narrow gauge rail line and developing and constructing new standard gauge rail lines across the country."

The launch of the Abuja-Kaduna line comes at the same time as the passing of the Nigerian Railways Authority Bill of 2015 by the Nigerian senate, which proposes to open the rail sector up to private investors in the future. The proposed bill makes provision for the establishment of the Nigerian Railway Authority, which will manage railway activity in Nigeria and will have the power to award private entities concessions to operate on the country's railway infrastructure.

The bill was tabled in June 2015, following which it was handed over to a special committee on land transport for research and consideration. The committee presented their report on 1 June of this year and in late July, senate passed the act for consideration by the House of Representatives. After a consolidation process by the House of Representatives, the bill will be harmonised and submitted to the president for consideration. It is not clear at this time when President Buhari will make his decision on the proposed bill.

VALE MOÇAMBIQUE STRUGGLING TO GET COAL TO THE COAST IN A DIFFICULT MARKET

Vale Moçambique (Pty) Ltd, declared a loss of $US212 million in the first half of 2016. The company is operating under severe constraints with weak international coal prices and high costs of production and transportation undermining the company's investment in Mozambique's coalfields in the Tete Province of Mozambique. According to BMI Research, an international company specialising in macroeconomic analysis: "Mozambique's coal production growth will continue to be hampered by weak global coal prices, high domestic start-up costs and inadequate infrastructure. Despite this, growth will be supported by increasing investment coming into the market, which will support long-term production growth."

Vale has been operating in Mozambique since 2004, when it initiated studies for the development of the Moatze Mine, one of the largest coal reserves in the world. Located in the Tete Province, the coal mine has a total production capacity of 11 million metric tonnes per annum of which 8.5 million metric tonnes is metallurgical premium hard coking coal and 2.5 million metric tonnes is thermal coal.

The company initiated operations on the mine in July 2011, and from inception invested heavily in the Nacala Corridor Development Project, in an effort to ensure that

the mine was supported by the necessary railway infrastructure to transport coal from Moatze to port facilities at Nacala-a-Velha. In 2010, Vale acquired a 51% shareholding in the development company of the Nacala Corridor, Sociedade de Desenvolvimento do Corredor do Norte SA (SDCN). SDCN, in turn, holds 51% of Corredor de Desenvolvimento do Norte (CDN) and the Central East African Railways (CEAR), cementing the company's foothold in the railway industry in the region.

The Nacala Corridor Project required the restoration of 682km of existing railway track between Malawi and Mozambique and the laying of 230km of new track to connect Moatze to the Nkaya Junction in Malawi, which then runs to port facilities at Nacala-A-Velha. The 912km railway line came into operation in 2014, under a concession signed by the Mozambican government and Integrated Nacala Logistics Corridor (NLC), a consortium in which Vale Mozambique holds a 70% share. In 2015, the Nacala coal terminal was opened at Nacala-a-Velha, enabling the company ship coal to their customers in India, America, Europe and Eastern Asia.

Due to the drop in global coal prices, the high start-up costs involved in getting the Moatze coal mine off the ground, and the lack of infrastructure in the region, Vale has had to re-evaluate their operational costs, as is the case for many coal producers the world over. Coal producers have had to continue reducing their costs due to oil and energy price declines, currency depreciation, and tax reductions. According to BMI Research, inefficient transport adds costs of up to $US20 per tonne to coal produced at Moatize, significantly cutting into already narrow profit margins. According to Vale, metallurgical coal prices fell due to the combination of weaker demand growth from China, which was offset to an extent by Indian demand in 2015 .

In response to the sharp fall in commodity prices and the need for more funds to complete capital projects to support profitability on the mine, Vale Mozambique decided to sell a stake in their African coal operations in 2014. Mitsui & Co, a Japanese general trading company agreed to pay $US638 million for a 14% stake in the Moatize coal mine and an additional $US313 million for a 35% stake in the Nacala Logistics Corridor. Mitsui & Co already holds 15% of Valepar, the holding company that controls the Vale group. This deal is however not yet finalised.

In 2013, an alternative route opened up from Moatize to port facilities in Beira, with the 575km Sena Railway line returning to operation after being inactive for 30 years. A consortium comprising Rail India Technical and Economic Services and Ircon International (Ricon) were awarded a concession to operate the line in 2004 and is currently operated by the Beira Railroad Corporation (CCFB). Services were reinitiated on the line in 2013, after extensive reconstruction works undertaken by Ricon, and has since become the primary coal transport line for the Moatize mine. The Sena line connects the Moatize coalfields with port facilities at Beira, which effectively cuts the distance by 337km in comparison to the Nacala route. In an effort to ensure operational safety and efficiency on the line, Vale invested in a railway signalling system that monitors the movement of trains through satellite communication along the Sena Railway. This system allows for approximately 500 trains per month to be monitored and controlled in real time on the Sena line.

In June of this year, the Sena line suffered a serious setback as a result of the resurgence of political unrest between Mozambique's rebel group the National Resistance Movement (Remano) and the ruling Frelimo Party. Remano, which waged a 16-year civil war in the country that ended in 1992, has refused to accept the results of the 2014 national elections and tensions between the rebels and government continues to escalate, despite peace talks currently underway.

Over the past two years, Remano has intensified attacks on the country's main highways and railways, resulting in the destabilisation of services on the Sena line. Vale officially stopped using the line to transport coal after gunmen attacked two of its trains in June this year. The violence has also delays plans to upgrade the Sena line, which is currently a single track, with a capacity of six million tonnes of coal per annum with traffic limited to 42 wagons and two locomotives. The proposed upgrade will increase capacity to 20 million tonnes per annum, double the length of the two-track sections, allowing trains from opposite directions to pass, and will allow 100 wagons with 6 locomotives to run on the track. While these upgrades would increase efficiency and profitability for the mining sector, it is not sustainable to implement upgrades while the rail assets cannot be secured.

With the Nacala Corridor proving prohibitively costly, and the Sena line both inadequate and subject to attack, Vale needs another viable route to transport coal to the country's port facilities. Fortunately, an answer to this challenge seems to be on the horizon, with public consultations opening up on a new proposed line that will link Tete to a new port at Macuse in the Zambezia Province, 35km north of Quelimane.

The concession to build the line was granted to a company called Italian-Thai Development Mozambique in 2013, and media reports indicate that the project went to tender earlier this year. There is as yet no official announcement of which company will be awarded the deal, however, reports indicate that applications have been received from two companies in China, two from Turkey and one each from Brazil, Portugal and South Korea.

The proposed Moatize-Macuse line will have a track distance of 525km and involves building a new standard gauge line parallel to the existing Cape gauge line that runs from Moatize to Mutarara, opposite the Sena line on the Zambezi river. Contractors will then construct 129km of railway to the coast, ending at a deep-water offshore port to be constructed at the Bons Sinais river mouth. The port of Macuse will have the capacity to receive vessels of up to 80 tonnes, which allows for greater competitiveness in relation to the port of Beira, which receives ships with a smaller draft. Current estimates indicate that the project could cost approximately $US4.5 billion and it is not clear as yet where funding for the project will come from.

ENGIE AND THALES TO BUILD RAIL SYSTEM IN DAKAR

French companies Engie and Thales have been selected by the Senegalese Agency for Investment Promotion and Public Works (APIX), to design and build the infrastructure and systems for the new Dakar Regional Express Train. The contract is valued at €225 million.

The Regional Express Train (Train Express Regional or TER) will link Dakar to the new Blaise Diagne international airport, with a travel time of under 50 minutes. The project forms a part of the government's ambitious "Emerging Senegal" restructuring plan, launched by the in 2014 to promote the country's social and economic development.

The link will be built in two phases, with the first phase covering 36km from the city of Dakar to Diamniadio and the second phase covering 19km from the city of Diamniadio to Blaise Diagne International Airport. The construction phase of the project is expected to take 26 months and is scheduled to begin in the third quarter of 2016, with systems coming on line in late 2018.

Engie Ineo, a subsidiary of the Engie group, together with Thales in a subcontractor role, will direct the engineering group, provide overall management and conduct all integration testing. The consortium will work closely with other companies assigned to the civil engineering, tracks, and stations portions of the project, as well as rolling stock. Senegalese company CSE, Engie Ineo's local partner, will be assigned the civil and electrical engineering work as well as the installation and management of construction sites and living quarters.

According to a press release issued by the consortium, the awarding of this contract recognises Engie Ineo's expertise in creating and developing efficient and innovative solutions for connected cities and regions. The contract also serves to strengthen the Engie Group's position as an investor in the African market, expanding the company's existing position in North and South Africa.

The contract is one of a number of railway development projects currently underway in the African state. In January of this year, the governments of Mali and Senegal entered into an agreement with China Railway and Construction Corp (CRCC) to rehabilitate the 1,286km meter gauge railway which connects the port of Dakar with Mali's capital city Bamako. The project is evenly split between the two states, with 644,6km of track on the Senegal section of the line and 641,4km in Mali. Collectively the project has been valued at $US 2.7 billion.

Senegalese President, Macky Sall, is optimistic about the project. In a recent media address, Sall announced that work on the Dakar-Bamako railway would be initiated in the near future. According to the statesman, the railway will have the capacity to carry two million passengers and six million tonnes of cargo annually, significantly reducing pressure on the country's road infrastructure. Once complete, passenger trains will be able to reach speeds of up to 100km/h, in comparison to the 20km/h currently possible on the dilapidated railway system, reducing what is currently a five-day journey between Dakar and Bamako to two days.

SOUTH AFRICAN ASSET MANAGER HALTS LOANS TO STATE OWNED COMPANIES DUE TO POLITICAL INSTABILITY

South African asset management firm Futuregrowth announced in a press release they intend to halt loans to state-owned entities (SOE). Futuregrowth and the asset management industry are substantial funders to South Africa's SOEs, notably Eskom, Transnet, Sanral, Landbank, IDC and DBSA, through direct loans and capital and money market instruments. This decision was motivated by concerns about the governance and decision-making structures within certain SOEs and will remain in place pending a review. Futuregrowth have suspended negotiations on over R1.8 billion of debt finance to three different SOEs.

In a media statement explaining the decision, Futuregrowth stated: "We have observed recent reports which strongly hint of conflict between branches of South Africa's government, the possible machinations of patronage networks and a seeming challenge to the independence of the National Treasury. This follows many months of such information flow, and stories of evidently patronage-driven contracts or potential contracts by SOEs to what appear to be politically connected persons."

The company's decision is further fuelled by the announcement of a special presidential committee that is intended to chair a council to directly oversee the SOEs. "The meaning, timing, and intent of this announcement, particularly at this juncture, is entirely unclear – and, lacking clarity and context, we feel compelled to view this announcement with concern. As rational and fiduciary investors we must adapt our views and investment strategies when circumstances change," the company states.

In justifying the decision to withdraw support from the listed SOEs, Futuregrowth states that: "It is certainly not our desire nor intent to undermine the highlighted SOEs' developmental missions, but in the current environment our message is clear: 'We cannot provide finance without having clearer sight of, and comfort around, the governance and decision-making of the SOEs.'"

Transnet Responds To Futuregrowth's Decision

In response to Futuregrowth's decision, Transnet issued the following statement: Transnet continues to pursue its R340-R380 billion infrastructure investment programme – the Market Demand Strategy (MDS), aimed at strengthening the country's railway, ports and pipelines infrastructure.

To support the successful execution of the MDS, Transnet raises funding through domestic and international debt capital markets, on the strength of its financial position with no government guarantees since 2005. Transnet has already funded its full borrowing requirement for the 16/17 financial year and has a healthy liquidity position, with R22 billion available at present.

Transnet has noted with regret reports about Futuregrowth's position on lending to SOCs.

The company engages with the investor community on a regular basis through road shows and one-on-one interactions with lenders. The objective of these engagements is to provide updates on our financial and operational performance, and to facilitate transparent conversations, whilst fostering a healthy relationship.

Transnet is available to engage with all its lenders and investors, including Futuregrowth, to address any concerns they may have regarding the company's business activities. It is regrettable that Futuregrowth, which represents about 1,25% of our total borrowings, opted to overlook the channels of communication available to them. Transnet, unfortunately, learnt of their decision to halt loans to SOCs through the media.

Transnet views itself as a credible and reliable borrower with strong credit fundamentals as evidenced by its stand-alone credit profile and investment grade credit rating. We are also

committed to maintaining the highest standards of good corporate governance and adhere strictly to internal policies and procedures.

Transnet has a diversified funding approach through a number of sources, depending on market conditions. These include the Domestic Medium-Term Note programme, Global Medium-Term Note programme, Export Credit Agencies, Development Finance Institutions and other financial institutions.

Currently, Futuregrowth has included the six largest SOEs in the country in a list of entities that they will no longer be extending funds too, however, they may extend this list "as we see appropriate," the entity explains. However, the company has indicated that they will continue to provide funding to various government-related and private entities that do substantial business with the government. "We presently see no suspension of funding to entities such as alternative energy companies, water boards, municipalities, and the like."

NAMIBIA - REHABILITATION OF KRANZBERG-TSUMEB RAILWAY LINE

There have been a number of articles published in Namibian press over the past few months that suggest that rail rehabilitation works being done on the Kranzburg-Tsumeb railway line may be the subject of irregular business practice. The allegations suggest that TransNamib may not have followed due process in tendering the deal and have failed to ensure fair contract conditions with D&M Rail Construction (Pty) Ltd, who are currently carrying out work on the critical railway line. A formal investigation has not been levelled against either party as yet. Railways Africa takes a look at the history and received a formal response from D&M Rail Construction.

Kranzburg-Tsumeb Line In Context

The railway line from Kranzberg to Tsumeb covers a mainline distance of 392km and connects the Port of Walvis Bay and the Walvis Bay – Windhoek main line with the northern parts of Namibia where major industries are located, including Namibia's only cement plant Ohorongo Cement and Dundee Precious Metals which produces blister copper and sulphuric acid. The line also serves the railheads at the Namibia/Angola border at Oshikango and Grootfontein/Tsumeb, for intermodal traffic to Zambia and The Democratic Republic of the Congo (DRC).

The Kranzburg-Tsumeb line was converted from narrow gauge to Cape Gauge during the mid-1960s and was, at the time, constructed using branch line standards. As rail traffic patterns changed in the post-independence period, the Kranzberg-Tsumeb line became a critical route, with the highest traffic density after the Windhoek-WVB route. The light rail materials used to construct the line, which includes 30kg jointed track on 30kg steel sleepers with poor ballast, rapidly deteriorated as a result of the increased traffic. Derailments reached critical proportions by the end of 2011, resulting in passenger traffic being abandoned and speed restrictions being imposed on most of the route.

Rehabilitation Works On The Kranzburg-Tsumeb Line

At the end of 2011, D&M Rail Construction was contracted by the Namibian Government to construct the new 58km Ondangwa-Oshikango rail line. The company won the tender against foreign competition and became the first 100% Namibian-owned company to undertake a rail project of such magnitude. The project, completed between June 2011 and February 2012, forms a part of the Northern Railway Extension of the railway link from Kranzburg to Otavi.

During the construction of the Ondangwa-Oshikango line, the Namibian government requested D&M to carry out emergency repairs on the Kranzberg railway line between December 2011 and March 2012 in an effort to bring critical sections back into operation. On very short notice, D&M was able to deploy a team to initiate repairs to the line by 22 December 2011.

The initial work carried out by D&M on the Kranzberg railway track served as an emergency interim plan and was very short-term in nature. The Government, however, soon realised that the scope of work required on the line was both extensive and urgent. During this period the government had invested heavily in the development of a N$2.7 billion gas-cleaning and sulphuric acid plant at Dundee Precious Metals' copper smelter in Tsumeb. The plant captures and converts problematic sulphur dioxide gas, which is produced as a by-product of the copper smelting process, and converts it into sulphuric acid, which is then sold to Namibia's uranium mines in the Walvis Bay area for use in the uranium production process. The plant was due to come online in 2015 and resulted in the need to transport 330,000 tonnes of sulphuric acid via rail from Tsumeb to Walvis Bay on an annual basis.

In an attempt to solve the problem pre-emptively, the government appointed Windhoek Consulting Engineers (WCE) to work as consultants on the rehabilitation of the line in 2010, but by December 2011 no funds had been released to initiate work. With the rapid deterioration of the line and the sulphuric acid project about to initiate operations, an interim solution had to be found to keep the line operational and satisfy

Condition of line before work was done

After completion of rehabilitation

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the basic safety requirements of the investors in the new acid plant at Tsumeb.

Following surveyance, it was established that a complete reconstruction of the line would not be achievable over the short to medium term. Windhoek Consulting Engineers then approached a shortlist of construction companies during 2012 to undertake larger scale repairs and rehabilitation on the line. D&M Rail Construction was selected as the company that met the requirements set and the company commenced the rehabilitation works in 2013.

A contract was then signed between TransNamib and D&M Rail Construction in 2013, with funding provided by the government, for rehabilitation works on the track. WCE supervises the project in consultation with TransNamib and the Ministry of Works and all work is done in accordance with the programmes set by WCE in consultation with relevant stakeholders.

Since rehabilitation works commenced in 2013, the government has spent approximately N$500 million on the project. Questions about the tendering process have arisen in Namibia's local media over the awarding of the rehabilitation program to D&M, with allegations that the government is trapped in an "open-ended contract" and that tendering processes were not correctly observed in awarding the contract to D&M Rail Construction.

In response to these allegations, Managing Director Mr Dawie Möller explained to Railways Africa that the contract has no defined end date as work is being done based on the availability of funding rather than on a pre-defined date. "As progress is determined by the availability of funding, no definite time-frame could be set for completion of the current rehabilitation works," Möller states.

With regards to the allegations from media that the contract is open-ended and therefore the result of dubious business practice, Möller offers the following response: "The perception that it is an indefinite period contract is not correct as the scope of the contract is clearly defined and once the work has been completed the contract will automatically terminate. Should the quality of work not be to the satisfaction of TransNamib, the government or WCE, the contract may be terminated. To date all stakeholders have been satisfied with the standard of work, which is also evident from the fact that no track related derailment has occurred since the start of the project and the transport of sulphuric acid commenced as planned and is running successfully."

TransNamib's acting chief executive Hippy Tjivikua seems to be satisfied with the working arrangements between the railway operator and D&M, stating that D&M is the only contractor in Namibia that is qualified and able to carry out the work needed.

Möller goes further to highlight some of the development initiatives undertaken by his company to ensure that the work undertaken benefits the community: "D&M Rail Construction gives preference to labour-intensive work methods, which is the right approach in a country with a very high unemployment rate. Labour is recruited from the communities in the vicinity of the works areas. To address the skills shortage in the railway construction sector, D&M Rail set up its own training school for semi-skilled and skilled grades and provides bursaries to Engineering students who are taken up in our employ after graduation."

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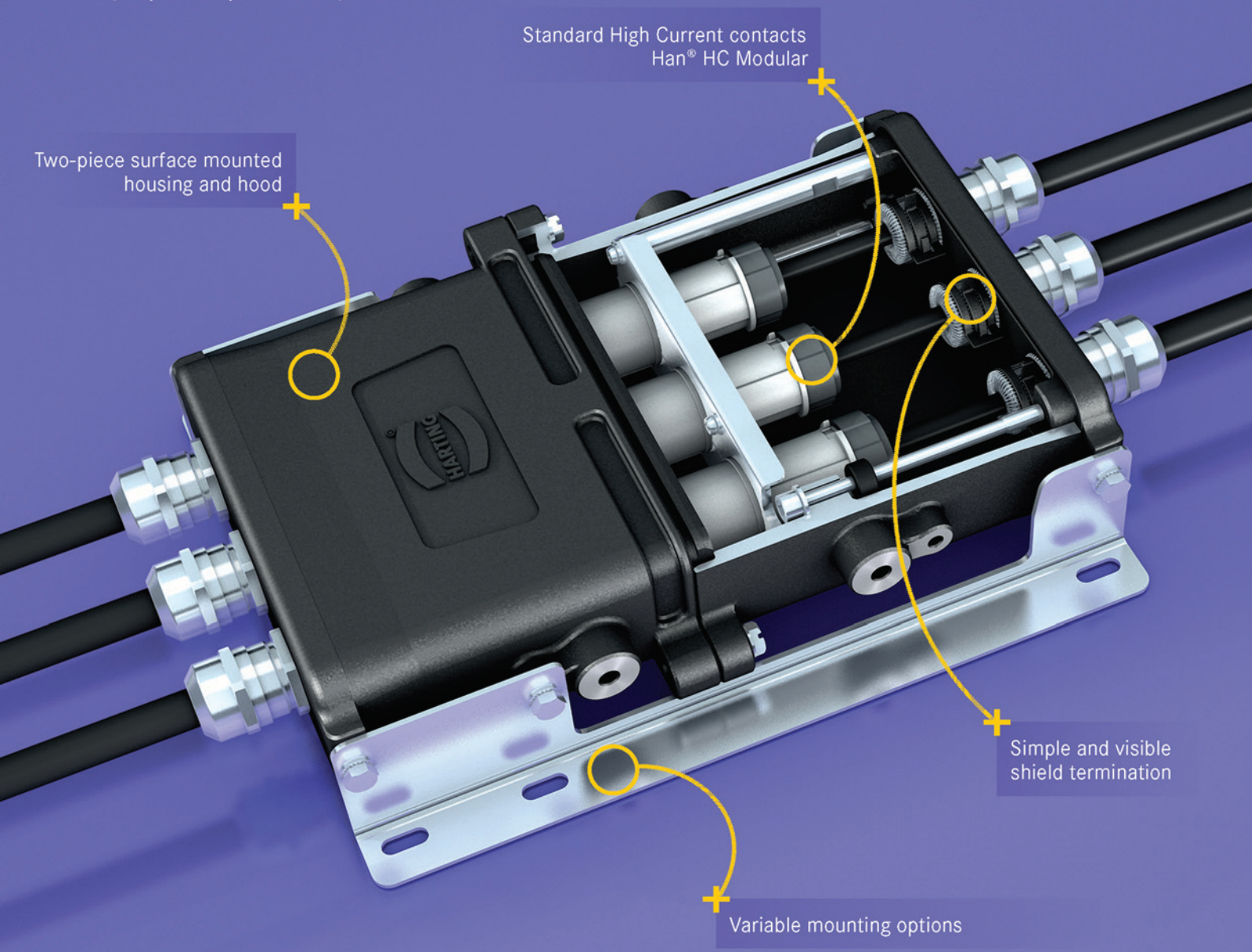

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TRANSNET REQUESTS PROPOSALS FOR A LIQUID BULK TERMINAL

Transnet has posted a request for proposals for a terminal operator to design, develop, finance, construct, operate, maintain and transfer a liquid bulk terminal for the handling of refined petroleum products for a 25-year concession in the port of Durban. Estimates on the cost of upgrading terminals to work with the new specifications range from $US2.7 to $7 billion. The company expects fuel imports to increase from 5.2 billion this year to 34.5 billion litres by 2044.

"Based on the current growing demand for liquid fuels and the lack of investment in refining or alternative liquid-fuel manufacturing capacity, South Africa and the region will remain short of products in the foreseeable future," Transnet stated, adding that: "This will result in growing import volumes of final product and components."

While the proposal called for terminal operators, with bidding companies being at least 51% black-owned, there are rail opportunities outlined in the RFP documents. Bidding documents need to be submitted by no later than 27 January 2017.

TENDER REQUEST FOR MULTIMODAL TRANSPORT PROJECT IN CAMEROON

The government of the Republic of the Cameroon has requested interested parties to submit tender applications for the supply and installation of a centralised, embedded signalling and traffic control system. Camrail, the Cameroonian concession company currently operating rail services for both freight and passenger services in the region, will be managing the project, with financial backing from the International development association. The objective of the Multimodal Transport Project currently underway in the Cameroon is to increase multimodal transport efficiency and effectiveness along the Yaounde-Kousseri corridor. The activities will include the modernization of the switch points and related signalling system along the Yaounde-Kousseri section and the rehabilitation of selected bridges, which have exceeded their life span and need urgent interventions.

The closing date for tender applications is 30 September. A tender application fee is applicable.

TRANSNET FLYING THE SOUTH AFRICAN FLAG HIGH ON THE INTERNATIONAL HEAVY HAUL RAILWAY STAGE

South Africa has won the bid to host the 11th International Heavy Haul Association (IHHA) conference, which will be held in Cape Town from 2 to 6 September 2017. This premier event is expected to attract in excess of 1,000 delegates across the world.

There are ten member countries in this association, which includes Australia, Brazil, Canada, China, India, Norway, Russia, Sweden, the USA and South Africa, with South Africa serving as host member for this conference. The IHHA has conducted international conferences for the past 34 years and the event has become widely recognised as a leader in railway heavy haul conferences and a world-class resource in heavy haul best practices. South Africa is one of the founding members of the IHHA, which was founded in 1982 and has been one of the pioneers in the development of heavy haul technology.

The IHHA is a worldwide non-governmental association of railways and railway institutions dedicated to the improvement of heavy haul railway operations, maintenance and technology. The association holds international heavy haul conferences every two years and hosting of the event is decided through a bidding process by member countries.

The IHHA, in partnership with Transnet and the South African Heavy Haul Association (SAHHA) is at the forefront of coordinating the 11th International Heavy Haul Conference, due to be held from 2 until 6 September 2017, at the Cape Town International Convention Centre, South Africa.

CALL FOR SA COMPANIES TO EXPLORE OPPORTUNITIES IN TANZANIA

Speaking at a business seminar in Dar es Salaam, South African High Commissioner to Tanzania, Thami Mseleku has called on South African business to explore opportunities in roads, rail and port infrastructure development projects in the region. Mseleku stated that Tanzania stands at a crossroad because of its 6-7% growth rate. While the country has great growth potential, the successful implementation of the country's industrialisation program depends on its ability secure public-private joint venture partnerships with the private sector to provide capital for critical infrastructure development projects.

"We must note that [Tanzania] is an entry point to the east African community particularly because the country is strategically located to enable us to penetrate the markets of Rwanda, Burundi, DRC and Uganda, which are landlocked and are dependent on Tanzania's port resources," he said. "That is there reason why the Tanzanian government is focussing on the development of the Dar es Salaam port because it is not only of interest to Tanzania but to all the countries in the Economic Community of West African States (ECOWAS)," Mseleku concluded.

Recently the Tanzanian government announced that helium gas deposits have been discovered in the country, which presents further opportunity for investment in raw material extraction in the country.

A representative from the Tanzanian Ministry of Industry, Trade and Investment, Ambrose Brixio Lugenge affirmed his country's commitment to fostering mutually beneficial relationships with private investors in the country's ambitious industrialisation plans, stating that:

"I want to encourage you to take full advantage of these interactions and make an undertaking with you that we will make sure we assist in any way possible to ensure that we create an enabling environment and that our laws make it conducive for you to partner with Tanzanian business people."

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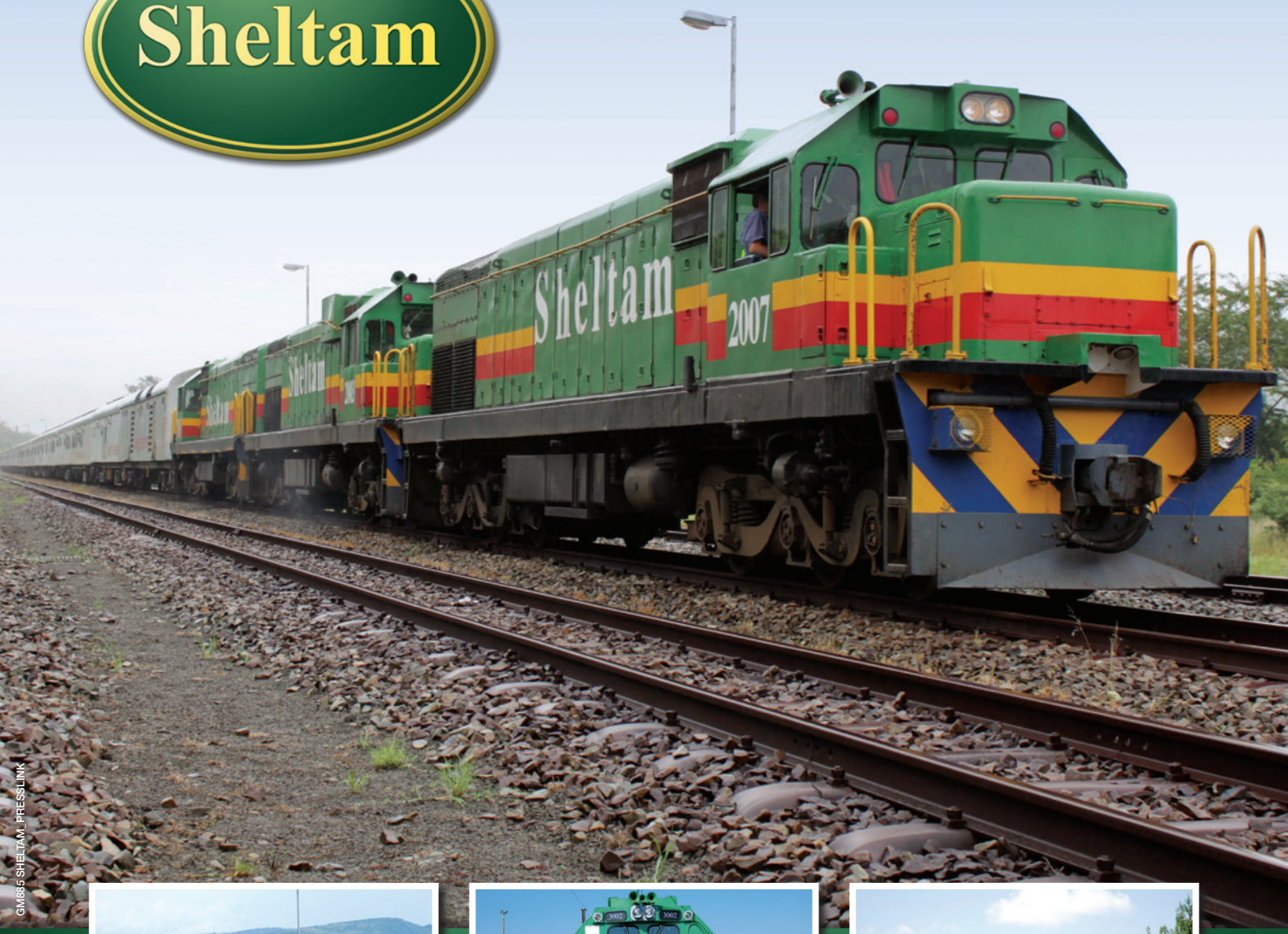

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