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Cover photograph
The SHOSHOLOZA is a heavy duty, knee-length gumboot with a steel toe that is worn in the mining environment. It is manufactured from oil and acid resistant PVC material, has a luminous ankle protector and has incorporated extensive research on foot shapes in its design. The boot aims to minimise fatigue, thereby increasing productivity. SHOSHOLOZA received an SABS Design Excellence Award in 2007.

Left page photographs
Courtesy of MediaClubSouthAfrica.com
The SABS realises that standardisation is a national effort that involves and touches lives of all South Africans. Standards are developed for the benefit of society and industry. Therefore, standards must be developed to achieve desired benefits that factor in these interests.

Standards are developed in technical committees composed of a few representatives, which forms a sample of society as a whole. For standards to be used, they must be known and assimilated into the fabric of society. Therefore, the SABS has an obligation to ensure that knowledge of standards and their value is communicated to the wider public. With this journal, the SABS aims to communicate on societal issues impacted by standards and on the activities and events that lead to the development, maintenance and promotion of South African National Standards and Conformity Assessment Services.

The SABS is in the midst of implementing a five year turn-around strategy which follows up on the recent spawning of its regulatory function as part of a long running technical infrastructure reform that has seen the organisation right-sized and focused in line with best practice. Customer centricity and the impact of its services and outputs on the economic and environmental performance of South Africa industries is now the centrepiece of the new strategy.

The standards strategy has the following priorities:

• Industry sector based standardisation strategies – focus on systems of standards to achieve industry and society wide impact
• Strategic partnerships to enable multinational standardisation outcomes that add to comparative nature of South African exports and to leverage domestic market for national standards to develop relevant and responsive national standards
• Accelerate implementation of best practices and workflow automation, to improve efficiency and effectiveness of divisional operations
• Develop the existing standards development talent for delivery of high level standards solutions
• Implement a standards sales strategy to meet the international practice of “user pays” and to obtain capital for reinvestment into the standardisation infrastructure.

Now, the SABS is concerned with what standards to write and for whom they are written and afterwards, how to promote their use in order to realise their potential value. In the past, the SABS reacted to intermittent requests for standards from where-withal, resulting in long lead times and an output of unknown value. To this end, the standards development activities have been augmented with a step for evaluation of benefits to society for any proposed national standard prior to commencement of work on the standard. This empowers the Bureau to be in a position to justify the value of its current work and ensures that resources are effectively utilised.
The SABS realises that standardisation is a national effort that involves and touches lives of all South Africans. Standards are developed for the benefit of society and industry. Therefore, standards must be developed to achieve desired benefits that factor in these interests.

This publication is intended to become a flagship for South African standardisation promotion, delivering both the insight on the standards and conformity assessment services development programmes and highlight the impact that these have on the economy, environment and society. The publication is targeted at technical practitioners that use standards and conformity assessment services in their work, regulators and policy makers.
The South African Bureau of Standards (SABS) has been developing standards since 1945. Although much has changed since then, the SABS is still responsible for the development, maintenance and promotion of South African National Standards (SANS). The purpose of standards is to protect the integrity of the South African market, protect the South African consumer, create a competitive advantage for the South African industry and assist access by South Africans to markets locally and internationally.

Declining economic growth nationally and internationally has prompted the SABS as a technical infrastructure for industrial policy to seek dynamic and innovative ways in contributing to industrialisation and economic development. In 2011, a structural overhaul was completed to ensure a new strategic direction that places socio-economic impact at the centre of operational strategy. The new strategy is based on the bureau taking a reasoned approach in developing national standards and proactively providing leadership in seeking out opportunities for solving firm level, industry level and national economic value chain problems through standards.

The Standards Division has been restructured to include five departments. There is the Standards Development Department which develops standards in partnership...
with technical committees by providing an enabling environment for participation and development. The Processes and Support Department ensures that the necessary infrastructure including rules and regulations are applied to allow for a transparent and fair standardisation process. The International Relations and Strategic Partnership Department allows for all relevant stakeholders to participate and contribute to the SABS strategic goals. The Economic Impact and Industrial Policy Department ensures that SANS are aligned to industrial policy and are of real benefit to the South African economy. The fifth department, Sales and Information is responsible for ensuring that standards are easily and readily available for interested parties.

The Division is headed by Dr S Bissoon who is supported by five Senior Managers.

“In 2011, a structural overhaul was completed to ensure a new strategic direction that places socio-economic impact at the centre of operational strategy.”
Implementing standards consistently provides benefits for users, including organisations and associations, regardless of their size, business sector or which country they are based in.

Most components, commodities and products are manufactured and used worldwide. In general, it is agreed that alignment with international standards i.e. IEC and ISO, is essential for the economy, international trade, compatibility and inter-changeability of commodities. To this end, available international standards are adopted to serve as reference documents for local standards.

The Standards Development Department liaises with international committees and working groups for the development of standards. The Technical Committee nominates subject matter experts in the national committees to represent South Africa in the development of standards and to ensure that the country’s interests are represented at international level. Young professionals are also identified and mentored to participate actively in the development of international standards. Local committees also ratify the adoption of identified international standards that are relevant to the South African industry.

A typical technical committee comprises of industry associations, non-governmental organisations, government departments, academic institutions, research institutions, regulatory departments, power utilities, local manufactures and consumers.

Technical committees contribute towards establishing objectives and standardisation requirements based on industrialisation and market growth. Committees ensure timely and efficient completion of projects on the programme of work. The members of the committees through their respective working groups provide updates on working group status and identify any issues or impediments that require discussion and decision making.

Currently, there are 450 national technical committees and subcommittees active in the development and maintenance of national standards.
“The Standards Development Department liaises with international committees and working groups for the development of standards. The Technical Committee nominates subject matter experts in the national committees, to represent South Africa in the development of standards and to ensure that the country’s interests are represented at international level.”

A selection of South African-designed products that have received SABS Design Awards over the years.
The contribution of standards towards an economy is invaluable. They ensure the health and safety of consumers and those involved in the production, supply and manufacturing of goods and services. Standards promote innovation, create new markets, ensure the interoperability of products and services, ensure quality of products, support research and development as well as accelerate time to market, foster competition and enhance visibility, facilitate trade, strengthen regulation, increase safety and environmental protection.

The benefits of standards are not automatic; they are dependent on the production of high quality standards. One of the ways that the SABS ensures high quality standards is to build in the required benefits from the infancy of a standard. The Economic Impact and Industrial Policy Department is tasked with the duty of ensuring that each proposed standard meets a rigorous criteria. A proposed standard must illustrate a positive net value or benefit in terms of trade, growth, competition, technology, employment and environmental sustainability, strategic alignment to national interest and public policy issues amongst others. The fundamental principle of net benefit is that the benefits must exceed the costs likely to be imposed on suppliers, users and other parties in the community as a result of its implementation. Furthermore, proposals must be in line with the Government’s targets of economic growth, social responsibility and sustainability.

It is important that the SABS maintains standards that ensure the safety and health of South Africans, protect consumers from poorly manufactured or low quality goods and guarantee the integrity of the South African market. The SABS maintains a delicate balance of home-grown and international adoptions or adaptations to ensure the growth of indigenous markets and promote the trading ability of South African companies. This is a process that involves continuous evaluation of South Africa’s trade environment and identifies standards that can aid domestic exporters to access increasingly demanding export markets, while concurrently locking out unsafe and poor quality imports.

The SABS has more than 6 700 standards in its collection and these cover a wide range of industry. (Figure 1).

Industry’s ability to take up innovative market solutions is adversely affected by risk and market size. Standardisation can be one important way to help address this by

Some of the Economic Impact & Industrial Policy team. From left to right: Thato Chabeli (Senior Manager), Yvonne Ndhlovu (Specialist), Geoffrey Chapman (Researcher) who contributed to this publication.
Figure 1: The SABS has more than 6 700 standards in its collection that are covering a wide range of industry.

reducing research and costs of development and guaranteeing quality compliance related to market access.

As part of a sustainable business model, National Standards Bodies around the world have embarked on a similar corporate strategy as the SABS. Many of these Standards bodies have various variations of a similar structure that is responsible for ensuring alignment of standards development with economic growth as well as a way to measure the impact of standards on the economy.

The role of the Economic Impact Department is to bridge a gap between standardisation and economic development. As a strategic tool of the Department of Trade and Industry, the SABS is responsible for contributing to economic growth stimulation, therefore it endeavours to synchronise its outputs to industrial growth. As part of its strategic plan to ensure alignment of standardisation and economic development, the Economic Impact Department was created. Its role is to fulfil the envisaged function as detailed above.

The department contributes towards the sustainability of the organisation’s business model. It will endeavour to stay ahead of market needs by involving itself at the incubation stage of innovation, invention and technology. The department will provide industry road maps; these are important standardisation solutions that outline various strategies for advancing standardisation activities in specific areas of the economy.

“One of the ways that the SABS ensures high quality standards is to build in the required benefits from the infancy of a standard. The Economic Impact and Industrial Policy Department is tasked with the duty of ensuring that each proposed standard meets a rigorous criteria.”
Meet the Standards Team

All above board – Processes and Support Department

To ensure that all is above board in the development and maintenance of standards, the Processes and Support Department develops and maintains processes to support the development of standards, ensures that relevant systems are in place for the efficient operation of the Standards Division, ensures continuous compliance to processes and procedures through auditing and assists with broadening stakeholder participation in committees by continuously assessing stakeholder balance in committees.

The department provides support for the development of relevant national standards by maintaining databases of committees, managing the annual planning and scheduling of committee meetings, providing administrative support at, before and following committee meetings and ensuring editorial quality through editing and technical editing services. The department also continuously seeks innovative ways to meet our customer’s needs. This includes modernising/automating and optimisation of processes to keep up with customer expectations.

The department operates in an environment where changes to governmental policy e.g. the SADC Free Trade Agreement, will impact on the processes that are in place. This in itself reflects that there will always be a possibility for continuous changes to our processes. Changes to SADCStan processes have an impact on how we handle harmonised text in terms of revisions or amendments. The procedures for the harmonisation of the tripartite standards (Comesa, EAC, and SADC) are also an area that needs proper attention by the department.

Lastly, there will always be a possibility for other organisations to seek recognition as Standards Development Organisations (SDOs). If the criteria for the recognition of these organisations ends up as aligned to our peers elsewhere, there will be a demand for editing as well as technical review services. Apart from providing these services to potential SDOs, we are able to provide them to organisations such as Eskom for their NRS documents.

From left: Mathlale Peter, Senior Manager: Processes and Support and Ann Nel, Manager: Committee Support.
“The department continuously seeks innovative ways to meet our customer’s needs. This includes modernising/automating and optimisation of processes to keep up with customer expectations.”

Delegates convened at the SABS from 3-7 September 2012 for the third plenary ISO/TC 258 meeting. This technical committee was set up to work with standards in the field of project, program, and portfolio management. With ISO 21500 released for international distribution on 3 September, ISO/TC 258 has been assigned to take care of ISO 21500 maintenance.
African views and interests in standards development and to market SABS as a national and international partner of choice in standardisation – Maintain a credible, inclusive, transparent, impartial and efficient standards development process that promotes wider participation and consensus principles – Manage and broaden the SABS relations with international standards bodies (e.g. ISO, IEC) and other strategic regional and sub-regional standardisation forums – Ensure that South Africa’s interests are effectively reflected at regional and international forums.

In terms of international relations, the SABS is a founder member of the International Organization for Standardisation (ISO) and serves on the Technical Management Board (TMB) with an extended period from 2012-2014. The SABS also serves on the ISO Council for a two year period and is a member of the board of the International Electro-technical Commission (IEC). The SPIR Department seeks to ensure that SABS continues to occupy leadership positions in regional, sub-regional and international forums, which are important in leveraging cutting edge technological know-how, financial resources, opportunities to network and lobby on programmes that favour South Africa, with particular reference to developing country perspectives.

The Strategic Partnerships and International Relations Unit was established during the 2011/12 financial year. Before the unit was established the South African Bureau of Standards had no specific business unit dedicated to establish, manage and strengthen strategic partnerships and international relations.

Under the stewardship of Thabisa Mbungwana who joined the SABS in April 2012 as the Senior Manager, the unit has a mammoth task of identifying partnership opportunities that can contribute to the improvement of the SABS’s daily activities, and to exploit and assess the relevance of existing local and international partnerships. A number of the existing strategic partnerships were managed separately in the past under numerous business areas of the SABS, which was not the most efficient use of human and financial resources of the organisation. While supporting and servicing the organisation, the unit is busy putting together a number of strategies that will guide the SABS in identifying, strengthening and managing partnerships to ensure maximum benefits for the organisation.

The unit is made-up of the following four sub-units:

International Organization for Standardisation (ISO) which is led by Sazi Zangqa as a specialist; he works with Neo Thibedi and Thembi Hlongwane as International Relations Officers. The three have a combined experience of over 20 years within the organisation and working with ISO.

SADC led by Lindo Miaba as a specialist; he joined the SABS in February from National Treasury where he was responsible for African relations.

Strategic Partnerships led by Komane Masemola as a specialist; he also joined the SABS in February from the Gauteng Provincial government where he was responsible for Intergovernmental relations.

The unit’s main objective is to develop and maintain national, regional and international strategic partnerships for SABS.

The strategic objectives of the Department are to:

- Maintain and increase influence in the regional and international standardisation arena in order to promote South African views and interests in standards development and to market SABS as a national and international partner of choice in standardisation

Meet the Standards Team

Everyone on board – International Relations and Strategic Partnerships

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The unit is made-up of the following four sub-units:

International Electro-technical Commission (IEC) led by Paul Johnson as a specialist, he joined the SABS in April 2012, bringing with him a wealth of experience from Eskom which is one of the SABS’s primary stakeholders.

International Organization for Standardisation (ISO) which is led by Sazi Zangqa as a specialist; he works with Neo Thibedi and Thembi Hlongwane as International Relations Officers. The three have a combined experience of over 20 years within the organisation and working with ISO.

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- Manage and broaden the SABS relations with international standards bodies (e.g. ISO, IEC) and other strategic regional and sub-regional standardisation forums

- Ensure that South Africa’s interests are effectively reflected at regional and international forums.

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The SABS hosts the Secretariat of SADC-STAN, the regional standardisation body for Southern Africa and will continue to maintain the leadership role in the harmonisation of standards in the SADC region. Although the SABS used to be an active member of the African Organization for Standardisation (ARSO), the relationship is strained owing to differences in strategic direction but efforts to re-engage with ARSO are underway.

The SABS has signed a number of Memoranda of Understanding with African National Standard Bodies; efforts are currently being made by SPIR to get into partnership with other strategic National Standards Bodies in Africa, other developing countries as well as in developed countries.

Locally, a strategy is being developed to guide SABS engagement with sectors which are critical in standardisation, such as the academia, SMMEs, private sector, NGO and the government. The next three years will see development and implementation of these strategies, aimed at eventually balancing the composition of standards development technical committees to ensure participation in standardisation activities by all sectors of the South African society.

“The Strategic Partnerships and International Relations Unit has a mammoth task of identifying partnership opportunities that can contribute to the improvement of the SABS’s daily activities, and to exploit and assess the relevance of existing local and international partnerships”
Meet the Standards Team

Access to information – Sales and Information

Standards Sales and Information Services is made up of a dynamic group of individuals who all love what they do. The department comprises four areas of expertise, i.e. the Sales Office, e-Products and Web store, Information Office and Library, and Repro Printing Office. Our core business is the selling of international and local standards as mandated by the Standards Act and the dissemination of information about standards.

We are very excited about our new business plan and strategy, as we have embarked on a segmentation strategy whereby we try to understand the needs of our various customers and proactively engage with them rather than wait for them to come to us. This will certainly be an exciting journey that should take this department to new heights.

The obvious intention is to delight both our national and international customers by offering them efficiency and convenience, a true customer-centric service and value-added customised products that benefit both their businesses and the overall economy of South Africa. Standards Sales and Information Services is responsible for positioning standards as products of high value that instil quality and efficiency within any business thereby contributing to the creation of an industry that is globally competitive.

For this very reason, we are currently developing a brand-new Web store that will have a fresh look, reflect the look-and-feel of the new Website and be particularly user-friendly to allow us to reach more people in our own country, in Africa and the rest of the world. The new Web store will accommodate the purchase of multi-user licences of standards and collections of standards and will also act as a portal for our various subscription clients.

We shall soon move into a very modern and attractive open-office environment that will project a professional and friendly image thus enabling us to represent our brand, the SABS, “as the trusted third party that offers uncompromised value-added standardisation service”.

In addition to the provision of service to customers who visit our Web store or Head Office, customers can purchase standards from our regional offices located in Cape Town, Port Elizabeth and Durban.

Nonhlanhla Mathabela, Acting Senior Manager: Sales and Information.
## Standard Sales: Market Segmentation Model

### Distribution channels and customers in each segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>Number of distribution channels</th>
<th>Number of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
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<td>1109</td>
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<tr>
<td>Energy</td>
<td>6</td>
<td>27</td>
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<tr>
<td>Services</td>
<td>9</td>
<td>484</td>
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<tr>
<td>Mining</td>
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<td>56</td>
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<tr>
<td>Construction</td>
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<td>90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31</strong></td>
<td><strong>1 766</strong></td>
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### Standards in each channel

<table>
<thead>
<tr>
<th>Distribution channel</th>
<th>Sub-distribution channels</th>
<th>Number of standards</th>
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</thead>
<tbody>
<tr>
<td>Food Processing</td>
<td>Beverages</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Solid Foods</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Dairy</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Meats</td>
<td>50</td>
</tr>
<tr>
<td>Wood and Pulp</td>
<td>Paper</td>
<td>84</td>
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<td></td>
<td>Wood Products</td>
<td>132</td>
</tr>
<tr>
<td>Metals/Steel</td>
<td>Metal Products</td>
<td>419</td>
</tr>
<tr>
<td></td>
<td>Electric Accessories</td>
<td>572</td>
</tr>
<tr>
<td>Automotive</td>
<td>Vehicles</td>
<td>314</td>
</tr>
<tr>
<td></td>
<td>Boats</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>Bicycles/Motorcycles</td>
<td>43</td>
</tr>
<tr>
<td>Computers and Electronics</td>
<td></td>
<td>682</td>
</tr>
<tr>
<td>Glass, Plastic and Rubber</td>
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<td>523</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>Appliances</td>
<td>217</td>
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<tr>
<td></td>
<td>Textiles</td>
<td>456</td>
</tr>
<tr>
<td></td>
<td>Floor Covering</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Sport and Recreation Safety</td>
<td>13</td>
</tr>
<tr>
<td>Medical/Pharmaceutical</td>
<td>Human</td>
<td>318</td>
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<tr>
<td></td>
<td>Livestock</td>
<td>31</td>
</tr>
<tr>
<td>Chemicals</td>
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<td>430</td>
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<td><strong>Sub-total = 9</strong></td>
<td></td>
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<tr>
<td>Fuels</td>
<td>Petroleum</td>
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<tr>
<td></td>
<td>Diesel</td>
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<td></td>
<td>Avgas</td>
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<tr>
<td>Electricity</td>
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<tr>
<td>Solar</td>
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<tr>
<td>Gas</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Wind</td>
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<tr>
<td>Nuclear</td>
<td></td>
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</tr>
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<td><strong>Sub-total = 6</strong></td>
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<table>
<thead>
<tr>
<th>Distribution channel</th>
<th>Sub-distribution channels</th>
<th>Number of standards</th>
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</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>Banking</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Insurance/Medical</td>
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</tr>
<tr>
<td></td>
<td>Postal Services</td>
<td>20</td>
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<tr>
<td>Public Service</td>
<td>Government Departments</td>
<td>43</td>
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<tr>
<td></td>
<td>Municipalities</td>
<td>102</td>
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<tr>
<td></td>
<td>Vehicle Test Stations</td>
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<td></td>
<td>Public Transport</td>
<td>50</td>
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<tr>
<td>Tourism and Hospitality</td>
<td>Hotels &amp; Gaming</td>
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<tr>
<td>Scientific and Professional</td>
<td>Consultancies</td>
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<td>Administration and Consulting</td>
<td>ITC Service Providers</td>
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<tr>
<td></td>
<td>Fire Fighting</td>
<td>12</td>
</tr>
<tr>
<td>Storage, Warehousing and Freight</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Mining</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>Sub-total = 9</strong></td>
<td></td>
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<tr>
<td>Coal</td>
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<td>102</td>
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<tr>
<td>Gold/Platinum</td>
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<tr>
<td>Manganese/Iron Ore</td>
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<tr>
<td>Mining Operations</td>
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<tr>
<td><strong>Sub-total: 4</strong></td>
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<tr>
<td>Building Materials</td>
<td>Cement/Concrete</td>
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<tr>
<td></td>
<td>Building Construction</td>
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<tr>
<td>Site Preparation</td>
<td>Demolition</td>
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<tr>
<td>Construction and Maintenance</td>
<td></td>
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<tr>
<td><strong>Sub-total = 3</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Total: 31</strong></td>
<td></td>
<td><strong>Total: 6 720</strong></td>
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**Summary:**

The document presents a segmentation model for standard sales, categorizing into various segments based on their distribution channels and customer numbers. It also lists the standards in each channel, further segmented into sub-channels with corresponding numbers of standards.
The history of traditional medicinal systems is as vast and varied as the cultures in which they have their roots. The system is predominantly practiced in Africa, North America, Central and South America, Australia, China, India, Arabia and Europe, with traditional African, Ayurvedic (Indian) and Chinese medicinal systems amongst the oldest known.

According to the World Health Organisation (WHO), traditional medicine is “the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental, or societal imbalance and relying exclusively on practical experience and observation handed down from generation to generation whether verbally or in writing”.

Today, African traditional medicine is increasingly becoming modernised as a number of local and foreign researchers discover the value of traditional healing. Research has widely expanded into fields of pharmacology, phytochemistry, chemistry of natural products, and organic synthesis.

Furthermore, the medicinal plants in traditional medicine are increasingly being incorporated into primary health care and are provided in more modern pharmaceutical presentations such as tablets and capsules.

Traditional medicines play a part within a holistic view of health and well-being. They strive to redress imbalance and play a strong preventative role in community healthcare.

Buchu, also known as boegoe or ibuchu, is one of South Africa’s best-known medicinal plants. It is commonly used as an antiseptic and to cure digestive and urinary tract problems. Photo: Tony Rebelo and SANBI.
where the concepts of wellness and tradition are well understood.

The usage of traditional medicine is rapidly increasing, stimulated by HIV/AIDS and unemployment and is gaining popularity worldwide as an alternative and complementary therapies. However, there is currently no legislation that controls the safety, effectiveness and prescription of traditional medicines in South Africa. However, cases of hepatic and renal toxicity associated with their use and even some fatalities have been reported.

According to NRCATM (National Reference Centre for African Traditional Medicines), a number of countries in the WHO African Region have made important strides in the area of traditional medicine in terms of policies and regulations. Countries like Mali, Nigeria, Ghana, Uganda, Zambia, Zimbabwe, to mention a few, have made major breakthrough in the area of regulation of traditional medicine and have put in place legislative machinery to recognise and empower traditional medicine officially as part of the public health care delivery system. However, the majority of countries in the region are still trying to formulate the legal status of traditional medicine.

By contrast, in many oriental countries, traditional medicine is officially recognised. China, for example, is able to provide adequate and constantly improving health care coverage for its vast urban and rural population precisely because it harnesses the precious legacy of traditional medicine. Consequently, most African countries are unable to develop their own legacy of traditional medicine, and this is partly responsible for the current health care crisis in Africa.

South Africa has a remarkable botanical diversity with over 30 000 flowering plant species, which constitutes more or less one tenth of the global higher plant species. It has been estimated that between 3 000 and 4 000 plant species are used for their medicinal properties throughout the country, with Mander et al estimating that approximately 27 million South Africans use traditional medicines.

Approximately 16 000 harvesters, predominantly rural Black women, operate in KwaZulu-Natal where the majority of these species are found. The harvesters collect plants from the wild and supply these raw products in bulk, with little or no processing, to the urban informal street markets. Harvesting of medicinal plants often occurs under non-sustainable conditions.

There is often a trade-off between short term financial gains by the harvester and the long term ecological impact and availability of scarce plants for use by future generations. This has resulted in some species becoming extinct in the wild.
If harvested correctly, medicinal plants are a sustainable natural source of medicine and the cultivation and processing of these plants do not lead to the inevitable pollution associated with the industrial processes used to produce many Western drugs. Cultivation and selling of medicinal plants could also provide rural communities with a viable source of income. South Africa can take advantage of its vast plant species, through commercial processing of traditional medicinal plants which in turn can create job opportunities and alleviate poverty.

South Africa can also see a reduction in pharmaceutical imports. Purchase of pharmaceutical imports leads to a heavy loss of foreign currency, which a development policy focused on available local resources (mainly medicinal plants) would otherwise have prevented.

SABS has taken a step forward to ensure that these natural benefits continue to be acknowledged and embraced by South Africans regardless of the increasingly Westernised lifestyles. To date, SABS is in the process of establishing a committee on African Traditional medicines which will be tasked with developing relevant South African National Standard (SANS) on African Traditional Medicines. This committee will comprise balanced stakeholder representation from Traditional Health Practitioners, relevant government departments, consumers, manufactures, etc.

To enhance the effectiveness of this initiative, the SABS is developing a certification scheme for traditional medicines and other herbal medicines. These services would ensure that the sector is leveraged to the same level as other formal health practices in order to enjoy the same benefit by delivering the same peace of mind to consumers and further giving an assurance that the African Traditional Sector would continue to be sustainable regardless of the shifts to westernisation.

This initiative is the SABS’ tenacious urge to continue to support the South African industry regardless of size, socio-economic stature, but as long as matters of public health, safety and environmental concerns are impacted.

The ultimate objective is to integrate this initiative to an appropriate Regulatory System that incorporates and acknowledges Traditional Medicines into the country’s healthcare system and facilitates the creation of businesses based on indigenous knowledge as is envisaged by the Indigenous Knowledge Systems Policy adopted by the South African cabinet in 2004.
Seafood has traditionally been a popular part of the diet in many parts of the world and in some countries, constituted the main supply of animal protein. Today even more people turn to fish as a healthy alternative to red meat. The low fat content of many fish species is an extremely important aspect for health-conscious people particularly in affluent countries, where cardiovascular disease and mortality rates are high.

Seafood is well-known as low calorie foods and research continues into the nutritional effects on, for example, obesity and heart disease. In addition, by-products of marine food processing can be used in nutraceutical applications. Seafood can either be supplied fresh or frozen. Growth in frozen fish demand is gaining momentum in both developed and developing countries, overtaking demand in fresh fish.

The aquaculture industry contributes approximately R2 billion to the South African economy on an annual basis. The industry is generally divided into five categories: demersal, pelagic, rock lobster, line fishery, and ‘other’ including the abalone and squid fisheries. The demersal fishery (primarily deep-sea trawlers, kingklip, sole, snoek, horse mackerel and monkfish) is the most valuable sector of the South African fishing industry, generating over R1 billion per annum. The line fishery has existed for centuries and focuses primarily on harvesting tuna, snoek, kobo and various species of yellowtail. The ‘other’ category of fisheries includes squid-jigging and abalone fishery. Squid-jigging is a key segment in the Eastern Cape, bringing in R50 million per annum.

Abalone (known locally as perlemoen) remained relatively stable for many years and was the most lucrative species in the South African fishing industry bringing in over R25 million per annum prior 2008. Much of the catch was frozen and exported to the Far East, where abalone is considered a delicacy and commands a very high price. However due to the escalation in illegal fishing activity, bringing the resource under pressure, abalone fishery became suspended. Recently, the government has targeted the abalone industry as a priority industry for development, and has introduced the compulsory specification for live farmed abalone products. All live farmed abalone products offered for sale would have to comply with the requirements of the new compulsory specification (VC 9001) thus allowing the industry to come back to life. The NRCS will be responsible for the monitoring and testing of the product, to minimise the risks of transferring dangerous micro-organisms from abalone to consumers. It would also be responsible for issuing health guarantees for export purposes.
Aquaculture has a high growth potential should comprehensive support measures be implemented. It is projected that the South African aquaculture sector could grow ten times from its current size to over 90,000 tons worth R2.4 billion in 10-15 years’ time. Some subsectors within the industry are labour intensive, and could present employment opportunities in areas of processing, feeds, packaging, equipment and other production inputs, and services such as transport, security and research.

The increase in demand for fish is juxtaposed against the stagnant, if not declining fisheries production due to overfishing. Overfishing doesn’t only have an impact on the particular fish species that is overfished; it also has serious effects further up the food chain. One of the other results is that many fishermen have to work harder than ever to catch fewer and fewer fish, which leads to economic hardship and also puts their safety at risk. Overfishing can also lead to the collapse of entire fishing industries. The cod fishery off Newfoundland in Canada, for example, collapsed in 1992 and approximately 40,000 jobs were lost. The South African Government is committed to working in partnership with the aquaculture industry to achieve the maximum sustainable growth to meet the significant investment and employment opportunities to rural economic expectations.

The EU is the second largest export destination for South African seafood after SADC. This means that South Africa has to increasingly comply with stringent conditions set by the EU for fish exporting countries. This includes amongst others, adherence to animal standards and hygiene and public health requirements. Furthermore, imports to the EU are only permitted if they are from approved and listed production areas, vessels processing plants, freezer, and cold stores. For South Africa to retain its status with the EU, strong quality control throughout the value chain must be promoted.

Food safety considerations are crucial in the seafood sector, and higher standards of quality are demanded even as products are shipped greater distances around the world. It has been estimated that there are more than 80 million cases per annum of food-borne illnesses in the USA and that the cost of these illnesses is in the order of many billions of dollars per year. As a result, food safety is becoming an increasingly important issue. Consumers are ever more wary about their health and need to be assured that the foods they consume are safe. The economic losses due to spoilage are rarely quantified but a report by the US National Research Council Committee estimates that one-fourth of the world’s food supply is lost through microbial activity alone.

“To enhance efficiencies and promote safety and quality within the seafood value chain, the SABS is revising the standard that specifies requirements for the handling, preparation, processing, packaging, transportation, freezing, the storage and quality of frozen fish and marine molluscs which are intended for human consumption.”
Seafood is highly perishable and therefore needs proper handling and preservation if it is to have a long shelf life and retain a desirable quality and nutritional value. Apart from its health benefits, consumption of fish and shellfish may also cause diseases due to infection or intoxication. Some of the diseases have been specifically associated with consumption of seafood while others have been of more general nature.

While there is growing and strong evidence that the implementation of HACCP-based systems have contributed to improve fish safety and quality, there has been an increasing awareness of the importance of an integrated, multidisciplinary approach to food safety and quality throughout the entire food chain. Proper handling of fish between capture and delivery to the consumer is a crucial element in assuring final product quality. Good sanitation, method of handling as well as the holding time and temperature are all significant quality factors. With a few exceptions, fish are considered free of pathogenic bacteria of public health significance when first caught.

The presence of bacteria harmful to man generally indicates poor sanitation in handling and processing and the contamination is almost always of human or animal origin. Salmonellae have been found in fish washed with polluted water and from fish holds washed with polluted water. Contamination may take place when the fish are gutted at the quayside in a dirty harbour. A number of microbiological tests of fish and fish products are used by authorities to check that the microbiological status is satisfactory.

However, microbiological testing can be costly and time-consuming. Estimation of bacterial numbers in fish is frequently used to retrospectively assess microbiological quality or to assess the presumptive safety of the product. The number, size and nature of the samples greatly influence the results and even the most elaborate sampling cannot guarantee the safety of the product. However, it is still worthwhile; if substandard consignments are found, the psychological effect on the seller is high, especially if the consignment is deemed for export to countries that have established microbiological criteria. Fish which are caught or raised with more care often have superior taste and freshness.

To enhance efficiencies and promote safety and quality within the seafood value chain, the SABS is revising the standard that specifies requirements for the handling, preparation, processing, packaging, transportation, freezing, the storage and quality of frozen fish and marine molluscs which are intended for human consumption.

The standard also specifies requirements for factories and employees involved in the production. The revision was proposed by the NRCS on behalf of the fish industry and it is aimed at updating microbiological requirements, bringing certain requirements for fin fish and fin fish products in line with Codex and certain requirements for abalone in line with modern industry and trade requirements and correcting some errors in the standard.
Natural gases, such as shale, burn cleaner than coal or oil and, therefore, emit significantly lower levels of key pollutants such as carbon dioxide ($\text{CO}_2$), nitrogen oxides and sulphur dioxide.

Let alone the cleaner burning, vehicles making use of compressed natural gas (CNG) and liquefied natural gas (LNG) fuels provide a greener alternative to gasoline, diesel and propane. With more than one billion road vehicles worldwide, each contributing to pollution levels and with growing concerns about the security and availability of oil supplies, it is not surprising that natural gas vehicles are becoming more popular. This holds for developing countries as well but apparently not so for South Africa?

Since South Africa is not at the point where CNG and LNG is available commercially and since we have not even begun exploring for shale gas, we shall take a step back for a second to discuss what fracking entails.

In short, fracking involves four steps:

1. Vertical drilling commences till a target depth is reached, at which point the drill goes horizontal (Figure 1).
2. A perforating gun blows holes through the walls of the well, creating channels for the fracking fluid (a mixture of water, sand and chemicals) to reach the surrounding shale (Figure 2).
3. The fracking fluid is injected at high pressure to fracture the shale, while the sand in the fluid keeps the cracks open (Figure 3).
4. Part of the fluid flows back to the surface (the amount depends on the depth, horizontal distance and number of times a well is fractured). The natural gas then flows up through the well (Figure 4).

The fracking fluid is essential to efficiently and economically extract the gas as the sand and chemical additives help to eliminate bacteria from the water, lubricate the fracking process and prevent scale deposits that can build up on piping and equipment.

Fracking fluid consists of 1-8 million gallons of water and approximately 40 000 gallons of chemicals per fracture.

Fracking, therefore, requires large amounts of water to be brought in and introduces harmful chemicals (lead, uranium, mercury, ethylene glycol, radium, methanol, hydrochloric acid and formaldehyde) into the earth. Apart from the potential harm caused by these chemicals, South Africa is a semi-arid country and water is a very valuable commodity.

Between 30%-50% of the fracking fluid is recovered, the rest is left in the ground.
and is not biodegradable. That which is recovered is left in open air pits to evaporate, releasing harmful volatile organic compounds (VOC’s) into the atmosphere, creating contaminated air, acid rain and ground level ozone.3

Given all these negative aspects, Shell, as the driving force behind the idea, has tried to allay concerns by making the following commitments:

• Shell will not compete with the people of the Karoo for their water needs,
• Nobody will go short of fresh water because of Shell’s operations,
• Shell will disclose fracturing fluids at each drilling location, and
• Shell will conserve and recycle water.

The word of those expecting to profit hugely from fracking the Karoo might need to be taken with a pinch of salt but how about that of one of the most respected universities in the world? An MIT (Massachusetts Institute of Technology) study found that, “The environmental impacts of shale development are challenging but manageable... There has been concern that these fractures can also penetrate shallow freshwater zones and contaminate them with fracturing fluid, but there is no evidence that this is occurring. There is, however, evidence of natural gas migration into freshwater zones in some areas, most likely as a result of sub-standard well completion practices...”4

Due to fracking taking place well below groundwater aquifers,6 the greatest threat to groundwater is at depths less than 300m. The image below highlights how proper well construction prevents any leakages into groundwater.

In the Karoo, groundwater is found at about 30m, whereas fracking will take place at depths between 2 500m and 4 000m.

SABS and the NRCS will therefore play pivotal roles in any future fracking as SABS will ensure the highest standards are developed/adopted for the wells and their completion and the NRCS will regulate that these standards are followed.

Mineral Resources Minister Susan Shabangu stated that the first challenge is to confirm the presence of sufficient gas and whether it can be economically extracted. If sufficient gas is found and it can be economically extracted, environmental and health impact studies will follow to determine whether fracking can go ahead.

South Africa cannot continue to rely so heavily on coal for all her energy needs. As it is, the demand for energy often exceeds the supply and with coal being a non-renewable source of energy, South Africa will at some point in time need to find an alternative.

Perhaps shale gas is not the best alternative (that remains to be seen in any case) but it is one of the only alternatives we have and thus cannot be ignored.

Referring once more to the MIT study, some of the high-level findings are cited (some in part) and discussed in the South African context:

1. There are abundant supplies of natural gas in the world, and many of these supplies can be developed and produced at relatively low cost.
If this holds true for South Africa, we shall gain not only in terms of diversifying our energy supply but we will also gain financially.

2. Unlike other fossil fuels, natural gas plays a major role in most sectors of the modern economy and is clean and flexible. The role of natural gas in the world is likely to continue to expand under almost all circumstances, as a result of its availability, its utility and its comparatively low cost.

Should this hold true, can South Africa afford to once more lag behind the rest of the world?

3. In a carbon-constrained economy, the relative importance of natural gas is likely to increase even further, as it is one of the most cost-effective means by which to maintain energy supplies while reducing CO2 emissions.

Although South Africa has large coal deposits, they will not last forever. Further, as the role of natural gas continues to expand, we cannot wait for our coal to run out before we start developing the industry. We should be at the forefront of development to realise the maximum gains.

4. Natural gas provides a cost-effective bridge to a low-carbon future.

As a signatory to the Kyoto Protocol, South Africa is committed to reducing its greenhouse gas emissions. As a cost-effective means to achieving this, while simultaneously reducing our dependency on coal, fracking may well be the best solution.

5. Natural gas use in the transportation sector is likely to increase, with the primary benefit being reduced oil dependence. CNG will play a role, particularly for high-mileage fleets.

September 2012 saw South Africa’s largest fuel hike in 22 years and with CNG and LNG vehicles available and growing in popularity, the availability of abundant shale gas may help alleviate the dependency South Africans have on petrol and diesel road vehicles. This may also translate into lower transportation costs, which, in turn, will feed into numerous aspects of the economy.

6. International gas trade continues to grow in scope and scale but its economic, security and political significance is not yet adequately recognised as an important focus for [South African] energy concerns.
As the Industrial Policy Action Plan (IPAP) tries to develop and grow export industries, South Africa must not ignore the possible benefits of our potentially large shale gas deposits. Here is an industry in which trade is expanding, so apart from the benefits mentioned earlier (poverty alleviation, employment opportunities, developing new industries and increasing foreign direct investment), we can enter a growing market and benefit from exports of shale gas.

7. Past research, development, demonstration and deployment programmes supported with public funding have led to significant advances for natural gas supply and use.

Our government, therefore, has the opportunity to fund a growing industry, create jobs and to gain from improved natural gas supply and use.

Yes, fracking has negative consequences but for each of these, there is at least one positive consequence.

South Africans are reluctant to change and this, possibly more than anything, is the reason behind the resistance to an industry that could help solve some of South Africa’s most severe and long-standing problems. Fracking cannot be ignored and the industry will continue to grow and expand whether South Africa is a part of it or not.

Lastly, given that government is reviewing all aspects of fracking – before it gets the green light – should we still oppose it with such vigour even before the nine year process has kicked off?

Notes

1. Other estimates are between 2 and 5 million, depending on the depth, horizontal distance, and number of times a well is fractured.
2. Other estimates are between 15-80%, depending on the depth, horizontal distance, and number of times a well is fractured.
5. Groundwater aquifers occur at depths of below 1 000 feet (roughly 305m), whereas fracking takes place at depths as deep as 6 000 feet (1 829m). Water can be found at these depths but the deeper the water, the higher its salinity content, which renders the water unusable.

Karoo shale gas. © Shell South Africa Upstream B.V.
Globally, Table 1 shows that energy consumption will increase across the board and with South Africa already experiencing energy shortages, we must save it where we can or make use of alternative energy sources.

With an estimated 200 years of reserves (at current production levels), coal is South Africa’s primary energy source, providing 88% of commercial energy needs. With energy demands increasing and coal reserves diminishing, energy needs to be saved whenever possible.

Market trends suggest that the demand for energy resources will rise by 57% over the next 25 years. If energy prices rise dramatically due to increased demand and constrained supply, businesses could face the following scenarios:

- Reduced profits due to higher operating costs,
- Declined of energy-using products, and
- Loss of competitiveness in energy intensive businesses.

As it is, South Africa is dependent on coal for its energy and Eskom is struggling to meet the demand. Further, South Africans have seen electricity price hikes (let alone the fuel hikes) over the last few years and so imagine the situation we would find ourselves in if we fail to diversify into alternative sources of energy and into energy saving products.

The development of relevant standards is and will be instrumental in ameliorating the current situation and the predictions. One such standard is the recently published SANS 50001: Energy management systems, which was adopted as a South African National Standard (SANS).

The International Organization for Standardisation (ISO) estimates that this standard will have a positive impact on some 60% of the world’s energy use. It is aimed at providing public and private sector organisations with management strategies to increase energy efficiency, reduce costs and improve energy performance.

In conjunction, the ISO 14000 family (Environmental management) “provides practical tools for companies and organisations looking to identify and control their environmental impact and constantly improve their environmental performance.”

Individuals now stress the importance of the natural environment, with a recent US survey indicating, by ratio of six to one, strong willingness to pay more for products that save the environment. Shareholders also indicate a similar opinion, something that confirms that top priorities for corporate expenditures are to clean up the environment and to produce safer products, with larger dividends ranking third.

The desire of companies to get beyond regulatory compliance and to find cost-cutting opportunities motivates them to implement environmental management systems (EMSs) standards. On the other hand, environmental issues are highly regulated in many countries and there are pressures in some areas to use regulation as well as national and regional standards, to exclude goods and services on environmental grounds.

At the commercial level, environmentally related expectations and requirements of purchases can have a significant effect on purchasing decisions and can also affect trade. Therefore, as a result, the focus on developing relevant standards within the environmental and energy sector within the SABS to guide the industry has also
Table 1: World energy outlook (Forecast closing date: 1 January 2010)
World energy industry forecast

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<td>Energy consumption (kg oil equivalent per head)</td>
<td>2,005.5</td>
<td>2,049.3</td>
<td>2,059.1</td>
<td>2,010.3</td>
<td>2,031.8</td>
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<td>2.8</td>
<td>1.9</td>
<td>3.2</td>
<td>1.5</td>
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<td>17.6</td>
<td>18.3</td>
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<tr>
<td>% change</td>
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<td>3.9</td>
<td>4.8</td>
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(a) Sum of 60 countries covered by the Economist Intelligence Unit’s industry service. (b) Economist Intelligence Unit estimates. (c) Economist Intelligence Unit forecasts.
Source: Economist Intelligence Unit.
have been prioritised as depicted by Figure 1, showing standards that were developed in this sector over the past ten years.

EMSs motivate corporate executives to adopt an integrated system of EMSs and standards in the field by providing:

- Integrated programmes of pollution prevention that can save companies money by improving efficiency, reducing the costs of energy, materials, fines and penalties and that development and certification of EMSs can increase investor confidence in a company and provide it with a competitive advantage internationally.
- Adopting an EMS not only focuses on a company’s attention on negative environmental impacts but also ensures that responsibility is appropriately assigned for maintaining high environmental standards throughout the organisation.
- Many multinational companies adopt EMSs to satisfy customer pressures and to ensure that their suppliers operate in environmentally and socially responsible ways. Some do so in response to peer pressure as more corporations adopt EMSs and require their second and third tier suppliers to do the same. Growing interest among corporate stakeholders within and outside of the firm also drives more corporations to adopt EMSs and certify them.

As mentioned above, South Africa needs to save energy. If thermal ceiling insulation and high-performance window systems were introduced today into all new residential and commercial buildings, an astounding 3500 MW (approximately) of electricity could be saved by 2020 – almost two times the electricity generated by Koeberg (1800 MW).

This principle was the main precept underpinning the recent publication of SANS 204 – *Energy efficiency in buildings*. The above scenario can easily be achieved by introducing sensible and practical measures that save energy when new buildings are designed and built. By eventually making the three parts of this standard mandatory, government will achieve savings in energy and savings in the cost of producing that energy.

Under IPAP 3, ‘Green’ and energy-saving industries is a qualitatively new area of focus and under the SABS’s goal of supplying relevant standards, it is not surprising that SANS 204 – *Energy efficiency in buildings* is currently the Bureau’s best seller.

The spectrum of focus is much wider than just energy efficiency in buildings however, as can be seen in Figure 2.

There is a global drive for low carbon and environmental goods and services (LCEGS). As such, the SABS is directly involved in not only developing standards for the goods and services themselves but for the diagnostic and testing devices that are used to monitor and evaluate them as well. For
example, SANS 1307 – Domestic solar water heaters, which specifies the requirements of domestic solar water heating systems and SANS 10106 – The installation, maintenance, repair and replacement of domestic solar water heating systems, which covers the requirements for the installation, maintenance and repair of solar water heating systems for domestic use.

In 2003, micro and very small businesses provided more than 55% of total employment and 22% of South Africa’s GDP. In addition, small firms accounted for 16% of both national jobs and production and medium and large firms 26% of national jobs and 62% of production. Clearly, small and medium sized enterprises (SMEs) are a vital component of the economy and, therefore, can collectively exert significant pressures on the environment. However, SMEs face a number of obstacles in addressing these pressures including lack of resources, specific expertise, information and awareness.

The South African Government, therefore, has to create awareness programmes and provide the required expertise, if SMEs are to overcome these obstacles and help steer South Africa to a greener economy.

The public and private sectors cannot win without the consumer. It is up to the consumer to demand green and energy saving products, like those mentioned above, so that public and private corporations can do nothing else but supply them.
Notes


3 Taken from: Illumination Engineering Society of South Africa.


9 Department for Environment Food and Rural Affairs (defra). 2011. An Evidence-based study into the benefits of EMSs for SMEs.
Kwikot was established in 1903 and is a key player in the construction material's industry. The company is the market leader in domestic and industrial manufacturing of hot water storage tanks supplying mainly the plumbing merchants. The company has a world-class modern ISO 9001 accredited manufacturing facility situated in Benoni, South Africa.

The company manufactures domestic electric and solar water heaters. The solar water heaters were only introduced in July 2008 when the revised SANS 1307 was formalised. The manufacturing of solar water heaters started in 1980 and Kwikot has been exporting these products to Australia and Indonesia, prior to the Eskom solar Rebate programme. A growing segment of Kwikot's business is that of pressure control valves and valves used in electric water heater installations. The company does not focus on a single industry and continues to make stainless steel products for both the domestic and international market.

Kwikot was selected as the assessment company for the study because of its well-established brand and prolific implementation of national and international standards. It was the first company to manufacture electric water heaters to SANS 151 and was the first company to obtain the SABS 600kPa mark of approval.

Studies done have attested that the validity of standardisation is determined by its potential to improve company performance. It is evident that companies that have experienced increases in market share and sales volume, and who have saved on costs due to economies of scale have embarked on quality improvement processes. To provide economic benefits to society, standards must show a pronounced impact at the micro-level, through cost minimisation, profit maximisation, and customer satisfaction. This may lead to macro-economic benefits through various investments, contribution to GDP, increased market share, increased participation in local communities through revenue distribution and job creation.

Analysing industries or companies that apply standards to their value chain activities is particularly important to raise awareness of the importance of standards in creating company or industry value. The analysis can also help standards developers to identify gaps within the value chain where intervention in the form of standards can be done. In order to analyse the economic benefits that standards bring to the company, the International Organization for Standardisation (ISO) methodology which was developed in 2010, is applied. The methodology focuses on the microeconomic analysis of the activities of businesses or industries and provides a very useful insight on how to consider the multiple ways in which the adoption of standards can promote the development and growth of companies or sectors. In essence, the approach focuses on the value chain analysis, on the identification of key value drivers, that characterise a company or an industry.
Retailers, wholesalers, distributors, and plumbers make up the water heater distribution chain. Wholesalers, distributors and retailers account for 95% of water heater sales and these sales are to property owners, developers, remodelers, insurance companies and builders. Since the industry is highly regulated, only 5% of installations are done by home owner/DIY players, while the remaining 95% is installed by plumbers.

Value chain of hot water storage tanks/geysers

Product flows from the manufacturer through a distributor to a system installer. In some cases, large system integrators who sell in large volumes may buy directly from the manufacturers. Kwikot operates in the component manufacturing segments of the value chain. The key manufactured products in the manufacturing segment of the value chain are water heaters, electrical elements and geyser safety trays. The main activities in the distributor segments of the value chain are mainly to receive and store products. Contractors

And on the relation between the application of standards and the creation of value.

**Attitude of the Kwikot towards standardisation**

The success achieved by Kwikot as a prominent manufacturer of geysers was explained by its ability to supply trustworthy and safe products of high quality. All products are manufactured with a view to meeting the performance requirements of the respective product specifications. The company undertakes in house testing and R&D to ensure that products meet these requirements. ISO 9001 Quality Management System is in place to ensure that all procedures and processes are documented and can be measured and audited.

For the construction materials sector, standards are compulsory; therefore, the company has to have them to comply with regulations. The company has always operated within the standards environment. The standards used by the industry are not harmonised internationally, therefore the company’s exports destination is mainly the SADC region. Through its application of standards, the company is protected from harmful imports. Safety and quality are the main critical issues facing the industry and impacts from standards are high.

Since its establishment, the company’s attitude towards standards has been strategic and very proactive. The importance of meeting customer’s needs and of satisfying regulatory requirements has been the main driver that boosted the implementation and adoption of several standards and certifications by Kwikot.

Kwikot is well represented in the SABS technical committees and working groups for all products that are manufactured for the plumbing industry. Technical committees include TC 72, TC 75 & TC 1057. Working groups include WG 138G for plumbing products, WG 151, WG 1307, WG181, WG 198, and WG 10106.

The company believes that it is important for experienced industry players to have an active role in standard writing to ensure that dilution of standards does not occur. By having an earlier access to technical information, management believes that this will reduce any negative impacts that international alignments may bring.

**Value chain analysis**

ISO explains the value chain as “products that move through all the activities in a prescribed order, gaining value in some way at each stage of the chain.” Two chains have been sketched, the first chain illustrates the supply chain and the second illustrate production processes. These chains are useful in understanding the value chain of the hot water storage tanks.
are the last players in the value chain who mainly attains products from distributors, install and maintain the system. The hot water storage tanks/geysers require the largest variety of manufacturing processes due to the number of different parts and complexity of the process. The most commonly used manufacturing processes for the industry are machining, stamping, pressing and welding.

The key process stages in hot water storage tank/geyser

The value chain is outlined on the basis of the information provided by the company. The aim is to position the company within the industry value chain.

<table>
<thead>
<tr>
<th>Supporting Functions:</th>
<th>Primary Functions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management and Administration</td>
<td>Production/Operations</td>
</tr>
<tr>
<td>Finances</td>
<td>Outbound Logistics</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Distribution and after sales service</td>
</tr>
<tr>
<td>Research and Development</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
</tr>
<tr>
<td>Inbound logistics/Procurement</td>
<td></td>
</tr>
</tbody>
</table>

Key value Drivers

Key value drivers are capabilities that give companies advantages over their competitors. The key functions within the primary functions are the production, outbound logistics and after distribution and after sales services, whilst procurement is the most important support functions.

Kwikot value drivers:
- Production efficiency – The Company has reached economies of scale in their production due to its application of standards in production processes and high degrees of mechanisation.
- Service efficiency – Due to its efficiency in distribution of products, the company has gained a large market share and attained nationwide distribution network.
- Improved product reliability – Product reliabilities have improved between 10% and 15% in the last 5 years as a result of improved systems and application of ISO 9001.
- Time savings – Time saved time in processing and receiving orders from clients due to its rapid application of ISO 9001 guidelines.

Kwikot operates as a manufacturer within the value chain. Hence production/operations, marketing and sales as well as procurement are the focus of the assessment. The reason for the selection of these activities is mainly due to the fact that standards take a leading role in them.

Use of standards by Kwikot

The figure below lists the most important standards and regulations used by Kwikot. The standards are classified by product, process and compliance. Production and operations function make a significant use of standards and regulations intended for manufacturing practices and product performance. The ISO 9001 is the main international standard used by Management and production/operations business functions.
“Kwikot operates as a manufacturer within the value chain. Hence production/operations, marketing and sales as well as procurement are the focus of the assessment. The reason for the selection of these activities is mainly due to the fact that standards take a leading role in them.”

### Use of standards by the company

<table>
<thead>
<tr>
<th>Product</th>
<th>Process</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANS 1848 – for geyser drip trays</td>
<td>ISO 9001 – Quality management system</td>
<td>Installation compliance is achieved via installers and installation regulations</td>
</tr>
<tr>
<td>SANS 1307 – solar water heaters</td>
<td>SANS 198 – Functional control valves</td>
<td></td>
</tr>
<tr>
<td>SANS 514 – Resistance heating elements</td>
<td>SANS 151 – Electric water heaters</td>
<td></td>
</tr>
</tbody>
</table>

### Selection of operational indicators to measure the impacts of standards

### Key activities at Kwikot

- **Procurement/Inbound logistics:**
- **Production/Manufacturing:**
- **Outbound logistics:**
- **Distribution warranty & After sales services**

### Processes in key activities and standards used to support these processes, and indicators

<table>
<thead>
<tr>
<th>KEY ACTIVITY</th>
<th>PROCESSES</th>
<th>STANDARDS USED</th>
<th>INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound logistics/Procurement</td>
<td>Sales forecast</td>
<td>ISO 9001</td>
<td>Reduction in time spent concluding contracts with suppliers</td>
</tr>
<tr>
<td></td>
<td>Production Planning</td>
<td></td>
<td>Low cost of supplies due to large purchases</td>
</tr>
<tr>
<td></td>
<td>Generate purchase order for all components</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Raw materials purchase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Production &amp; Packaging</td>
<td>Receive the order</td>
<td>ISO 9001</td>
<td>High volume production due to efficiency of production processes as a result of mechanisation</td>
</tr>
<tr>
<td></td>
<td>Machining</td>
<td>SANS 1848</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stamping</td>
<td>SANS 1307</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Punching</td>
<td>SANS 514</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Welding</td>
<td>SANS 198</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shot blasting</td>
<td>SANS 151</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enamel coating</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Casement assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyurethane insulation moulding</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labelling and packaging for distribution</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The financial aspects of this refer to the EBIT calculations, which mean earnings before interest and taxation. The reason why we chose this method is because of its simplicity and its broad application.

### Economic benefits of standards

The financial aspects of this refer to the EBIT calculations, which mean earnings before interest and taxation. The reason why we chose this method is because of its simplicity and its broad application.

### Summary of the financial impacts of standards

<table>
<thead>
<tr>
<th>Selected business functions</th>
<th>Financial impact of standards on all BF’s (for 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound logistics/procurement</td>
<td>25.6%</td>
</tr>
<tr>
<td>Production/operations</td>
<td>17.6%</td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td>11.3%</td>
</tr>
<tr>
<td>Distribution Warranty and after sales services</td>
<td>1.14%</td>
</tr>
<tr>
<td>Total financial impact:</td>
<td>Total financial impact: 1.79%</td>
</tr>
</tbody>
</table>

### Kwikot’s economic benefits

<table>
<thead>
<tr>
<th>Selected business functions (BF)</th>
<th>Operational indicators (to measure the impact of standards)</th>
<th>Savings/Impacts</th>
<th>Financial impact for the operational indicator (savings apply for 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound logistics/Procurement</td>
<td>Inbound logistics personnel costs</td>
<td>Indicator 1: the reduction in time used to collect relevant information on suppliers’ products was 20%.</td>
<td>Personnel cost savings in inbound logistics are estimated to be at 25.6%.</td>
</tr>
<tr>
<td>Production</td>
<td>Production costs</td>
<td>Indicator 2: Production costs are reduced by 15% due to the application of standards in the production process</td>
<td>Production cost savings in the production/operations are estimated to be at 17.6%.</td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td>Outbound logistics Personnel costs</td>
<td>Indicator 3: time used to process orders is reduced by 10%.</td>
<td>Operation cost savings is estimated to be at 11.3%.</td>
</tr>
<tr>
<td>Distribution warranty and after sales services</td>
<td>Operational costs</td>
<td>Indicator 4: Product reliability has improved by between 10% and 15%.</td>
<td>Cost savings due to product reliability is estimated at 1.14%.</td>
</tr>
</tbody>
</table>
Due to the reliability and quality of Kwikot’s products, there is an increased recognition of the company by its customers. Customers have confidence in the consistency of the products; as a result the company has a nationwide distribution network of over 1 000 retailers who buys from them. The company’s relationship and clientele has increased significantly, with large corporate groups such as Massmart, Plumb-link, Illiad and Saffer forming the core of their client base. This group places a higher emphasis on SABS standards products and tend to look for reputable products. Furthermore, strict control measures in production, and improved methods have led to a reduction of field failures. These methods are documented and measured according to the company’s ISO 9001 quality management document.

Kwikot’s has been able to grow faster than the sector: its market share of South Africa’s total geyser sales has increased by more than 60% since 2003. Kwikot’s management believes that standards, and the company’s attitude to standards, have significantly contributed to its success. However, it is also important to consider that, whilst the implementation of standards has contributed to Kwikot’s performances and supported its impressive growth, the latter has primarily been from other factors such as increased household demand due to new housing developments and the market migration from copper low pressure geysers to newer technology high pressure geysers: factors that cannot be isolated from the pure impact of the use of standards.

The overall result showed a total financial impact which is 1.79% of the total company revenue. The total financial impact of standards is calculated on the organisational level by aggregating/consolidating the functional impacts. This percentage (1.79%) is based on results from selected business functions on which it was perceived that standards had the strongest impact.

At each function, it is apparent that a cost saving due to the use of standards has been made. Standards show a positive impact on costs, mostly as a result of the reduction of personnel costs in each of the selected functions. The strongest impacts can be seen in Inbound logistics. In inbound logistics, standards-based quality assurance is undertaken for all supplied materials before they are mixed and introduced into the production process. Technological improvements resulted in significant savings in production. When preparing sales contracts in outbound logistics, systematic reference is made to standards and key information from standards is available through IT-systems. The consistent use of standards resulted in lower rejection rate and increased reliability rate of products.
Determining the quantitative value of standards

Macro-economic analysis

The SABS is investigating the macro-economic benefits of standards. Our study builds on from eight national studies that have been conducted previously:

1. Germany in 2000 and 2010 (an update of the 2000 study): The 2010 study shows that standards have an economic benefit of 16.77 billion Euros a year. This equates to 0.72% of Germany’s GDP.

2. UK in 2005: Standards are associated with growth in labour productivity of 0.28% per annum or about 13% of the recorded growth in productivity between 1948 and 2002. Furthermore, the study finds that the contribution of standards to technological change is over 25%.

3. Australia in 2006: The study’s results indicate that a 1% increase in the stock of standards leads to a 0.17% increase in the level of TFP, although this estimate did range between 0.14 and 0.19.

4. Denmark in 2007: The Danish results show that the standards explain approximately 4% of Gross Value Added (GVA) growth in the aggregated analysis and 18% of GVA growth is explained by standards in the disaggregated analysis.

5. Canada in 2007: On average, the Canadians found that growth in the number of standards contributed 0.246 percentage points to growth in labour productivity and real GDP in each year. Thus, the results suggest that growth in the number of standards accounted for 17% of labour productivity growth and about 9% of growth in real GDP between 1981 and 2004.

6. France in 2009: The French found that the impact of standards on TFP (and consequently on the total growth of the French economy) averaged 0.81% per year between 1950 and 2007.

7. New Zealand in 2011: The results of this study show that over the last 30 years a 1% increase in the number of Standards in New Zealand could be related to a 0.1% increase in TFP. Therefore, a 1% increase in the number of Standards in New Zealand relates to a 0.056% increase in labour productivity.

As illustrated by various countries that have embarked on a macro-economic study of the value of standards; numerous variables are applicable in the quest to quantify the net benefit of standards. Due to the fact that the South African economy is labour intensive and according to the industrial and economic policies will remain so into the foreseeable future, modelling labour productivity seemed appropriate.

The results indicate that a one per cent increase in the number of standards results in labour productivity increasing by 0.24 per cent in the non-agricultural sectors and by 0.11 for the economy as a whole. Apart from the number of standards, the average capital-labour ratio and gross fixed capital formation both have significant impacts on labour productivity with the former having a negative and the latter a positive relationship.

More specifically, the following long-run relationship was found (according to the process of co-integration): (Figure 1)
For long-run equations, such as these, statistical inference is not reported because the sampling distributions of non-stationary data are non-standard and, therefore, statistical inference relying on asymptotic theory is invalidated.

Table 1 displays the output coefficients for the long-run co-integrated equation (non-agricultural sectors on the left hand side and the entire economy on the right hand side).

Table 1: Output coefficients for the long-run co-integrated equation

<table>
<thead>
<tr>
<th>Dependent variable: LN_LP</th>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN_NUM_STD</td>
<td>0.111690</td>
<td></td>
</tr>
<tr>
<td>LN_AVE_KL_RATIO</td>
<td>-0.351667</td>
<td></td>
</tr>
<tr>
<td>LN_GFCF</td>
<td>0.367408</td>
<td></td>
</tr>
<tr>
<td>LN_NUM_STD_DUM02</td>
<td>-0.022111</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>3.284624</td>
<td></td>
</tr>
</tbody>
</table>

The signs and magnitudes of the variables in the long-run equation do conform to a priori expectation. It is expected that an increase in the number of standards active in the South African economy (LN_NUM_STDS) will positively affect labour productivity, likewise for gross fixed capital formation (LN_GFCF). Not according to economic theory, the average capital labour ratio (LN_AVE_KL_RATIO) has a negative impact on labour productivity, however, in South Africa’s case, this makes sense for the following two reasons: firstly, providing additional capital equipment to a workforce with minimal education and skills, is unlikely to result in productivity increases; secondly, employing capital rather than labour is contrary to the interests of labour and, the conflict that could ensue from this would adversely affect productivity, as a consequence it is in everyone’s interest to ensure more labour is employed rather than capital. This finding is in line with the case study of Kwikot (published in this journal), who indicated that employing additional capital is unlikely to improve productivity.

The output presented in Table 1 suggests that a 1 per cent increase in the number of standards would lead to a 0.24 per cent increase in labour productivity (in the non-agricultural sectors), prior to 2002. After 2002, with a change in the coverage of employment, a 1 per cent increase in the number of standards would lead to a 0.21 per cent increase in labour productivity. A 1 per cent increase in gross fixed capital formation would lead to a 0.12 per cent increase in labour productivity.

In addition, Table 1 suggests that a 1 per cent increase in the number of standards would lead to a 0.11 per cent increase in labour productivity for the economy as a whole. A 1 per cent increase in the average capital labour ratio would lead to a 0.35 per cent decrease in labour productivity. A 1 per cent increase in gross fixed capital formation would lead to 0.37 per cent increase in labour productivity. From these results, it may appear as though standards do not have as large an effect in the agricultural sector as they do in the non-agricultural sectors.

The SABS chose to model labour productivity because it is a fundamental component of economic policy, contributing to economic growth and social development and hence is of paramount importance because:

- The measurement thereof helps explain the primary economic foundations necessary for economic growth.
- It is a useful measure, relating to the single most important factor of production.
- It is intuitively appealing.
- It is a key determinant of living standards (social development), measured as per capita income and is, therefore, of significant policy relevance.
Standards developed by the SABS directly contribute to South Africa’s national objectives.

Notes

1. The analysis and study will be published in full at a later stage.

2. Cointegration involves combing economic data series, through a linear combination, into a single series, which itself is stationary. In so doing, the process shows which variables affect labour productivity in the long run.

3. Labour productivity for the entire economy is not affected by the dum02 variable since it is not sourced from the SARB, who in 2002, changed the coverage of employment.
Consequently, in order to help alleviate this isolation and to assist in the provision of essential services, the SABS is in the process of adopting SANS 959/NRS1 052, Photovoltaic systems for use in individual homes, schools and clinics.

SANS 959/NRS1 052 was developed to standardise requirements for photovoltaic components and systems as applicable to the solar home systems programme, the schools electrification programme and the clinics electrification programme. These national programmes are envisaged to provide solar power to individual homes (up to a maximum of 200 W), schools and clinics (up to a maximum of 900 W) which would ordinarily be remote from the electricity grid. Due to the limited wattage, power from the system would be targeted at selected functions in the schools and clinics.

The solar home systems are purpose-designed primarily for remote locations and were designed for lowest initial capital cost consistent with a life expectancy of the order of 20 years for the photovoltaic array, at least 7 - 10 years for the regulator and inverter whereas other components, such as batteries and lamps, should be considered as consumable items with a much shorter life expectancy. The systems are based on a direct current (D.C.) power source of 12 V, which is inherently safer than an alternating current (a.c.) grid system of 230 V for example. Furthermore, the solar home system does not need to be earthed.

As with the solar home systems, the schools and clinic systems are purpose-designed for remote locations. These systems comply with certain requirements for powering end-user appliances such as: lighting, audio-visual equipment, computers, vaccine refrigerators, medical equipment and even photocopiers. With lowest initial capital cost in mind, these systems were designed to be modular and scalable in design and to last for periods as specified above. The distribution systems are a.c. 230 V based and comply with all the required norms and standards.

Not only will these systems help link up the more remote parts of South Africa, they will also help save electricity, while simultaneously contributing towards a greener economy.

The SABS is committed to a greener South Africa and with the National Energy Efficiency Strategy of March 2005, proposing a final energy demand reduction of 12% by 2015, 10% of which must come from the reduction in energy demanded from the residential sector, it is not surprising to learn that SABS has been active in this field.

The SABS has published SANS 941:2012, Energy efficiency of electrical and electronic apparatus. The publication of SANS 941 is a necessary step towards complying with the stipulated energy demand reduction requirements. Energy efficiency of household appliances and the application of equipment efficiency standards are of the most successful energy saving measures. Hence, the utilisation of this standard will contribute significantly to energy saving.

Amongst other things, the standard covers energy efficiency requirements and energy efficiency labelling, the introduction of which is to ensure that at the time of purchase, buyers have all the energy efficiency information at hand to make an informed choice. This standard, along with future energy efficiency standards and labels, will result in the elimination of inefficient appliance models on the market (through influencing consumers, manufacturers and importers) and green gas emissions.
Labelling will encompass the following:

- the name of the appliance, the name of the manufacturer and the number of the model;
- the appliance efficiency classification indicated by the black arrow in the label diagram;
- the average energy consumption per year;
- the average water consumption, where applicable;
- other relevant product information, for example noise levels and information applicable to the specific appliance;
- the number of the applicable standard; and
- the label directive.

As South Africa catches up to the technological rat race, digital television (TV) will soon render it necessary to make use of set-top boxes. To ensure that South Africans continue watching their favourite programmes, the Department of Communications and the SABS launched the Set-Top Box (STB) decoder standard (SANS 862:2012) for free-to-air digital terrestrial television at the inaugural ICT Indaba in June 2012.

The Department of Trade and Industry has identified the manufacturing of STBs as an area for local procurement and for growing the SMME sector. Therefore, publication of SANS 862 will not just drive

“Not only will these systems help link up the more remote parts of South Africa, they will also help save electricity, while simultaneously contributing towards a greener economy.”

A typical energy efficiency label
South Africa’s transition to digital terrestrial television but will also play an important role in strengthening economic growth in South Africa.

The standard is comprehensive in its requirements and has taken into account the importance of ensuring that the final set-top box is affordable, has low maintenance and includes an access control mechanism to prevent decoders from being used outside South Africa. Furthermore, government made a commitment in 2008 to establish a subsidy scheme to assist poorer households in purchasing a set-top box. It is anticipated that approximately 5-million South African households will receive subsidised assistance.

The set-top boxes and SANS 862 will ensure high definition, digital broadcasting is no longer going only for the privileged minority - it will be accessible to all South Africans who own a TV set. In addition, the installation of a set-top box will afford viewers an improved picture, improved sound and a wider selection of channels from which to choose.

Significantly, the announcement means that South Africa will now comply with the 2006 resolution of the Regional Radio Communication Conference (RRC-06), hosted by the International Telecommunications Union (ITU), stating that all countries in Europe, Africa, the Middle East and the Islamic Republic of Iran should migrate from analogue to digital broadcasting services by 2015.

“The SABS is committed to a greener South Africa and with the National Energy Efficiency Strategy of March 2005, proposing a final energy demand reduction of 12% by 2015, 10% of which must come from the reduction in energy demanded from the residential sector, it is not surprising to learn that SABS has been active in this field.”
The main reason for the migration is to provide additional capacity in the digital sphere that can be utilised to enhance services. Capacity is scarce and it is therefore necessary to make efficient use of the resources available for much needed telecommunications and broadcasting services.

As much as we all want to be connected to the world and even though cities offer several more opportunities than rural areas, some parts of South Africa are wild and naturally beautiful. With developments expanding, these parts of the country must be preserved and cherished if our children are to enjoy them as well. These areas offer us the chance to break away from the day-to-day slog and provide tranquil locations where we can relax and unwind.

Although relatively well developed, the tourism in South Africa still has the potential to achieve global status as one of the best places to visit. In order to encourage this, the National Tourism Service Excellence Requirements (SANS 1197) were launched by Deputy Minister of Tourism, Ms Tokozile Xasa. The requirements are aimed at improving and maintaining service levels at all service touch points in the tourism value chain. They are also aimed at guiding the sector to achieve the National Tourism Sector Strategy’s objective of positioning South Africa as one of the top 20 global tourism destinations.

Previously, the tourism value chain in South Africa did not have integrated standards and norms and this contributed negatively to service levels. Research conducted in 2009 identified inconsistencies on service levels and a poor culture of complaining for poor service as critical challenges in the sector. The requirements in SANS 1197 provide a yardstick by which all tourism service providers in the value chain can compare themselves.

The standard was developed by the SABS, on behalf of the tourism sector, and benchmarks against international standards. Tourists are thus ensured that a visit to South Africa meets global standards.

Note

1 National Rationalised Specifications (NRS). A NRS is not a national standard until it is adopted and published by the SABS under the Standards Act, 1993 (Act 29 of 1993).
Efficiency indicates the ability to achieve objectives by implementing processes to develop products or services of optimal quality with minimal waste, expense, or unnecessary effort. It helps organisations maximise profits and meet their goals, and is crucial for success in today’s challenging and competitive economic environment.

In today’s highly competitive and complex world, the issue of sustainability, viewed from an economic, environmental and societal perspective means that businesses must be more efficient across a wide range of measures and issues. It is of paramount importance for South Africa to create a competitive industry that will keep pace with the dramatic transition of the world economy, where increased globalisation and greater competition, accelerated rate of technological innovation, broader application of new technologies, reduced requirements of raw materials and unskilled labour have become new parameters that drive economic progress, sustainability and employment for all citizens of South Africa.

Standards are powerful tools for helping organisations capitalise their potential in the global marketplace. For example, by providing common specifications, standards enable products, services and technology from different vendors to fit together like pieces in a puzzle. They support interoperability and compatibility, providing a solid base for developing innovations and facilitating market access to new products.

In line with the theme, two of the breakaway sessions dealt with the theme of “energy efficiency”. The theme for session one was the final of a series of workshops held throughout the country in the past four months to raise awareness on the requirements of SANS 10400XA. SANS 10400XA and SANS 204 were both launched at the SABS Convention in 2011. At the time, it was realised that with the introduction of energy efficiency regulations for the building industry, it will require continuous efforts from the SABS to raise awareness on the existence of these standards – hence a second session at this year’s Convention.

The 3rd breakaway session addressed the launch of a series of South African National Standards for land development and geotechnical investigations on dolomite land. These ground-breaking standards – and a first of its kind in the world developed by a national standards body, will play an important role in future land development on geotechnical sensitive sites such as dolomite areas.

The Standards Convention was a great success and delegates left already looking forward to the next convention in 2013.

SANS 941 Energy efficiency for electrical and electronic apparatus require”. Session one was the final of a series of workshops held throughout the country in the past four months to raise awareness on the requirements of SANS 10400XA. SANS 10400XA and SANS 204 were both launched at the SABS Convention in 2011. At the time, it was realised that with the introduction of energy efficiency regulations for the building industry, it will require continuous efforts from the SABS to raise awareness on the existence of these standards – hence a second session at this year’s Convention.

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“Standards are powerful tools for helping organisations capitalise their potential in the global marketplace.”

Speakers at the 2012 SABS Standards Convention included amongst others (from left to right) Dr Bonakele Mehlomakhulu (CEO: SABS), Dr Torsten Bahke (Director: Deutsche Institut für Normung [DIN]), Dr Sadhvir Bissoon, (Executive: SABS Standards) and Ms Elis Lefteris, (CFO: SABS) who acted as programme director.

Delegates attending the 2012 SABS Standards Convention.
SABS APPROVED PRODUCTS, A COMBINATION OF QUALITY AND ASSURANCE.
Creating value for the future

1945 marked the founding of the South African Bureau of Standards (SABS). In the 66 years since then, the SABS has become a trusted independent stalwart in South African life, protecting consumers and the environment while facilitating access to foreign markets for local industry. The SABS has earned its status as the leading standardization body in Africa and one of the top ten certification bodies in the world.

The SABS, a wholly-owned subsidiary of the Department of Trade and Industry, is the national standards authority for South Africa. This entails developing and maintaining the database of more than 6500 South African National Standards (SANS), many of which address the environmental impact of products or industrial processes.

However, the SABS does far more than just develop standards. From its network of branch offices throughout South Africa, the SABS offers a range of conformity assessment services to industry, including product and systems certification, testing, consignment inspection, calibration and training. The SABS product certification Mark has, for decades, been a trusted and respected icon, reassuring South African consumers that products are safe, fit for purpose and comply with important minimum requirements.

In terms of systems certification, the SABS certifies to SANS, ISO, Occupational Health and Safety Assessment Scheme (OHSAS) and Hazard Analysis and Critical Control Point (HACCP) standards. Certifying that South African companies demonstrate the required professionalism, quality, safety and good governance stipulated by internationally recognised standards is critical to economic growth, enabling local companies to access global markets. SABS certification to ISO 14001 has also helped to ensure that South African industry operates with due regard for environmental quality and protection.

As a corporate citizen, the SABS fulfills and promotes the socio-economic imperatives of the South African government, through its Broad-Based Black Economic Empowerment (BBEEE) procedures and Corporate Social Investment initiatives.

As South Africa strives to grow the economy, create jobs and alleviate poverty while simultaneously limiting environmental impact, the SABS is set to play an increasingly important role in the country's success. The organisation has the assets to face this challenge: 66 years of accumulated standardization and conformity assessment experience, visionary leadership, 150 accomplished Test Auditors, 350 qualified Test Officers, a new leading-edge laboratory complex completed in 2011, and a footprint that covers South Africa and extends way beyond its borders. Markets, business models and the climate may all be changing.

But one thing is constant:
The trust and respect that the SABS has earned from industry and consumers, and the value that the company offers to the South African people.
The SABS has a number of food safety preventative schemes to fit a variety of food certification requirements.

These systems are essential in effectively controlling food risks and apply to any food company that operates in the food supply chain:

**HACCP (SANS 10330):** Hazard Analysis and Critical Control Point System certification ensures that all potential hazards at each stage of production, storage and distribution are analysed, identified and controlled.

**ISO 22000 Food Safety Management Systems:** This certification ensures that the company is not only HACCP compliant but also ensures that processes are continually improved in order to meet customer requirements.

In addition, we offer certification to:

**ISO 9001** - Quality Management Systems,

**ISO 14001** - Environmental Management Systems

**OHSAS 18001** - Occupational Health and Safety Systems

Do you know which one is better?
What are the benefits of Food Safety Certification?

- Maximises food safety;
- Determines where controls are critical in the company’s processes;
- Ensures traceability of products throughout the manufacturing process;
- Provides mechanisms for recalling products upon identification of false release;
- Effective management of hygiene and housekeeping;
- Ensures continual improvement in food safety standards;
- Enhances customer satisfaction.

We do.
Contact us

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