Business to Society Report

In South Africa. For South Africa

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“Whatever we do, it must add lasting value and deliver benefits – for shareholders, for employees, for customers, and for our partners in business and in society.”

Joe Kaeser, CEO of Siemens AG
“Companies need to look beyond the bottom line and the supply of their products and services; they must consider the impact of their business on society at large. Business is part of society, not independent of it.”

Sabine Dall’Omo, CEO of Siemens Southern and Eastern Africa
Introduction

Legitimacy

Business is the route to a society’s prosperity and progress, and that is what gives businesses legitimacy. A company should not exist if it does not create value for society. Of course, business can only contribute to society if it is competitive and profitable.

Financial stability is essential for the business sector to deliver investment, infrastructure, jobs, education, training, taxes and innovation.

Scrutiny

In South Africa, we are putting ourselves under scrutiny and trying to understand more completely our role and responsibilities to society.

We started by looking hard at what matters most to South Africa. Rather than viewing the country from the perspective of Siemens and its own operations, we looked inward at Siemens from the perspective of South Africa and its particular social, economic and political circumstances.

We recognise that only by understanding what is important to South Africa can we really evaluate our place in society.

Never acting alone

Siemens and its employees do not operate independently of society. We are in a series of complex and important relationships with the people of South Africa, with government, our customers and our suppliers. These are the relationships which enable us to add value and prosper. So we set out to find out more about these relationships, and the impact we have on our various stakeholders.

It meant digging deep beyond our own headlines to find new data. It has been an interesting and entirely voluntary exercise, driven not by compliance and legislation but a genuine and principled desire to understand our contribution to South Africa.

We’ve not been satisfied with just the good news or headline facts. Instead we have scrutinised the data to make sure we recognise and understand where we are under-performing and take account of our challenges.

A better company

We believe this has been an exercise which will make Siemens South Africa a better company. It will help to attract and retain the best employees, improve our decision making, guide our business planning, and make Siemens a benchmark in local sustainability reporting.

It shows that Siemens is much more than a business. We are also a partner in the development of South Africa as a fair and prosperous nation.
How we did it
The Business to Society methodology

Siemens developed a customised methodology based on the Measuring Impact Framework of the World Business Council for Sustainable Development (WBCSD), where Siemens is a global member, to objectively measure and assess its contribution to South Africa.

![Image](image_url)

**Figure 1:** Customised Business to Society methodology based on the WBCSD Measuring Impact Framework.

Companies often try to see the world through the prism of their own business activities. We took a different approach.

We started off by identifying and measuring Siemens' contribution to the things that really matter to South Africa, like economic growth, job creation and skills, infrastructure and industry, the environment, quality of life and socio-economic transformation; and we examined the government’s priorities for the country’s development.

This was based on stakeholder input, published goals and the National Development Plan. We worked with two global consulting firms to provide external expertise and independent support to assess Siemens’ contribution to South Africa.

Price Waterhouse Cooper (PwC) was used to calculate specific economic impacts like GDP contribution and job creation, while Boston Consulting Group (BCG) was used to measure the impact of the Siemens portfolio and business operations.

When assessing our impact in specific industries like mining, transportation, automotive, petro-chemicals, electricity generation and healthcare, we measured only where Siemens technology plays a fundamental role in a sector or is a critical part of a business or industrial process. We calculated our contribution over one year (2014, unless otherwise stated), though in most cases our installed base of technology delivers value and benefits for a much longer time.

The intention was not to over engineer calculation methodologies to get the ideal figure, as we realise that this is not possible. Our goal was to understand our overall impact on the things that matter to our stakeholders in order to evaluate our role and purpose in society, improve business value add and promote stakeholder dialogue.

During this exercise we identified Siemens’ positive and negative impacts. Where feasible we benchmarked our results to other companies operating in South Africa, and we consulted with various stakeholders representing customers, government, academic institutions, NGOs and suppliers to get the benefit of critical thinking from people outside Siemens.

Companies often try to gloss over the negative. At Siemens, we are committed to understanding it and dealing with it, so in this report we have identified where we need to improve, and worked hard to understand how we can perform better.
South Africa is a country recovering from injustice, inequality and uneven development. It has huge opportunities and significant challenges. There is an urgent need to develop new infrastructure, to create industrial opportunities and employment, and to tackle endemic poverty and inequality. Through our external research and analysis we identified six key pillars that set the focus of our impact assessment and provided the framework to measure Siemens’ contribution to South Africa.

**What matters to South Africa?**

**Driving the Economy**

South Africa is aiming to develop an economy which provides security, fulfilment and a better quality of life to its people. Yet there are currently 23 million people living in poverty – about 45% of the population.

Government aims to grow the economy to 2.7 times its current size of R3.8tn and to expand sectors such as mining, manufacturing, automotive and transport, which between them account for around 25% of GDP.

**Developing Local Jobs and Skills**

The creation of jobs and skills is an imperative in a country with five million people unemployed.

The skills shortage in South Africa is holding back growth, with nearly half a million private sector posts unfilled.

The National Development Plan aims for the creation of 11 million new jobs by 2030.

**Value-adding Innovations**

South Africa needs innovation to build its economy. It is innovation which will help to overcome the power crisis, increase the supply of renewable energy, and make industry more globally competitive through automation and digitalization.

South Africa is currently ranked 70th of 144 countries in its ability to benefit from IT and digitalization, but has the potential to make rapid progress by adopting internationally-proven technologies.

Innovation also creates more skilled jobs and stimulates the growth of small businesses.

**Sustaining the Environment**

South Africa is aiming for growth combined with environmental responsibility. It is currently among the highest CO2 emitters in the world, due largely to dependence on coal for power generation, but aims to reduce emissions by 34% by 2020.

Water is a scarce resource in South Africa, the 30th driest country on earth.

Each year, it generates 60 million tons of general waste, of which more than 90% ends up in landfill. Only 10% of general waste is currently recycled.

**Improving Quality of Life**

Healthy and fulfilled people are able to build healthy and equitable societies. But more than 10% of the SA population has HIV/AIDS or related diseases, and total life expectancy is a relatively modest 58.3 years.

The South African health system is ranked by the World Health Organisation as 175th out of 191 countries. South Africa has 3.5 million orphans, half of whom lost one or both parents to HIV/AIDS.

Education is recognised as being critical to South Africa’s success, yet it is ranked 144th out of 148 countries in education quality, and last in maths and science.

**Supporting Transformation**

South Africa is being rebuilt out of the apartheid legacy, and empowerment of the previously disadvantaged is essential to foster a more inclusive society. This requires a massive long-term commitment by business to support transformation through employment, skills development, and support for small businesses.

Small, medium and micro enterprises (SMME) contributed 45% to South African GDP in 2014, up from 35% in 2007. These SMMEs are now the foundation of the NDP’s plan to create jobs, with 90% of jobs forecast to come from SMMEs by 2030.

But corruption is undermining the country’s progress, with SA ranked 67th on the Transparency International Corruption Perceptions Index.
Siemens Value Map:
Our contribution to the sustainable development of South Africa

Driving the Economy
- GDP contribution: Contributed R6.8bn in direct and indirect GVA to the economy
- Mining: Enabled ~50% of SA mining value (R140bn)
- Transportation: Enabled ~20% of total rail and pipeline infrastructure (>5000km)
- Automotive: Enabled ~50% of total car production (240,000 cars)
- (Petro-)Chemicals: Enabled ~90bn SA base chemicals & gases industry value (8m tons)

Developing Local Jobs and Skills
- Job Creation: 1,460 people directly employed with 15,600 jobs enabled
- Employment Equity: 56% of employees are historically disadvantaged
- Employee Training: 3,900 training days and R40m invested in employee up-skilling
- External Training: 1,751 suppliers and customers trained

Value-adding Innovations
- Electrification: 31,000 MW of SA's total installed base and 20% of green electricity managed with Siemens technology
- Automation: ~20% of SA's total industrial processes enabled with automation control systems (>20,000 processes)
- Digitalization: Insights from 640bn pieces of process and operation information generated from smart products

Sustaining the Environment
- CO₂ offset: 1,300 kt of CO₂ offset with our carbon saving innovations
- Energy used: 8,700 MWh of electricity consumed and 9,300 tons CO₂ generated
- Water used: 88,700 kilolitres of water used
- Waste generated and recycled: 670 tons of waste generated and 80 tons recycled

Improving Quality of Life
- Health: 34,000 patients benefit daily from healthcare based on Siemens equipment
- Employee Well-being: 78% employee engagement score
- Long Term commitment: 155 years in South Africa

Supporting Transformation
- Compliance: >R18m invested in Integrity Initiative over last 5 years
- Ownership: 30% B-BBEE ownership
- Procurement with QSEs / EMEs: >30% of procurement spent with QSEs / EMEs
- B-BBEE: Level 2

Areas of continuous improvement
Focus areas of improvement

Note: All figures are for 2014, unless otherwise stated.
The following pages provide more detailed information on the results of the Siemens Business to Society Report, and how we are working together with our various stakeholders to make a sustainable contribution to the development of South Africa.
Driving the Economy

Our GDP contribution

- **Contributed**
  - R6.8bn

  Direct and indirect Gross Value Added (GVA) to the South African economy

- **80% Contribution occurs in South Africa**

- **In total**
  - R8.6bn

Economic growth generated by corporate and industrial activity is essential to social and economic development, job creation and reduction of poverty.

South Africa is the second biggest economy in Africa with GDP of R3.8 trillion; and government plans to nearly triple GDP by 2030 with a 5% target growth rate.

In 2014, Siemens contributed a total of R8.6 billion in Gross Value Added (GVA), directly and indirectly, in the form of profits, salaries and taxes – whereas R6.8 billion occurred in South Africa, meaning that although we are a multinational company Siemens is making a significant local impact as 80% of our GVA occurs in the country.

Apart from the direct contribution to GDP, we believe Siemens’ real value comes from the contribution our technology makes to key industries like manufacturing, mining, automotive and transportation. These sectors account for around 25% of GDP and are key drivers of the country’s growth.

Future challenges and commitments

As a dynamic developing nation, South Africa faces many political, regulatory, labour and economic issues that have constrained foreign investment and economic growth. Siemens recognises this may reduce the growth and scale of the key industries to which Siemens supplies products and technology.

We remain committed to adding local value through our manufacturing and service facilities in South Africa, particularly in the energy, rail and industrial sectors.

Explanatory notes: * Contribution to GDP is sum of calculated Gross value added (GVA) for all economic activities. GVA is derived as the difference between gross value of output of the covered economic sectors and the value of intermediate consumption. Total contribution to GDP based on one year output is likely to be higher since current analysis only covers first direct customers and a time frame of one year while average use phase will span over a longer period of time. Economic impacts of supply chain have been calculated based on spend data and a Multi-Region Input-Output Model (MRIO) developed by PwC (PwC ESCHER) ** GVA generated through intercompany purchasing not considered. Source: PwC analysis.
Explanatory notes: * Analysis was conducted on the top 90% of customers by Siemens SA revenue in the major mining commodity segments (top 90%). Siemens share of installed technology (across SCADA, PLC or drives) was estimated per customer and multiplied with tons of ore mined (as denoted by ROM) to obtain tons of material moved that can be attributed to Siemens. The value of output was estimated using average market price per commodity multiplied by Siemens share of finished product (in relevant units e.g., Oz., carats, tons).

Source: BCG analysis.

Our contribution to Mining

Mining is a key industry in South Africa, accounting for a million jobs, 18% of GDP and more than half of foreign exchange. South Africa has some of the world’s richest mineral reserves, worth an estimated $2.5 trillion, and the fifth largest mining sector in GDP value.

Mining accounts for 20% of investment (12% of direct investment), and attracts significant foreign savings, estimated at R1.9 trillion or 43% of the value of the Johannesburg Stock Exchange (JSE).

Siemens is proud to be directly involved in around 50% of the South African mining sector. Our customers are using Siemens automation and drives technology to make mining safer, increase productivity and improve efficiency.

In 2014 Siemens technology enabled R140 billion of value by helping our customers to move 175 million tons of material in key sectors like platinum, gold, diamond, coal and iron ore.

Siemens has been active in SA mining since 1897, and today the industry depends on Siemens’ innovative drive, automation and electrical technology for everything from extraction to transportation and beneficiation.

Future challenges and commitments

Siemens is collaborating with the mining industry’s drive for greater productivity and efficiency through mechanisation and automation.

Automation will likely reduce the number of unskilled jobs in the sector, but in the long-term will increase skilled and quality jobs. Siemens is committed to increasing the skills of the mining workforce and helping make the South African mining industry globally competitive.

Because of its long history in South Africa and large installed base, some mining companies have Siemens equipment from a previous generation. While this equipment still performs its function, it does not meet the energy efficiency standards of today.

With the NDP calling for a 15% improvement in energy efficiency for the mining industry, Siemens is ready and able to support to our customers with the latest technology.
Our contribution to Transportation infrastructure

The transport sector supports most other industries through the movement of goods and fuel, and it is essential to South Africa’s competitiveness. The sector moves 200 million tons of freight and 16 billion litres of fuel annually. It contributes around 5% to GDP and absorbs 6% of the labour force.

Our customers are investing billions to make the country’s freight and commuter rail network, as well as pipeline infrastructure more efficient, reliable and safe, and the government plans to increase infrastructure spending to 10% of GDP.

Siemens technology is used to control and regulate around 5,000km or 20% of South Africa’s critical rail and pipeline infrastructure.

It directly enables two of South Africa’s most strategic industrial transport routes, the New Multi-Product Pipeline (NMPP) and the 850km Orex heavy haul rail line which annually transports more than 50 million tons of iron ore from Sishen to Saldanha. Siemens rail signaling technologies and integrated passenger information systems also form part of four key regional rail networks: Johannesburg, Pretoria, Durban and Western Cape.

In addition to supporting rail and pipeline infrastructure, Siemens technology is being used by our customers in the shipping industry. Cranes and terminals at South Africa’s major harbours are equipped with our automation and control systems, and Transnet’s tugboats at Durban harbour are fitted with Siemens electrical systems. Road traffic in the urban hubs of Johannesburg and the Nelson Mandela Bay area are managed with Siemens control systems.

Future challenges and commitments

South Africa’s aging transport infrastructure requires significant ongoing investment, but this may be hindered by a lack of technical skills and local capabilities. To help address the shortage of skills required for rail signaling in South Africa, Siemens together with MICT Seta, invested over R1.2 million towards an internship programme which has created employment for 10 engineering students.

The internship programme which started on 1 July 2014 is in addition to any current project obligations and based on practical and theoretical training, including mentoring.

This programme will be extended for an additional 2 years, funded completely by Siemens. At least 80% of these interns will be absorbed into the organisation and will be involved in the execution of the Gauteng Rail Signalling project where Siemens is upgrading the signaling systems on Gauteng’s passenger rail network, for and in, close partnership with the Passenger Rail Agency of South Africa (PRASA). Once completed it will help improve train punctuality and safety, and provide better controls and capacity management.
Siemens supports the production of around 240,000 vehicles a year in South Africa, about half of the industry’s current output. Of the total cars produced in the country using Siemens technology, 140,000 cars are exported.

South Africa has a significant automotive industry, making nearly half a million vehicles a year and accounting for 6% of GDP, creating 93,000 direct and indirect jobs and 12% of manufactured exports. Government and the industry want to boost annual production to 1.2 million vehicles by 2020.

Siemens optimises operations at automotive companies, from efficient product design to flexible production and plant maintenance.

Our technology automates and intelligently controls assembly lines, paint shops and body shops at the largest car manufacturers, including Mercedes-Benz SA, Volkswagen SA, BMW and Ford. Siemens industrial control technology also enables the automotive component and the tyre manufacturing industry.

Automotive is one of many manufacturing sectors where our customers use Siemens technology, and we help the industry to remain innovative and competitive in a global marketplace by supporting the drive for higher productivity and better quality.

Future challenges and commitments

South Africa’s Automotive Production Development Plan encourages new investments to boost annual production.

Yet automotive manufacturers and suppliers face challenging market requirements, including shorter time-to-market, more vehicle models, higher productivity, production quality, and competition from a global industry.

Siemens is working with customers seeking growth in production capacity and helping to ensure the SA automotive industry stays competitive.
Our contribution to (Petro-)Chemicals

The chemicals industry in South Africa is the largest in Africa, and it contributes around 5% to GDP.

It also supports 200,000 jobs and approximately 23% of total SA manufacturing sales.

Chemicals have a wide variety of industrial and domestic uses including fuels, plastics and fertilisers.

In 2014 Siemens supported production of eight million tons of chemicals and gases in South Africa, creating R90 billion of value.

All major oil and gas companies in South Africa, and most industrial and chemical gas firms, use Siemens process control technology, compressors, electrical and automation systems.

Siemens supports our customers in production and processing of oil, gases and chemicals, plant safety, quality control and flexible growth.

Future challenges and commitments

Siemens recognises that lower and volatile oil prices is placing increasing pressure on our customers in the oil, gas and petrochemicals industry.

With Siemens’ acquisition of Dresser-Rand, we now have a comprehensive portfolio of equipment and capability for the oil and gas industry and a much expanded installed base, allowing us to address the needs of the market with world-class products, solutions and services.

The current level of oil prices increases the focus of our customers for ways to reduce costs. So despite the challenges of a low oil price, this also brings opportunities as we focus our efforts on offers that reduce costs and increase efficiency.

Explanatory notes: * Analysis was conducted on top 90% of (Petro-)Chemicals customers by Siemens SA revenue. Siemens share of technology (SCADA, PLC or drives) was determined at a customer level. The technology with the highest share was used as indicative Siemens share at customer. Siemens attributable share was determined by multiplying Siemens share with total output per customer (for tons of material) and customer revenue by product segment (for revenue share).

Source: BCG analysis.
Our contribution to Job creation

One of South Africa’s most urgent national priorities is job creation. Nearly 5 million South Africans, or 24% of the economically active workforce, are unemployed, and this is a major driver of poverty and inequality.

Government has a target of reducing unemployment to 6% by creating 11 million jobs, with a focus on labour-absorbing industries and the small business sector which is expected to create more than 90% of future jobs.

Siemens directly employs 1,460 people in South Africa, and we develop highly-skilled employees, including artisans and technicians at Siemens manufacturing and service facilities.

Each Siemens job enables approximately a further ten jobs through local procurement, employee spend and by providing value adding technology to our customers. That means Siemens supports 15,600 jobs in the SA economy. 90% of the jobs created are for skilled labour.

As a company that works on projects in multiple countries, Siemens South Africa also created more than 28,000 jobs outside SA, through indirect effects, thereof 89% of them in Africa.

Future challenges and commitments

Siemens is committed to creating more skilled jobs in South Africa, despite a shortage of graduates with the appropriate engineering background.

Employment and skills development are increasingly important for companies’ B-BBEE scores and ability to bid for government and parastatal tenders.

We aim to further develop our local supply chain, including Qualifying Small Enterprises (QSE) and Emerging Medium-sized Enterprises (EME), especially in industries with higher employment multiplier effects.
Employment equity is a national policy target in South Africa, aiming to ensure workplaces reflect the racial balance in the country.

Siemens values diversity in the workplace and we believe our diversity gives us a competitive advantage. Our approach to employment equity is in line with government targets to improve the racial and gender mix, particularly in skilled, technical and managerial positions.

In 2014, 56% of our employees were from historically disadvantaged groups. People from historically-disadvantaged groups make up 35% of senior and middle management staff at Siemens. We have 29% female representation in our workforce, and 3 out of 11 people in top leadership are women.

Future challenges and commitments
Siemens is committed to increasing the percentage of its previously disadvantaged employees and move closer to the national average of 65%. This is being addressed by focusing on education and training along the value chain to develop skilled employees and a talent pipeline and various programmes to ensure Siemens employment reflects South Africa’s demographics.

Source: BCG analysis.

Figure 2: Employment equity benchmarking.

Note: Analysis of % female employees includes telecommunication, mining and manufacturing companies only and excludes outliers such as retailers due to higher percentage of women employed (>70%). 1. Siemens internal data, 2. Companies’ annual and CSR/Sustainability reports, 3. Companies’ annual and CSR/Sustainability reports, Bloomberg, ESG, Thomson Reuters ASSET4, Datastream, 4. HDSA = Historically disadvantaged South Africans (i.e. Black, Colored and Indian). Source: BCG analysis.
There is a critical shortage of engineers and other technical professionals in South Africa, and the private sector has 470,000 vacancies for skilled positions. According to a World Bank survey of large companies in SA, an inadequately educated workforce was the 3rd most common barrier for doing business. Government recognises this skills gap and is targeting skills improvement for 1.2 million workers per year.

Siemens recognises that skilled staff increase productivity and reduce business costs. We are tackling South Africa’s chronic skills shortage by investing heavily in training our employees, and providing them with access to skills training and development throughout their careers.

In 2014, we invested R40m equating to 3,900 training days, with an average of R27,300 training spend on each employee. This is nearly three times more than the SA company average, an investment which makes Siemens more competitive, boosts productivity and retains the best talent.

Our goal is to meet the skills development aims of the National Skills Development Strategy, NDP and Human Resources Development Strategy.

Future challenges and commitments
Siemens must work hard to retain its existing skilled employees because they make attractive targets for other companies. The company is committed to continuous investment in employee training, and to supporting skills development outside of its own workforce, as required by B-BBEE legislation.
There are critical shortages in technical professions in South Africa, particularly for engineers. The New Growth Path, a framework for economic and jobs policy, targets skills improvement for 1.2 million workers per year. Skilled staff produce real results in productivity, cost reduction and process optimisation.

High-tech innovation and state-of-the-art products and solutions require specialised knowledge and technical know-how. Siemens is committed to training and up-skilling our customers to effectively use our products.

Through our locally based training facilities we trained 1,751 of our customers and suppliers in 2014. This includes specific training programmes for the automation, energy and healthcare sectors.

Suppliers, especially small and medium size enterprises, have identified complicated processes, a lack of capacity and resources as key challenges to working with large corporations. We support our suppliers to improve their own processes and to comply with the international Siemens Code of Conduct, to ease the process of working with us.

In 2014 we conducted 175 supplier audits, a 300% increase from 2013.

Future challenges and commitments

At Siemens we need to do more to support our suppliers. We have recently launched the Siemens Supplier Development programme with R6.8m invested in 2015. Fifty suppliers have been identified to support and develop their capabilities. We are also targeting to increase our supplier audits to 300 in 2015.
Our contribution to Electrification

Value-adding Innovations

Reliable power is critical to economic success, but South Africa currently suffers from severe electricity constraints due to aging infrastructure. The country is ranked 99 out of 144 countries for quality of electricity supply and it needs an additional 40,000 MW of electricity infrastructure projects, of which 50% will come from renewables.

The government wants 97% of homes to have access to electricity by 2025, and there is a drive to diversify away from coal, which currently provides more than 90% of power.

Siemens is a major player in the South African energy sector, to which we bring innovation and global market experience.

Siemens technology is used to support 69% or 31,000 MW of South Africa’s current total electricity capacity through our installed base of steam and gas turbines, and control and instrumentation systems in power stations. We are helping to build a renewable energy future for South Africa. Our renewable energy technologies already support the generation of 800 MW (20%) through wind, solar and hydro energy, and we supply steam turbines for concentrated solar power (CSP) plants.

We are well positioned to support in future gas power generation projects, and applying our technology to reduce carbon emissions from coal-fired power plants. Siemens is also a leading supplier of transmission and distribution solutions to SA’s electricity network, such as transformers and medium voltage switchgear. We are preparing to introduce smart grids and smart metering technologies that enable better management of electricity demand.

Future challenges and commitments

Siemens is ready to support the expansion of gas as a significant potential power source for South Africa. We will continue to introduce more efficient technologies to coal-fired power plants to aid the reduction in emissions. And we aim to consolidate our position in the wind power industry. Siemens expects to become a leading supplier of smart meters to the industrial and domestic sectors in South Africa.
Value-adding Innovations

Our contribution to Automation

20%

Of SA’s total industrial processes enabled with Siemens automation control systems (>20 000 processes)

Key industries such as:

Food & beverage
Water
Mining
Petro-chemicals

Automation will enable South African industry to become more competitive, contribute more to GDP and create more skilled jobs.

Automation already drives innovation, efficiency and productivity in manufacturing and mining, sectors which contribute 20% of GDP, employ more than two million people, and are critical to the SA economy.

Siemens’ automation hardware and software is already embedded in South African industry. Our customers are using our technology to automate around 20,000 or 20% of SA’s total industrial processes, to make South African mining and manufacturing safer, more efficient and more productive.

Future challenges and commitments

Siemens is committed to the automation of SA industry in a way which takes account of union and labour concerns about job losses.

We believe automation must be regarded as inevitable in sectors where South Africa competes globally for market share to drive the economy, and see it as an opportunity and stimulus for expanded training programmes leading to a more skilled workforce, and better jobs.

This will increase the overall competitiveness of the economy, and that leads to creation of additional jobs. We will ensure that our international experience is available to South Africa as automation becomes more mainstream.

Explanatory notes: * Each PLC or SCADA/DCS defined as one process. Therefore number of processes determined as the total number of automation products (PLC & SCADA/DCS) sold in South Africa. Includes all automation products sold directly through Siemens and excludes products sold via 3rd party vendors. Source: BCG analysis.
Our contribution to Digitalization

Digitalization is being adopted by every major industry globally. Intelligent processing of data, and the combination of data and engineering technology, bring flexibility and resilience to production, and enable more predictable and efficient maintenance.

Digital information grows ten times every five years, and rapid access to business and operational data allows deeper insight and quicker decision making, resulting in sustainable increases in productivity, efficiency and quality.

Siemens digital technology and products are, however, already used to monitor and control operations in the energy, manufacturing and healthcare industries. For example, there are Siemens products and solutions installed in South Africa that are continuously generating and transmitting data and providing real-time insights for our customers.

In 2014, Siemens equipment in SA generated 640 billion pieces of process and operations data in the energy, industry and healthcare industries. Data generated was used for services like remote monitoring and predictive maintenance on wind turbines and to create digital images from medical diagnostic equipment.

Embracing digitalization will be a critical element in achieving SA’s ambitious growth and job creation targets, but the country has been relatively slow to date in uptake of digitalization. It is ranked 70th out of 144 countries on the Networked Readiness Index.

Future challenges and commitments

Siemens is undertaking research to better understand the scale of South Africa’s opportunities in digitalization across key industries like manufacturing and electrification. To help equip South Africa’s and the world’s future engineers for the age of digitalization, Siemens Product Life Cycle Management (PLM) software is available to academic institutions for free - enabling students to acquire skills and knowledge on using industry software for design, simulation and manufacturing.
Sustaining the Environment

Our contribution to CO₂e savings

South Africa currently has the 13th highest CO₂ emissions in the world with 470 million tons emitted in 2012. Electricity generation through coal-fired power stations is a key source of carbon emissions in SA, but government has awarded almost 4000 MW of new capacity to developers of cleaner renewable power sources.

Siemens supports a fundamental technological shift toward energy-efficient economic development and environmentally friendly solutions. We are committed to cutting our own carbon emissions globally, reducing our contribution to climate change, and helping customers to reduce their own environmental impact.

In 2014, Siemens supported our South African customers to offset 1,300 kilotons of CO₂ through its renewable energy and energy efficiency technology at two wind farms, two solar farms, a hydro energy station and two CSP plants.

Future challenges and commitments

Siemens will support South Africa’s migration to cleaner power generation by being a reliable partner in gas fired power generation, renewable energy and hybrid solutions, as well as industrial applications.

New capacity commissioned in 2015 will help save an estimated 2,105 kilotons of CO₂e, an increase of approximately 65%. Siemens South Africa was also recently awarded a contract to deliver 157 wind turbines for three new wind farms to be built in the Northern Cape, with a combined generation capacity of 360 MW.

We recognise, however, that our large installed base in South Africa means some of our older technologies, which are less energy efficient, continue to operate in the energy, transport and mining sectors. Many legacy technology installations at Siemens’ long-term customers produce significantly higher carbon emissions than new-generation technologies.

Explanatory notes: * CO₂e savings for 2014. Saving calculations are mainly based on published saving figures or based on an average Grid Emission factor of 0.99 tons per MWh (Source: Eskom Report 2013).
Government is aiming for economic growth with a low carbon footprint, and it encourages corporate awareness of CO2 emissions.

Our operations consumed 8,700 MWh of electricity in 2014, a decrease of 13% from 2013; and 150 MWh of power was generated by solar panels installed as part of energy saving initiatives at Siemens Park in Midrand outside Johannesburg.

Siemens business activities in South Africa generated 9,300 tons of CO2 emissions in 2014, mostly from transportation of products and power supply to offices and factories. This is a reduction of 9% from the 10,200 tons of CO2 emissions in 2013.

We aim to create value with a minimal impact to the environment. A ton of CO2 is emitted for every R1 million in Siemens revenue in South Africa, significantly lower than the average of 6.8 tons in companies against which Siemens was benchmarked; and lower than the 2.4 tons per R1 million in revenue of its international peers.

Future challenges and commitments
Siemens in South Africa has initiated its own energy efficiency programme to identify future energy and cost savings across its offices and facilities. The company is conducting audits across our operations to identify energy saving opportunities.

However, the lack of a reliable baseline in the past has prevented us from setting accurate reduction targets for CO2 emissions and electricity consumption.

Note:
1. Scope 1 and 2 emissions as reported by Siemens Environmental Taskforce. Annual report 2013.
2. Benchmarking from companies’ annual and CSR/Sustainability reports. Bloomberg ESG, Thomson Reuters ASSET4, Datastream. Benchmark excludes companies with high outlier CO2 emissions due to a heavy manufacturing or energy rate (1 USD = R10.85 based on average 2014 exchange rate). 
3. Comparison basis Siemens SA intensity = 1.
Source: BCG analysis.

Figure 4: Energy usage and CO2e footprint benchmarking.
Water is a scarce resource in South Africa, the 30th driest country in the world. With only 1,007 m³ of renewable water available to each inhabitant (2008 figures), South Africa is already close to the international water scarcity threshold. Government strategy aims to ensure water is protected, managed and used sustainably and fairly.

Siemens’ consumption of water in South Africa was reduced in 2014 by 6% to 88,700 kiloliters.

Our use of 8 m³ of water per R1 million generated in revenue is lower than the average of 27 m³ for SA companies and 20 m³ for international peers. We will continue to improve our water consumption and use this precious resource wisely.

Explanatory notes:
1. Water consumption figures based on municipal records. Consumption data for one site was not available and thus estimated using an average consumption/person for remaining sites.
2. Comparisons basis Siemens SA intensity = 1
3. Comparison basis Siemens SA intensity = 1
Source: BCG analysis.
South Africa’s landfill sites are under pressure. The country generates 60 million tons of general waste of which more than 90% ends up in landfills. In 2011, only 10% of this general waste was recycled, but government aims to reduce waste disposal and increase recycling.

Siemens is committed to recycling efforts which it tracks and reports across all its sites. We are also trying to better understand our waste footprint by establishing a baseline to allow assessment of waste reduction initiatives.

During 2014, we recycled 80 tons of the 670 tons of waste we generated in our operations.

When compared to our benchmarks, Siemens generates 0.1 tons of waste per R1 million generated in revenue which is lower than the average of 0.5 tons/R1 million.

## Future challenges and commitments

Our aim is to continue to improve Siemens South Africa's recycling rates to move towards international benchmarks.

Even though Siemens’ recycling rate is higher than the average reported South African rate of 10%, it is still significantly lower than the global benchmark. In Europe, for example, 35% of general municipal waste is recycled.

![Figure 6: Waste generated and recycled benchmarking.](image)


Source: BCG analysis.
Improving Quality of Life

Our contribution to Healthcare

Modern healthcare systems supported by technology are important to South Africa because the country faces multiple health challenges. Life expectancy of 58.3 years gives it a ranking of 129th out of 144 countries.

South Africa is confronted by an epidemic of HIV/AIDS with more than 5.5 million people affected. That is 10% of the population, and South Africa is ranked 140 out of 144 countries for HIV prevalence.

Maternal mortality of 140 per 100,000 is unchanged since 1995, and non-communicable diseases have risen to 260,000 deaths a year, up 50% from 2000. A 2000 World Health Organisation ranking of health systems placed SA 175th out of 191 countries.

Siemens regards healthcare as an investment in the well-being of South Africa’s economy and society, and not just a cost. Our products are used throughout the health system in South Africa, from imaging and diagnostics to surgery, to improve patients’ quality of life.

Every day in South Africa, 34,000 people benefit from healthcare based on Siemens equipment. This equates to 12 million people a year. And every year our technology and products help to diagnose and treat 540,000 people with some of the most threatening diseases, including HIV/AIDS, tuberculosis, heart attacks and breast cancer.

**Explanatory notes:** * No. of Patients benefiting estimated using installed base and average utilization rate per modality. Some input was obtained for South Africa specific utilization rate and therefore an average rate calculated using additional data from Brazil, India and China which have similar HDI. ** Most threatening diseases in South Africa include heart attacks, breast cancer, HIV/AIDS and TB. Utilization of modalities for identified threatening diseases based on expert input from peer countries (Brazil, India and China): customer level. The technology with the highest share was used as indicative Siemens share at customer. Siemens attributable share was determined by multiplying Siemens share with total output per customer (for tons of material) and customer revenue by product segment (for revenue share). Source: BCG analysis.

Future challenges and commitments

Siemens measures success in healthcare as helping people to enjoy a better quality of life for longer. This requires affordable access to quality care, innovative solutions to combat disease, with a careful balancing of costs and needs.

Siemens aims to develop partnerships that lead to more social commitments to provide accessible and affordable healthcare to remote areas of South Africa.
Studies show that engaged employees are better employees, who are more fulfilled at home and at work. Good employee engagement reduces absenteeism, safety incidents and staff turnover; and it increases productivity, customer satisfaction and profitability.

Siemens regards high-performing, engaged and satisfied employees as one of its strengths; and it is part of what makes Siemens an attractive employer. In its most recent survey of staff, Siemens was pleased to report a 78% employee engagement score.

We put a high priority on employee support initiatives and offer in-house training and development programmes, flexible working hours, an on-site creche and gym, canteens and a staff wellbeing programme.

Siemens encourages an ownership culture that encourages every employee to act as if Siemens was their own company, and to take personal responsibility to build Siemens’ long-term success.

To ensure we have the right human resources policies, salaries, working environment, training and workplace culture we engaged with an independent research institute and established the Siemens Global Engagement Survey as an important management tool.

Future challenges and commitments

Siemens is an innovation driven company, so we know it is important to stay competitive in the tightening labour market and remain an employer of choice.

Committed and engaged employees are the basis of a company’s success. The management team of Siemens in South Africa are taking all the results of our latest engagement survey very seriously and will derive various measures to help address major issues.

The results show that while we have a relatively good level of engagement and a strong culture of collaboration in our company, key areas that we want to improve are operational excellence and employee retention.
Our Long-term commitment to South Africa

Our customers and government need stable and reliable suppliers who understand South Africa.

Building the country’s infrastructure and meeting South Africa’s national development goals is a long-term investment which requires committed partners with a long track record and local presence.

Siemens has been active in South Africa for 155 years. Since 1860, we have played a key role in building South Africa’s infrastructure; and our current investment in local facilities, employee training and skills development demonstrates a real commitment to the future of South Africa.

Our integrated portfolio of technology and global experience is helping South Africa to deal with the megatrends of climate change, demographic change, globalization, urbanization and digitalization.

With our positioning along the electrification value chain, we have knowhow that extends from power generation to power transmission, power distribution and smart grid to the efficient application of electrical energy. And with our outstanding strengths in automation, we’re well equipped for the future and the age of digitalization.
Our Corporate Social Responsibility (CSR)

Invested in Mandela School of Science and Technology

Supports 700 learners by 2016

R100 million

All businesses in South Africa have an obligation to help overcome the development inequalities of the past.

Siemens invested R100 million in the Mandela School of Science and Technology in the Eastern Cape village of Mvezo, where former president Nelson Mandela was born. Opened in January 2014, Siemens’ biggest corporate social responsibility project (CSR) worldwide, is ensuring that young learners from the village and surrounding areas no longer have to travel long distances to get a valuable secondary education.

In addition to the Mandela School, Siemens spent R8 million on other CSR activities in 2014, covering childcare, education and supporting the homeless – all activities aligned with national goals. Through our CSR activities we have touched the lives of 2,750 people in 2014 and almost 14,300 people over the last five years.

As a good corporate citizen, we see it as our job to make a long-term, positive contribution to the development of South Africa.

Future challenges and commitments

Siemens South Africa aims to manage its CSR activities more strategically, including reporting and target setting, and to focus on areas where company competencies and resources can make a more meaningful difference. An area of improvement and priority is fostering a stronger employee volunteerism culture in our local company. We will look to create more opportunities for our employees to spend time at the projects that Siemens supports and worthy causes close to their hearts aligned to our business.

Source: BCG analysis.
Our contribution to Good corporate governance

Corruption is recognised as a major challenge for South Africa. In Transparency International’s 2014 Corruption Perceptions Index the country scored 44 out of 100 and ranked 67 out of the 175 countries surveyed.

The National Development Plan explicitly aims to make public servants more accountable and to address corruption, which undermines good governance and hinders implementation of the NDP.

Over the past five years the Siemens Integrity Initiative has invested more than R18 million in South Africa to promote good governance. For example, Siemens is working with the Ethics Institute of South Africa on a project that aims to reduce corruption by engaging with municipalities and businesses, with an investment of more than R14 million. We have also invested R3,8 million in an anti-corruption collective action initiative with the United Nations Global Compact (UNGC).

As a company which has had to deal with global compliance scandals of its own in the past, Siemens is assuming a leading role in fighting corruption together with business and civil society. The global Siemens Integrity Initiative supports organisations and projects that fight corruption and fraud through collective action, education and training.

Future challenges and commitments

Siemens remains committed to preventing and combatting corruption in South Africa and other African countries. The WU Global Tax Policy Centre (GTPC) at the Institute for Austrian and International Tax Law at Vienna University of Economics and Business (WU) has been awarded US$1.7 million by the Siemens Integrity Initiative to launch the Tax and Good Governance Project 2015-2018.

Together with WU GTPC, the African Tax Institute (ATI) at the University of Pretoria’s Faculty of Economic and Management Sciences will play a key role in the fight against tax crimes and illicit activities in Africa. The project aims to identify links between corruption, the lack of business and political integrity, tax crimes, corrupt tax administrations and multinationals.
Our B-BBEE ownership

Businesses must play a key role in empowering people who were excluded by past social and economic policies under apartheid. Enabling ownership of companies is a key criteria in South Africa’s Broad-Based Black Economic Empowerment (B-BBEE) codes, particularly ownership by black women.

Siemens has consistently played a leading role in advancing the cause of B-BBEE and years before legislation was put in place to address the issue, the company initiated its first empowerment deals in December 2000. Today, Siemens has a 30% B-BBEE shareholding, with 15% being owned by Sekunjalo Investment Holdings and 15% by the Siemens Employee Share Ownership Trust.

The Siemens Employee Share Ownership Trust, launched in 2012, allows eligible employees to share in the long-term success of the company.

Our black ownership of 30% is higher than the figure of the benchmarked South African companies of 27%. In early 2015, Siemens B-BBEE score rose 6% following an increase in the net value of black ownership of the company.

Figure 8: B-BBEE ownership benchmarking.

Note: Black as defined by the B-BBEE codes as being historically disadvantaged South Africans (HDSA).
1. Siemens BEE scorecard
2. Companies’ annual and CSR/Sustainability reports
Source: BCG analysis
Our Procurement with QSEs/EMEs

By 2030, more than 90% of jobs in South Africa are forecast to come from small, medium and micro-enterprises. These small businesses already contribute 45% to GDP, up from 35% in 2007.

Big companies have a significant role to play in stimulating and supporting small businesses, which are a key part of the National Development Plan’s ambition to create jobs. Private sector procurement from small companies has been identified as a key strategic intervention by the Department of Trade and Industry.

Siemens spends more than 30% of its procurement budget, or R950 million, with Qualifying Small Enterprises (QSE) and Emerging Medium-sized Enterprises (EME) - more than double the B-BBEE target of 15%. Already this procurement spend supports around 5,300 jobs in South Africa.

Future challenges and commitments

It can be challenging for a large multinational, like Siemens, to build solid relationships with QSEs and EMEs given the large number of suppliers we have and the pressure to rationalise costs by bundling suppliers.

It is important to balance the economies of scale of procurement whilst prioritising the development of small enterprises. The Siemens Supplier Development programme is aimed at strengthening our QSE and EME business supplier base, with R6.8m invested in 2015.

With supply chain development increasingly important for the company B-BBEE score and ability to bid for parastatal tenders, Siemens will continue to aim for procurement from the small business sector.
Supporting Transformation

Our B-BBEE level

The Broad-Based Black Economic Empowerment (B-BBEE) Codes of Good Practice are the standard framework in South Africa to promote and measure a company’s contribution to transformation. A strong B-BBEE rating is also a competitive advantage and vital for competing for tenders.

Siemens’ Level 2 B-BBEE rating is a demonstration of our commitment to transformation in South Africa. We believe our B-BBEE rating has made us a better company.

As a result of our B-BBEE efforts we have better trained staff, we are more diverse and attracting better talent, we are getting positive feedback from customers and the whole Siemens team is motivated by the B-BBEE achievement.

Siemens steadily increased its B-BBEE points from 51% in 2006 to nearly 86 points in 2015.

If Siemens were listed on the JSE, it would be in the top 25 companies in terms of B-BBEE points.

Future challenges and commitments

While Siemens is proud of its current B-BBEE Level 2 rating, it recognises room for further improvement and will continue to work towards greater demographic representation in its workforce.

For example our management control score declined 8% from 8.93 to 8.21 points.

The new B-BBEE codes, from 2015, have more demanding targets for businesses to achieve and may cost Siemens its Level 2 rating. The company is already putting in place programmes to address any deficits in its B-BBEE scoring.
This Business to Society Report has been developed by Siemens to measure and demonstrate our contribution to the sustainable development of South Africa to our stakeholders - customers, government, suppliers, employees and potential recruits, as well as the wider public. Siemens has developed a customised methodology based on the WBCSD framework to objectively assess its contribution to South Africa. Using this methodology, we aim to do a Business to Society assessment periodically to reflect internally on our progress as well as to keep external stakeholders informed. This regular assessment will therefore allow us to constantly identify key areas where performance can be improved and to develop action measures.

It is the first time that the global Siemens organisation has done an impact assessment of this nature on a country level, and Siemens South Africa is proud to have been selected as the pilot project. The lessons learnt and experiences of our local company are being shared with the international Siemens community, so that other Siemens regional entities can do similar country level assessments in the future.

We set out to objectively evaluate our business activities and present a fair assessment of Siemens South Africa’s performance, both positive and negative, across the six pillars identified:

**Conclusion**

**Looking forward**

Apart from the good contribution Siemens makes to the GDP, our company’s true value comes from the contribution our technology makes to key industries that are driving the economy - sectors like mining, automotive, transportation and petrochemicals.

While we are proud of Siemens’ positive contribution to job creation and skills development, we need to improve our employment equity percentage of 56%. We are addressing this with significant investments in education and training along the value chain to develop skilled employees and a talent pipeline to ensure Siemens employment reflects South Africa’s demographics.

Siemens technology is making a significant contribution in the electrification and automation of South Africa’s public and industrial infrastructures, but we can improve in the area of digitalization across the key industries we operate in.

Siemens makes a positive contribution across the environmental indicators. We want to make further improvements through better reporting and setting accurate targets to reduce our CO2 and electricity consumption. Siemens technology is also helping customers to reduce their own environmental impact. We recognise, however, that our large installed base in South Africa mean some of our older, less energy efficient technologies, continue to operate in various sectors.

Siemens technology and various company initiatives contribute positively in areas such as healthcare, education and public welfare, as well as employee well-being. An area of improvement is fostering a stronger employee volunteerism culture in our local company. We will look to create more opportunities for our employees to volunteer their time and contribute to worthy causes.

Siemens is making a positive contribution to socio-economic transformation in South Africa, through employment, skills development, support for small businesses and good corporate governance. The new B-BBEE codes, from 2015, have more demanding targets for businesses to achieve and we acknowledge that this may cost Siemens its Level 2 rating. Siemens South Africa is already putting in place programmes to address any deficits in its B-BBEE scoring.
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