Revenue earned from external customers remained strong at R1,4 billion (2015: R1,7 billion). Focused cost management initiatives reduced fixed costs by 4% to R5,5 billion (2015: R5,7 billion).

98,4% availability of critical equipment; exceeded the target of 98%.

98,57% preventative maintenance; exceeded the target of 98%.

**HIGHLIGHTS**

- Revenue earned from external customers remained strong at R1,4 billion (2015: R1,7 billion).
- Focused cost management initiatives reduced fixed costs by 4% to R5,5 billion (2015: R5,7 billion).
- 98,4% availability of critical equipment; exceeded the target of 98%.
- 98,57% preventative maintenance; exceeded the target of 98%.

**BUSINESS OVERVIEW**

Transnet Engineering (Engineering) comprises four customer-facing businesses: locomotive, wagon, coach manufacturing and maintenance services. The manufacturing businesses are dedicated to the manufacturing of different types of rolling stock, such as locomotives, wagons and coaches. The maintenance services business is focused on rolling stock maintenance, such as upgrades, conversions and running maintenance.

The maintenance services business also maintains all key rolling stock components, such as traction motors, engines, wheels and exhausters, as well as port equipment.

Engineering has a rich and proud heritage spanning more than 150 years. Over this period, it has established extensive capabilities for the design, testing and development, manufacture, assembly and maintenance of railway rolling stock, including locomotives, freight wagons, passenger coaches and port equipment.

Engineering has plants and depots spread throughout South Africa, creating a network of sites that serve the main rail corridors and ports. The six main plants are located in the following major cities:

- Cape Town;
- Johannesburg;
- Durban;
- Bloemfontein;
- Pretoria; and
- Uitenhage.

These factory plants serve as regional centres for Engineering’s satellite depots, and provide a range of support services. Out-of-service heavy maintenance and manufacturing activities are undertaken at the factories, while the Division’s 133 depots concentrate on in-service maintenance of rolling stock.

Engineering provides several value-adding services to customers, comprising:

- Maintenance planning;
- Fleet planning;
- Light maintenance training;
- A variety of training courses around products purchased;
- Lean Six Sigma training; and
- Turnaround time modelling.

**REGULATORY ENVIRONMENT**

The National Safety Regulator Act (No. 14 of 2002, as amended by Act 69 of 2008) provides for the establishment of a Railway Safety Regulator and oversees safety in the railway industry, to which Transnet and PRASA are signatories.

The Act requires Engineering to achieve the following:

- Submit applications to the Railway Safety Regulator for the approval of safety permits, new (products) technologies, and new railway operations;
- Report all rail-related incidents to the Regulator;
- Comply with the provisions of the Act, rail safety standards, as well as notices of non-conformance and non-compliance issued by the Regulator; and
- Comply with any other legal request for information issued by the Regulator.

The Railway Safety Regulator provides the following services to Engineering:

- Issues and manages safety permits;
- Conducts inspections and audits;
- Investigates railway accidents;
- Issues notices of non-conformance and non-compliance;
- Issues penalties for non-compliance with the Act and rail safety standards;
- Monitors and ensures compliance through audits, inspections and investigations of reported incidents; and
- Oversees and promotes safe railway operations through appropriate support, monitoring and enforcement.

**OPERATIONAL PERFORMANCE**

Core initiatives for 2016

- Market Engineering’s capabilities, products and services, and provide technical solutions in targeted markets.
- Implement the Transnet-wide Africa Strategy.
- Implement Engineering’s ‘Strategy Vision 2023’.
- Expand Engineering’s footprint in Africa by establishing maintenance workshops in targeted countries.
Overview of key performance indicators

Table 1: Overview of key performance indicators

<table>
<thead>
<tr>
<th>Key performance area and indicator</th>
<th>Unit of measure</th>
<th>2015 Actual</th>
<th>2016 Target</th>
<th>2016 Actual</th>
<th>2017 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial sustainability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBITDA margin (%)</td>
<td>%</td>
<td>6.00</td>
<td>10.7</td>
<td>3.6</td>
<td>4.2</td>
</tr>
<tr>
<td>Operating profit margin (%)</td>
<td>%</td>
<td>3.86</td>
<td>8.5</td>
<td>0.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Gearing</td>
<td>%</td>
<td>42.60</td>
<td>44.4</td>
<td>56.6</td>
<td>62.8</td>
</tr>
<tr>
<td>Net debt to EBITDA times</td>
<td></td>
<td>4.71</td>
<td>2.8</td>
<td>11.4</td>
<td>14.5</td>
</tr>
<tr>
<td>Return on average total assets %</td>
<td></td>
<td>4.67</td>
<td>10.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Asset turnover times</td>
<td></td>
<td>1.21</td>
<td>1.20</td>
<td>0.97</td>
<td>0.98</td>
</tr>
<tr>
<td>Cash interest cover times</td>
<td></td>
<td>5.20</td>
<td>2.8</td>
<td>(0.7)</td>
<td>0.4</td>
</tr>
<tr>
<td>External revenue R million</td>
<td></td>
<td>1 718</td>
<td>2 800</td>
<td>1 356</td>
<td>3 750</td>
</tr>
<tr>
<td>Internal revenue R million</td>
<td></td>
<td>10 652</td>
<td>11 219</td>
<td>9 378</td>
<td>7 590</td>
</tr>
<tr>
<td>Total revenue R million</td>
<td></td>
<td>12 374</td>
<td>14 019</td>
<td>10 734</td>
<td>11 340</td>
</tr>
</tbody>
</table>

**Capacity creation and maintenance**

| Capital expenditure R million     |               | 1 026        | 1 511       | 1 002       | 1 185       |
| Planned maintenance R million     |               | 227          | 267         | 243.8       | 230         |

**Operational excellence**

| Train cancellations due to traction % |               | 1.80         | 6.0         | 1.54        | 6.00        |
| Net volume lost due to traction mt  |               | 7.0          | 0.63        | 2.16        |
| Traction delays %                   |               | 10.80        | 40.0        | 8.94        | 40.00       |

**Innovation**

| Research and development cost R million |               | 93           | 150         | 207         | 310         |

**Sustainable developmental outcomes**

| Human capital                      |                |             |             |             |             |
| Training spend % of personal cost  | %             | 2.18         | 5.0         | 2.35        | 3.1         |
| Employee turnover %                | %             | 8.70         | 6.0         | 7.27        | 6.00        |
| Employee headcount number          |               | 11 719       | 12 249      | 11 377      | 11 220      |
| Revenue per employee R million     |               | 1.06         | 1.10        | 0.92        | 1.01        |

**Transformation**

| Total blacks %                     |               | 79.2         | 80.0        | 79.7        | 80.0        |
| Total females %                    | %             | 21.5         | 40.0        | 22.3        | 40.0        |
| Total people with disability %     | %             | 1.6          | 3.0         | 1.6         | 3.0         |
| Supervisory development headcount |               | 263          | 200         | 274         | 200         |

**Skills development**

| Practical training 1 and 2 (P1 and P2) headcount |               | 121          | 100         | 113         | 100         |
| Technician training headcount          |               | 43           | 100         | 12          | 15          |
| Engineers in training headcount       |               | 78           | 50          | 60          | 50          |
| Graduates in training headcount       |               | 37           | 40          | 4           | 20          |
| Rural development (youth development) headcount |           | 48           | 120         | 3           |
| ABET learners headcount               |               | 104          | 200         | 0           | 200         |
| Women development headcount           |               | 34           | 50          | 0           | 15          |

**Risk, safety and health**

| Cost of risk % of revenue            |               | 1.47         | 5.00        | 1.59        | 5.00        |
| DIFR rate                           |               | 0.68         | 0.75        | 0.45        | 0.75        |

Financial performance review

Table 2: Financial performance review for the 2016 Financial Year

<table>
<thead>
<tr>
<th>Salient features</th>
<th>Year ended 31 March 2016 R million</th>
<th>Year ended 31 March 2015 R million</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>10 734</td>
<td>12 370</td>
<td>(13.2)</td>
</tr>
<tr>
<td>– Internal</td>
<td>9 378</td>
<td>10 652</td>
<td>(12.0)</td>
</tr>
<tr>
<td>– External</td>
<td>1 356</td>
<td>1 718</td>
<td>(21.1)</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(10 345)</td>
<td>(11 625)</td>
<td>(11.0)</td>
</tr>
<tr>
<td>– Energy costs</td>
<td>(208)</td>
<td>(216)</td>
<td>(3.7)</td>
</tr>
<tr>
<td>– Maintenance</td>
<td>(244)</td>
<td>(227)</td>
<td>7.5</td>
</tr>
<tr>
<td>– Materials</td>
<td>(4 506)</td>
<td>(5 744)</td>
<td>(21.6)</td>
</tr>
<tr>
<td>– Personnel costs</td>
<td>(4 579)</td>
<td>(4 613)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>– Other</td>
<td>(808)</td>
<td>(825)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>Profit from operations before depreciation, derecognition, amortisation and items listed below (EBITDA)</td>
<td>389</td>
<td>745</td>
<td>(47.8)</td>
</tr>
<tr>
<td>Depreciation, derecognition and amortisation</td>
<td>(334)</td>
<td>(268)</td>
<td>24.6</td>
</tr>
<tr>
<td>Profit from operations before items listed below</td>
<td>55</td>
<td>477</td>
<td>(98.5)</td>
</tr>
<tr>
<td>Impairments and fair value adjustments</td>
<td>(15)</td>
<td>(33)</td>
<td>(54.5)</td>
</tr>
<tr>
<td>Net finance costs</td>
<td>(463)</td>
<td>(343)</td>
<td>35.0</td>
</tr>
<tr>
<td>Profit before taxation</td>
<td>(423)</td>
<td>101</td>
<td>(521.8)</td>
</tr>
<tr>
<td>Taxation</td>
<td>97</td>
<td>(31)</td>
<td>412.9</td>
</tr>
<tr>
<td>Profit after taxation</td>
<td>(326)</td>
<td>70</td>
<td>(565.7)</td>
</tr>
<tr>
<td>Total assets (excluding CWIP) R million</td>
<td>11 840</td>
<td>10 293</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**Profitability measures**

| EBITDA margin (%) | %        | 3.6 | 0.5 | 3.9 | 4.0 |
| Operating margin (%) | %        | 1.2 | 4.7 | 3.5 |
| Return on average total assets (excluding CWIP) (%) | %   | 1.0 | 1.2 | 19.8 |
| Asset turnover (excluding CWIP) times |           | 0.97 | 1.21 |
| Capital investments R million |             | 1 002 | 1 026 |
| Employees number |               | 11 377 | 11 719 |
| Revenue per employee R million |             | 0.94 | 1.06 |

1. EBITDA expressed as a percentage of revenue.
2. Profit from operations before impairment of assets, fair value adjustments, net finance costs and taxation expressed as a percentage of revenue.
3. Profit from operations before impairment of assets, fair value adjustments, net finance costs and taxation expressed as a percentage of average total assets excluding capital work in progress.
4. Revenue divided by average total assets excluding capital work in progress.
5. Actual capital expenditure (replacement + expansion) excluding borrowing costs.
6. Not reported.
Engineering

PERFORMANCE COMMENTARY

Financial sustainability

Engineering’s total revenue for the year was R10.7 billion, which is 13.2% lower than the R11.4 billion achieved in the prior year. During the year, Transnet implemented a capital optimisation programme which reduced Freight Rail’s demand for rolling stock from Engineering. This resulted in a 12.6% reduction in revenue from Freight Rail to R5.4 billion (2015: R6.2 billion). Further, the deteriorating economic outlook, both in the country and in the rest of Africa, reduced the demand for Engineering’s products, resulting in a decrease in external revenue by 21.1% to R1.4 billion (2015: R1.7 billion).

In response to the decline in revenue, Engineering continued with, and further enhanced, the cost-saving initiatives implemented in the 2015 financial year. Discretionary spending was significantly controlled, while personnel cost increases were minimised by, among other things, not filling vacancies created through attrition and terminations. Owing to these interventions, Engineering’s operating costs were reduced by 9.6% to R10.3 billion (2015: R11.4 billion). Other operating expenses, excluding material costs, decreased by 0.7% to R5.8 billion (2015: R5.7 billion), despite the upward inflationary environment experienced in the economy.

Engineering lost over R880 million in contribution to fixed costs owing to reduced revenue in the current year, which was partly offset by the gains achieved through cost-saving initiatives. The resultant EBITDA was R399 million for the year (2015: R745 million).

Looking ahead

• 2017 represents key financial challenges for the division owing to a decrease in revenue from Freight Rail and the roles associated with securing external work. Engineering has committed to achieving R480 million EBITDA in 2017. This is a challenging target and requires all employees to commit to identifying and executing all revenue-generation opportunities, while closely monitoring operating expenses.
• Transnet, and indeed Engineering, has implemented initiatives to address financial challenges. A range of initiatives, collectively known as ‘reshaping the core’, intended to reduce operating expenses by approximately R700 million in 2017. Engineering, while maximising potential and planned revenue opportunities.

Capacity creation and maintenance

• Engineering continued to implement the locomotive maintenance strategy, as well as technology advancements and improvements.
• The division expanded its footprint in the rest of Africa by setting up maintenance workshops in targeted countries.
• Maintenance (including financing) for the locomotive, wagon and coach businesses, included
  • Wheel business – assembly of new and refurbished wheel-sets for the locomotive, wagon and coach businesses.
  • Rotating machine business – refurbishment of electrical and mechanical rotating machines in rail and ports industry for the locomotive and coach businesses.
• Foundry business – casting components for assembly for the locomotive, wagon and coach businesses.
• Engineering continued to enhance knowledge and know-how through partnerships and joint ventures with leading original equipment manufacturers (OEMs).

Looking ahead

• Expansion of Engineering’s footprint in the rest of Africa by setting up maintenance workshops in targeted countries.
• Revenue diversification through training and maintenance.
• Provision of maintenance consulting services for revenue diversification.
• Provision of remote, technical and field service support to customers as part of warranty maintenance services.
• Fleet condition monitoring services.
• Spare parts and logistics support.
• New product development.
• Reduce the cost of outsourcing.
• Source external funding and partner with funding houses.

Market segment competitiveness

• Engineering developed a traction motor for the rugged African conditions using optimised design capabilities.
• Advanced simulations were used through Electromagnetic Finite Element Analysis design to enhance design reliability.
• Simulations were further refined using multi-physics simulation techniques.
• Prototypes were validated using test facilities which are able to conduct life-cycle testing.
• Engineering continued to build on its competencies and in-house skills, which cater for the needs of various Operating Divisions within the organisation.
• A traction network model was developed to investigate transients on the network.
• A train model was developed that will induce more accurate transients on the Overhead Tractions Equipment (OHE) machines.
• A model was developed to facilitate infrastructure upgrade analysis.
• Engineering advanced its regional integration strategy through supplier development initiatives in the motor manufacturing value chain.
• The Wayside Energy Storage System (WESS) was developed and will assist Engineering in becoming an OEM. This will be achieved by offering WESS as an energy-efficient management solution which will be applicable to the entire electrified African rail market.
• WESS has both local and global market prospects, which offer Transnet the opportunity to expand and grow across the globe. The product is applicable to both passenger and freight rail networks, in addition to serving as an energy reserve to provide both versatility and flexibility. Industry partnerships with leading suppliers will have to be researched and established in the next two years for certain elements of WESS.
• Engineering is currently in the process of applying for funding from the Green Climate Fund. This will enable the division to implement its engineering solution across the rail network and explore potential funding sources for the implementation of 61 WESS units/site.
• The division developed a tool to enable rail traffic optimisation for periods when there may be numerous faults on the line that could render sections impassable. This added robustness has immense value in a large network that may experience failures from a multitude of sources. This tool can be sold to any rail operator – especially the growing rail sector in Africa – to enable a solution to cut-edge train scheduling software in their business. It is further anticipated that this technology will unlock many diverse markets within the region, including
  • Battery manufacturing.
  • System integration, and
  • Local manufacturing.

Looking ahead

• Roll out advanced traction motor designs.
• Establish world-class motor test facilities.
• Introduce capability development initiatives to promote motor development.
• Introduce flexible design strategies that are capable of adapting to different market needs.
• Model the entire traction network of the organisation with all loads, including the Eskom supply network, to gain a complete understanding of the effects of the traction network’s operation on the South African draw of power and power-grid quality.
• More assertively market Engineering’s modelling, power analysis and auditing capabilities.
• Market the WESS solution to local markets and ensure its adoption across all South African rail networks.
• Complete the funding process through the Green Climate Fund.
• Implement WESS within Engineering’s networks as a showcase for a working product.
• Implement a modelled system capable of simulating train movements, unpredicted events and the allocation of new routes when incidents occur.
• Provide advisory services to the Transnet Group Planning and Group Results Management offices as well as Freight Rail in the areas of train service design and planning.

Operational excellence

• Control systems were developed for diesel and electric locomotives, diesel multiple units (DMUs) and electric multiple units (EMUs).
• Motors were developed for different technical applications.
• Engineering developed a model in the Alternative Transients Package capable of addressing issues relating to power quality, operating efficiency and infrastructure upgrades. It remains one of the most comprehensive models developed in-house to date. The division reduced the dependence on external advisory services relating to these issues. The new model is capable of providing voltage and current waveforms on desired lines for trains operating under various conditions. Accordingly, the total harmonic distortion and harmonic spectrum of the voltage and current can be viewed.
• The WESS solution can provide Transnet with energy savings and a substantial reduction of CO₂ emissions. It is estimated that WESS, across all 61 sites, will be able to reduce CO₂ emissions by 415 780 tonnes over a 10-year period. This will be the first product of its kind for freight rail application within South Africa and will make Transnet a first mover of technology for WESS.
• While the WESS solution is region- and traffic-dependent, it is estimated that a single WESS is capable of recycling 688MWh per year.
• Engineering introduced modern and alternate operating philosophies for Transnet’s operations, such as the robust operating paradigm. This paradigm includes concepts for minimizing impact, fault tolerance and adaptive scheduling.
Looking ahead

• Investigate specific applications in sectors where motors are required.
• Develop a user interface which allows for easily adjustable parameters and configuration within any of the developed models.
• Implement a more accurate load profile of locomotive models as determined by the Train Dynamic Simulator.
• Improve the settings for multi-train simulations, and optimise the associated modelling software.
• Determine and confirm model accuracy by undertaking physical measurements.
• Establish a development and assembly plant for production purposes.
• Introduce industrial apprenticeships that will allow for further development and collaboration of technologies.

Human capital

• Engineering achieved a permanent employee headcount of 11,977 (target: 12,249).
• Black employees represented 79.7% of the total employee base (target: 80%).
• Female employees represented 22.3% of the total employee base (target: 40%).
• People with disabilities represented 1.6% of the total employee base (target: 3%).

Organisational Redness

High-performance culture

• Engineering has established Operational Efficiency Committees to drive key business strategic objectives, focusing on effective labour utilisation and maximising outputs with fewer resources. This includes having the right people and skills, managing attrition, optimising outputs from fixed-term contractors and closely managing discretionary overtime.

Skills development

• Training spend for the year – as a percentage of personnel costs – fell short of the target of 2.8%, amounting to 2.35% of personnel costs.
• Year-on-year, the division has remained compliant with the Skills Development and the Skills Levies Acts, and has successfully reaped the benefits by ensuring that levies are paid to SARS, and employees are educated, trained and developed on a per annum Workplace Skills Plan submissions.
• The division, through various accredited artisanal development programmes, has continued to train and develop unemployed South African youth to obtain nationally-recognised and accredited artisanal qualifications to enable better employee opportunities.
• The empowerment and development of women is driven across all levels of the organisation and remained the heart of Engineering in creating readiness for vocational opportunities.
• Engineering's distinctive 24-month structured workplace exposure programmes for university engineering graduates led to the placement of 38 'engineers in training' in various engineering positions.
• Overall, 566 employees graduated from Engineering's in-house Customised Supervisory Development Programme, accredited by the Services SETA. A further 277 employees enrolled for the programme during the year. The programme aims to empower and develop current and future supervisors to better manage their teams and day-to-day operations.
• In line with Engineering's supplier and enterprise development initiatives, 25 supplier employees were trained and certified in various training modules that included the following skills: personal budgeting, problem solving, business writing and communication skills.

Health and safety

• The division's health and safety management system complies with OHSAS 18001 requirements. The system is integrated into other existing SHE management systems, such as ISO 14001 and SANS 3001, and fully managed through an IsoMetrix software application. During the 2016 financial year, internal audits were performed across all Engineering's businesses to establish the organisation's level of compliance and identify gaps that still exist within the system's implementation. A SHE legal audit was also conducted during the year, with all audit findings being addressed. OHSAS 18001 certification audits are planned for 2017.
• Engineering's DIFR performance was 0.45 against a target of 0.75. This historical-best performance is attributed to continuous safety awareness being created amongst employees through monthly SHE awareness campaigns and safety controls that help to reduce or eliminate incidents.
• Numerous standard operating procedures (SOP) were concluded and implemented during the year, the highlight being the driver safety SOP, which enrols drivers for advanced defensive driving training.
• Occupational risk exposure profiles (OREPs) were concluded and implemented for operational businesses. This has improved Engineering's medical surveillance programme, and ensured that medical assessments are conducted in line with employees' occupational exposures.
• Additional health and safety initiatives rolled out during the year included medical programmes for C to D cadre employees, as well as fire-safety management training, clinical drug-testing and a hearing conservation programme.

Governance and ethics

Environmental stewardship

Environmental Management System

Engineering's Environmental Management System (EMS) is being implemented in terms of ISO 14001 standards as part of the division's SHE Integrated Management System. The IsoMetrix software system, which went live in June 2014, has been embedded and is assisting with the analysis and confirmation of Engineering's environmental sustainability performance. Internal system audits were conducted during the year for all Engineering's businesses to assess ISO 14001 compliance levels and ensure that the division is well placed for certification audits planned for the 2017 financial year. Engineering is gearing up to obtain ISO 14001 certification during the second quarter of the 2017 financial year.

Waste Management

Waste minimisation and recycling initiatives are being implemented at all Engineering's main centres, with Uitenhage and Bloemfontein regions launching their recycling initiatives during the year. Employees were informed of the importance of ‘separation at source’ and guided in terms of overall waste management principles. The division's recycling efforts aim to reduce the quantities of waste that goes to landfill sites and, ultimately, to reduce the cost of waste transportation and disposal.

Air Quality Monitoring for the Foundry Business

Air quality assessments were performed for Engineering's two foundries: Koedoespoort and Bloemfontein. An implementation plan is being finalised for the 2017 financial year based on the recommendations of the reports. One of the actions will be to obtain the air emission licences (AEL) for the two foundries from the relevant local municipalities, and to ensure compliance.

Energy Efficiency Programme

The lighting replacement programme is 100% completed for four of the six Engineering regions, namely: Koedoespoort, Durban, Germiston and Uitenhage. The installation of heat pumps to replace gasyers for heating water in ablation facilities in the Uitenhage region was completed in June 2015. Energy-efficient compressors were installed at Koedoespoort, with utilisation being regularly monitored to assess efficiency gains.

Further, the Research and Development Unit in Engineering has also started investigating alternative energy technologies, which include:
• A feasibility study on regenerative braking energy storage for electric locomotives, using wayside energy storage systems;
• Research on vibration energy harvesters for rail vehicles; and
• Wind resource analysis in Transnet Ports.

Water Management

To ensure compliance with the National Water Act, Engineering assessed its water use activities and embarked on the requisite application processes with regional water and sanitation departments. The industrial effluent monitoring programme continued during the year, and the compliance status remained satisfactory at all effluent discharge points and treatment plants. Engineering has made significant progress in obtaining discharge permits from local municipalities, although there are still some outstanding, mainly in the Germiston area.

Pollution Management

Engineering appointed an independent consulting firm to conduct a soil analysis and site assessment for all 11 historically-contaminated sites. The final assessment reports are yet to be received. The implementation plan will be based on the recommendations and outcomes of the reports, and will be rolled out in the year ahead pending finalisation of all reports.

Social accountability

Engineering attempts to align its social contributions with the most critical needs of the communities where it operates. Education continues to be a priority. Accordingly, the division has introduced the ‘Build a Class, Build a Learner’ campaign in various operational centres.
Engineering

Further, approximately 1,300 desks were donated to schools in various regions. This outreach programme received financial assistance from the Student Bursary Scheme for learners enrolled at the various School of Engineering campuses.

<table>
<thead>
<tr>
<th>Table 3: Engineering’s top 5 risks and key mitigating activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key risks</td>
</tr>
<tr>
<td>Market competitiveness</td>
</tr>
<tr>
<td>Lack of intellectual property for key products</td>
</tr>
<tr>
<td>Lack of organisational market intelligence</td>
</tr>
<tr>
<td>Adverse economic conditions</td>
</tr>
<tr>
<td>Supply-chain management process conflicts with strategy</td>
</tr>
</tbody>
</table>

OPPORTUNITIES

• New rail corridors are being developed within sub-Saharan Africa to enable Engineering to exploit these opportunities with the supply of rolling stock.
• New discoveries of bulk commodity mines across the world will facilitate expanding market opportunities.
• Rolling stock overhauls and upgrades will continue to be strong in Africa, providing opportunities for selling refurbished rolling stock.
• Engineering has the ability to bundle locomotive wagons and maintenance packages as a product offering to customers, which few competitors have the ability to match.

Through Engineering’s research and development focus, skills and technology transfer will benefit local industry and support an increase in revenue and job creation.