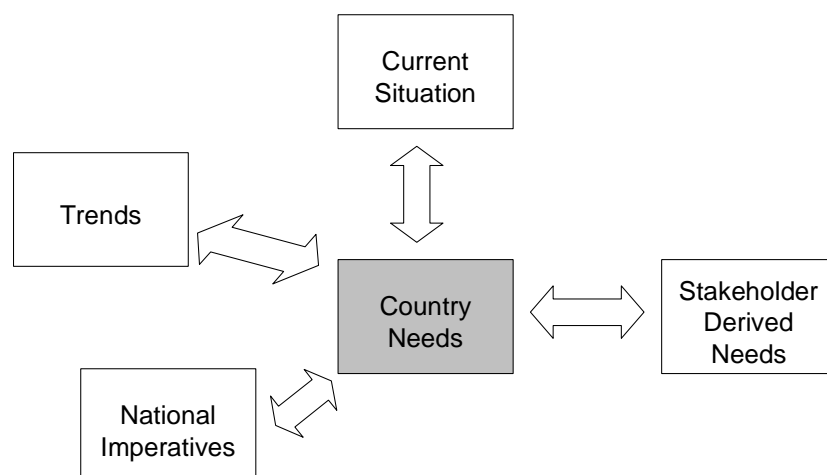


## 5 The needs of South Africa and the implications for SQAM

The needs of South Africa, within a regional and global context, from the SQAM infrastructure are the key drivers of this review. The country needs are used as the basis on which to define the “ideal” SQAM infrastructure for South Africa, against which the “current” situation and recommendations were then formulated, that will enhance the ability of the SQAM infrastructure to meet the needs of the country.

These needs were derived from consultant analysis, public hearings, interviews with specific stakeholders, as well as written responses to questions on the Terms of Reference for the South African SQAM review.

The analytical framework for determining the needs of South Africa is as follows:



The country needs are in fact a combination of the need for the country to respond to international trends in its environment, the needs derived from national imperatives as well as those of the various stakeholders. The current situation, in terms of country performance, also has an impact on the needs of the country.

The following table is a summary of the needs of South Africa, considered relevant to the SQAM environment, as described in detail in the section that follows:

**Table 4: Country needs and the implications for SQAM**

Country needs	Implications for SQAM
<p><b>International trends</b></p> <ul style="list-style-type: none"> <li>• Globalisation</li> <li>• Changing regulatory regimes.</li> <li>• Changes in corporate status of SQAM institutions.</li> <li>• Regulatory reform</li> <li>• Accountability to government by SQAM institutions</li> <li>• Closer interactions with industry.</li> <li>• Technological advances</li> </ul> <p><b>National imperatives</b></p> <ul style="list-style-type: none"> <li>• Job Creation</li> <li>• Regional Integration</li> <li>• National Human Resource Development</li> <li>• Development of SMMEs</li> <li>• Development of Indigenous Business</li> <li>• Adequate protection of the consumer</li> </ul>	<ul style="list-style-type: none"> <li>• Participation, credibility and accountability</li> <li>• Mutual Recognition Agreements (MRAs) – trade facilitation</li> <li>• Elimination of Technical Barriers to trade (TBTs)</li> <li>• Harmonisation</li> <li>• Global competitiveness</li> <li>• Value added services</li> <li>• Sectoral industry focus</li> <li>• Support for SADC Trade Agreement implementation</li> <li>• SMME focus</li> <li>• Technology diffusion</li> </ul>
<p><b>Stakeholder derived needs</b></p> <ul style="list-style-type: none"> <li>• <b>Strategic direction and coordination</b></li> <li>• <b>Management and control of technical regulations</b></li> <li>• <b>Business/ user orientation</b></li> <li>• <b>Relevance</b></li> <li>• <b>Funding optimisation</b></li> <li>• <b>Accountability and transparency</b></li> </ul>	<ul style="list-style-type: none"> <li>• Integrated strategic planning</li> <li>• Multiple stakeholder needs driven</li> <li>• WTO requirements</li> <li>• Accessable to domestic stakeholders</li> <li>• Efficient and cost effective</li> <li>• Responsive - Industry “pull” rather than technology “push”</li> <li>• International recognition and harmonisation</li> <li>• Technology transfer and diffusion</li> <li>• Industry involvement (management, technical)</li> <li>• Optimum positioning, no-conflict of interest and no duplication</li> <li>• Technical excellence</li> <li>• First and third world considerations</li> <li>• State of development</li> <li>• SMME focus</li> <li>• Appropriate levels and targeting</li> <li>• Appropriate management processes</li> <li>• Delivery oriented</li> <li>• Measurable and accountable</li> <li>• National interest, rounded service</li> <li>• System viewed as ethical and operating in public interest</li> <li>• Clear delineation between public interest and commercial activities</li> <li>• To government for public interest funding</li> <li>• To clients with operational rules and requirements fully transparent</li> <li>• To international peers as required</li> </ul>

The above summary is distilled from an analysis of the following:

- The need for the country to respond to international trends in its environment .
- The needs derived from national imperatives .
- The needs of the various stakeholders.

## **5.1 The need for South Africa to respond to international trends**

Throughout the world SQAM environments are generally being influenced by seven distinct factors. They are:

- Effects of globalisation on trade and SQAM institutions.
- Impacts of changing regulatory regimes.
- Changes in corporate status of SQAM institutions.
- Needs for better national co-ordination of technical regulations.
- Greater accountability to government by SQAM institutions.
- Closer interactions with industry. and
- Technological advances.

### **5.1.1 Globalisation**

Globalisation is affecting SQAM infrastructures to various degrees. In the United Kingdom and Australia considerable investment in the development of international recognition of relevant SQAM institutions has resulted in establishment of extensive networks of mutual recognition arrangements (MRAs) between their institutions and counterparts in foreign markets. This is considered necessary to support efforts to reduce technical barriers to trade. Future investment in MRA development in Australia and the United Kingdom is now based more on maintenance and incremental development of MRAs rather than fundamental establishment of such linkages. This is also the case in Sweden, Germany, New Zealand, Singapore, USA and the Netherlands. In Malaysia and Brazil, there are currently greater needs for investment in development of

MRA's and other international recognition. This is reflected in the objectives set by their relevant government agencies to develop such linkages internationally. South Africa's SQAM infrastructure bodies, in the main, have already achieved significant international recognition and they would sit more in the group of countries which now have maintenance and incremental expansion needs for their international recognition.

Another feature of globalisation is the significance of regional bodies, and their influences on the activities of SQAM institutions. A number of international MRAs are now being developed at the regional level both in government to government agreements and in MRAs amongst SQAM institutions. Regional bodies are also being used much more comprehensively to act on behalf of more global, international arrangements. Some regional bodies already have comprehensive recognition amongst their international peers. Australia, UK, the USA, Sweden, Netherlands, Malaysia, Singapore, Germany, and New Zealand have access to regional bodies for most of their infrastructure bodies, where regional MRAs, or support activities for MRAs at a regional level, are highly developed. Brazil, however, is an active contributor to a number of regional bodies, which are at earlier stages of development and not yet more broadly recognised. All countries, however, have highlighted a need to make considerable investments in their regional bodies.

In South Africa's case, it has been necessary for it to unilaterally seek recognition with regional bodies outside its own region, and this need is likely to remain until the SADC regional bodies are further developed. This has significant cost implications for South African infrastructure bodies both in terms of extending and maintaining their international recognition, and also for investing in the leadership roles its infrastructure bodies are expected to take in developing SADC capabilities.

Increasing levels of adoption of international standards is another significant globalisation effect on SQAM institutions. All countries visited highlighted their need to invest heavily in representation on regional and international standards bodies, to ensure appropriate consideration of the needs of industry and others in their economies to ensure development and adoption of international standards, suitable for their needs.

### **5.1.2 Impacts of changing regulatory regimes**

Changes in regulatory environments are affecting SQAM institutions in significant ways. In countries such as the United Kingdom, Australia, and New Zealand, regulatory regimes have, in the main, become less prescriptive over recent years. In the United Kingdom's case its regulatory regime is now largely influenced by the broader European Community regulatory

requirements, replacing previous domestic regulations. De-regulation in Australia and New Zealand has in some cases provided additional opportunities for involvement of SQAM institutions as industry codes of practice replace previous regulatory requirements, and independent recognition of compliance with such codes is sought through accreditation or certification.

In the case of Brazil, however, privatisation of various government activities has resulted in the formation of new regulatory bodies. These bodies will also need mechanisms for judging the performance of the bodies they are now required to regulate, and this provides some opportunities for increased use of accreditation and certification. The expected privatisation of a number of government activities in South Africa should present similar opportunities for the various players in the SQAM arena.

### **5.1.3 Changes in corporate status of SQAM institutions**

Most of the countries surveyed as part of this review have had significant changes over the past five years in the corporate status of one or more of their SQAM institutions. Some have moved out of government and many have been established as not-for-profit organisations. Others have been required to separate non-core, national activities from other commercial or market competing activities. Other changes have been predicted for some institutions. International codes of practice are now being developed for activities such as accreditation which, if accepted, may become more prescriptive on types of corporate status which may be acceptable for future international recognition of such bodies.

Many countries have SQAM institutions operating successfully outside government, but recognised through various measures as the government endorsed body for their national functions. This includes use of non-government bodies, such as accreditation bodies, for regulatory purposes. This has implications for South Africa, in regard to the need or otherwise for an Accreditation Act to support greater and wider recognition by Government for the accreditation activities, in their activities as regulators.

### **5.1.4 Need for better national co-ordination of technical regulations**

Some countries took the focussed view that reference to technical regulations was directed only at regulations involving measuring instruments. In these cases, legal metrology organisations were usually the developers of the regulations, either solely (eg for weighing instruments) or in conjunction with a regulatory authority (eg breathalysers for police use). In these cases, the

system was usually well-defined and alignment with international practices was limited to either regional conformity (eg in the EC) and/or conformity with OIML recommendations.

However, some countries took the broad view that technical regulations referred to any regulation involving a numerical specification (eg permissible pollutant discharges). In these cases, the developers of the regulations could come from a wide population (usually various government departments, not always with a coordinated approach even in the same economy), and the alignment with international practices became difficult to define. Comments about the needs for offices of regulatory review usually referred to this broader picture. Interestingly, few respondents referred to any necessity for measuring instrument regulations to pass through an office of regulatory review.

All countries surveyed as part of this review have experienced difficulties in coordinating technical regulations information. A number of countries, including South Africa, Australia, Brazil, USA and Germany have the additional complication of dealing with regulations at both federal and state (or provincial) level and many also have local government regulations to address.

Co-ordination of regulations at a regional level is also an issue in groupings such as the European Community and the Asia-Pacific Economic Co-operation (APEC). There is a guidance model emerging within APEC on good regulatory practice, and both the United Kingdom and Australia have processes to coordinate regulatory review and reform within their economies.

#### **5.1.5 Greater accountability to government by SQAM institutions**

Over the past few years SQAM institutions in Australia and the United Kingdom have been subjects of either whole of SQAM (Australia) or SQAM-by-SQAM review (UK) by government.

A number of SQAM institutions now also have the government's expectations of them specified in a memorandum of understanding or contract, and these may be tied to the funding received, and be reviewed against performance measures set by the governments concerned..

#### **5.1.6 Closer interactions with industry**

Levels of inputs from industry to the operations, policies and services of SQAM institutions varied from country to country, and from type of institution to institution. In standards development activities it appeared that their processes provided different levels and types of inputs to those in South Africa. In Malaysia and Brazil a large proportion of standards

development is devolved to industry associations, which has some drawbacks, but certainly ensures industry inputs are substantial. In the United Kingdom and Australia there is a greater use of sectoral boards or groups to advise on policy and priority setting for standards development activity in different industry groups.

In the operations of national measurement institutes in Brazil and Malaysia, the parent organisations (INMETRO) and SIRIM Bhd) are well known and respected throughout industry. The NMIs are therefore accepted under the larger “brand name” but recognition of their individual contribution is harder to achieve. The legal metrology requirements for traceability are very strong and comprehensive in Brazil, and strong where they exist in Malaysia. Hence the legal metrology regime can also have an influence on recognition of the role of the NMI.

In the UK, NPL is a well respected “brand name” in its own right and there is a long history of collaboration with industry, and industry panels are used comprehensively to evaluate priorities for government funded projects.

For relevance to the South African situation it might be judged that interaction between its NMI and industry is a two-way process. Industry needs to be receptive to the concepts and objectives of metrology (as appears to have been achieved by the National Confederation of Industry [CNI] in Brazil) or be compelled by the legal metrology regime as is the case also in Brazil and Malaysia. NMIs also need to be prepared to offer additional value-adding services, which provides them with opportunities to provide specific services internationally.

In Brazil there is an additional key entity that is not part of the SQAM landscape but has a substantial impact on it, namely the National Confederation of Industry (CNI). The power of CNI to influence Brazilian industry derives from its significant funding and its pervasive and highly integrated structure. A proportion of the payroll tax collected by the Brazilian Government is returned to CNI for its operations.

### **5.1.7 Technological advances**

Technological advances are having an impact on SQAM organisations in a variety of ways.

Advances in manufacturing, information and communication technologies are reducing lead times for new product development and time to market realisation. This is placing increased pressure for SQAM organisations to increase their flexibility and responsiveness to the market. There is pressure on SQAM organisations to reduce the time to develop new products, services, and the infrastructures that supports such services. In some areas of rapid technological

change, for example, information technology, the standards development processes lag so far behind that that the proprietary characteristics of the product become the “de facto” standard.

Communication technologies, such as video-conferencing enable organisations to transcend time and distance barriers. The international SQAM environment, which is characterised by international cooperation in many activities such as standards development, is increasingly benefiting from such technologies. Efficiency gains are being experienced as institutions from across the world participate in virtual development processes, without consideration for time and geographical constraints. The level of adoption of such technologies varies considerably between countries and organisations. In more developed countries such as the UK and Australia the rate of adoption is higher than in a developing nation such as South Africa.

The influence of the Internet is more pronounced in some organisations than others. For standards development organisations it is presenting new channels and opportunities for the sales and marketing of products. The downside for standards development organisations is, however, that the Internet inevitably shifts the competitive pattern towards price differentiation and more and more standards are becoming freely available on the Internet. This is forcing standards development organisations to re-think their fundamental business strategies.

For organisations active in the physical metrology field the impact is less pronounced due to the physical nature of test articles, etc. It is however facilitating inexpensive and fast exchange and dissemination of large quantities of data and information.

## **5.2 The country needs derived from national imperatives**

The needs derived from the national imperatives of South Africa are as follows:

- Job creation.
- Regional Integration.
- National Human Resource Development.
- Development of SMMEs.
- Development of Indigenous Business.
- Adequate protection of the consumer.

### **5.2.1 Job Creation**

Job creation has been identified as both a national and Presidential Imperative and is a function of many factors including economic growth, export led growth, SMME development and foreign direct investment. One of the primary purposes of the SQAM infrastructure should be to

facilitate the efficiency and competitiveness of South African industry, which is essential to growth and job creation. The following illustrates how the SQAM infrastructure can contribute:

- Development of specific industry sectors is seen as critical for increased economic growth. The SQAM infrastructure needs to be attuned to the various needs of industry sectors and investment in SQAM resources should be focussed on clearly prioritised industry sectors.
- The domestic industry needs to be protected from unfair competition. The emphasis should be on unfair competition, and not on protection of non-competitive domestic industries. The identification and removal of Technical Barriers to Trade (TBTs) is a challenge in the context of technical regulations in South Africa.
- Accreditation plays an important underpinning role for the conclusion of government to government Mutual Recognition Agreements (MRAs) which offer the guarantee that the importing country will accept test results from recognised bodies in South Africa and can have a significant impact on export success.
- There is, therefore, a need for the SQAM to be responsive to world developments in key South African export industries, and to take an active role to shape developments in these industries. Of specific importance is the need to influence developments in international forums for SQAM bodies, and to conclude agreements that will reduce barriers to trade. This also translates to the need for a coordinated approach between all role-players, with Government playing a valuable role in creating an integrated framework.
- If export led growth is achieved, the increasing trade volumes will place pressure on the SQAM infrastructure. Furthermore, if South Africa moves towards the higher value added industries (seen as critical to success) then the SQAM will need to be able to provide more sophisticated technical support.

### **5.2.2 Regional Integration**

South Africa has stated that regional integration is core to its current policy. The country has to play a delicate balancing act in that there is some sensitivity in the SADC region regarding South Africa's status as the major economic powerhouse of the region.

The Government has given specific consideration to the establishment of a free trade zone within SADC, and has signed the SADC Trade Protocol. There is a strong belief that, based on the world-wide phenomenon of regional integration (European Union, NAFTA, MERCOSUR

etc), economic integration is important to sub-Saharan Africa. Regional integration will facilitate trade and investment and in accessing foreign direct investment.

In SADC, there are a number of SQAM related issues as far as harmonisation of standards, legal metrology and trade metrology are concerned. For mutual confidence under a free trade environment it will be imperative that appropriate structures are developed to demonstrate compliance with technical regulations. South Africa currently possesses the majority of skills and will need to play a leadership role in the region with respect to SQAM activities. Critical success factors for SQAM are international linkages and the ability to satisfy WTO/TBT requirements. South Africa has strong international links in all the SQAM functional areas and as such will remain the international conduit for SADC. This ability needs to be developed and encouraged in the most appropriate fashion.

### **5.2.3 National Human Resource Development**

The development of human resources in South Africa is a key national imperative. The creation of a skilled human resource base is essential to address one of the key resource gaps present in South Africa. The role of the SQAM institutions, in this regard, is to ensure appropriate communication and training, as well as the provision of information to enable the communities to understand the role and importance of standards, quality, accreditation and metrology. The investment of the institutions in building priority technical skills in priority areas is considered essential and should facilitate future technology transfer throughout the community.

### **5.2.4 Development of SMMEs**

SMMEs are widely recognised as a potential engine for growth and the creation of employment opportunities.

The marketplace demands on products and services produced by SMMEs, in terms of quality and conformance, are no different to that demanded from large organisations. The ability of SMMEs to meet such demands is often constrained, and their needs in terms of support from SQAM are therefore quite different to those of large organisations. The SQAM institutions need to recognise such specific needs and develop unique mechanisms (for example bridging standards) to meet such needs. In essence the SQAM needs to ensure that it has the capacity and ability to deliver to SMMEs. A possible mechanism could be demand driven where SMMEs receive support for services from the SQAM.

### **5.2.5 Development of Indigenous Business**

South Africa has a large sector of its population active in what can best be described as “indigenous business”. This ranges from areas that produce items such as African art and curio items, indigenous medicines and other products, for example paints. Specific needs in this sector include standards which provide products with enhanced credibility, greater integration into the mainstream economy, and growing needs for intellectual property protection for indigenous art. Concern is being expressed that the creators of this art are being exploited from a trade and ownership perspective.

### **5.2.6 Adequate protection of the consumer and consumer environment**

The needs of consumers globally will continue to be based on the need for information and protection. Consumers rely on the SQAM to provide confidence and protection. New technologies create risks, which might potentially adversely affect consumers (e.g. the current debate on effects of electromagnetic emissions from cellular telephones). This is a generic need, which is present in all countries. A further need, which is starting to emerge, is the ability for a consumer to obtain redress after their rights have been violated.

The environment is the subject of increasing concern both in South Africa and internationally, as is the need to minimise possible health and safety risks to consumers of marketed products. This has an associated cost of regulation. Governments are increasingly aware of the cost of regulation and there needs to be a focus on creating regulations that produce the required outcomes with low cost. There also appears to be an emerging move in some markets to discriminate against countries with poor environmental standards.

## **5.3 Stakeholder derived needs**

The stakeholders of the SQAM environment can be placed into two categories.

- The SQAM “clients”, which include the Government, conformity assessment service providers, industry and consumers.
- The SQAM infrastructure, which consists of the primary official institutions namely the SABS, the NML, SANAS as well as conformity assessment service providers and the various organisations active in the quality arena.

The needs are different. The first group has requirements from the infrastructure and the second has needs which enable it to support the needs of its customers. An extensive analysis of the

needs of the various stakeholders indicated that the needs are often conflicting. Using the primary country needs, as identified, as the basis for reconciliation, the following stakeholder needs have been derived:

### **5.3.1 Strategic direction and coordination**

It is recognised that SQAM infrastructures evolve incrementally over time, and that the lead-time for the development of new, or change of existing activities is generally years and not months. For activities such as physical metrology, where development is research intensive and dependent on physical infrastructure, it is not unusual to have a planning horizon in excess of a decade. Although it is recognised that much of this planning can be done on an institutional basis, the value chain is such that any short-sightedness of any one institution could disrupt the effectiveness of the entire infrastructure. There is, therefore, a need for a certain level of coordination and coordinated long term strategic planning.

The extensive involvement of stakeholders is seen as key to the successful long term planning of individual SQAM institutions as well as their coordinated long-term strategy development.

### **5.3.2 Management and control of technical regulations**

South Africa is actively involved in international trade and is a signatory to the WTO/TBT agreement. South Africa needs an effective and efficient technical regulation system that takes into account its limited resources (financial and skills) and also supports the country in meeting its WTO/TBT obligations. The regulatory environment within South Africa needs to be harmonised at provincial and national level so that regulations do not create artificial trade barriers within the domestic market. This is very important since domestic market success is often the springboard of export success. It is an argument for some centralisation of the technical regulation system.

### **5.3.3 Business/ user orientation**

In meeting the needs of business, the following are considered to be key requirements

#### **a) Cost effective SQAM**

While SQAM provides business with many advantages (standards, conformity, traceability, international recognition etc) business needs to perceive value in order for it to participate, and especially in voluntary areas. SQAM needs to ensure that it provides its services in an efficient

and on a highly cost competitive basis. For certain SQAM related activities, such as conformity assessment services provided by certification bodies, laboratories and inspection bodies, business needs to have a choice between a variety of SQAM service providers, all operating in a level field competitive environment. Situations or structures that result in unfair competitive advantages should be identified and rectified.

#### **b) Responsive SQAM**

Business is operating in an increasingly dynamic environment. The SQAM infrastructure needs to regard business as their client and support it in its endeavours. This means the SQAM infrastructure needs to actively monitor the developments in their areas of focus and react rapidly and timeously in support of their clients. This means that SQAM needs to align itself with the needs of business (which are often rapidly changing). This extends into the areas of customer service and responsiveness.

#### **c) International recognition and harmonisation**

International credibility of South African business is dependent on a SQAM infrastructure, which is internationally recognised. Business needs the SQAM infrastructure to conclude mutual recognition agreements especially with respect to recognition of testing and certification results. The ability of the infrastructure to conclude such agreement is dependent on level of international recognition the infrastructure has managed to achieve. This means that South African institutions need to have technical excellence underpinning their activities and need to actively participate at peer level in international activities in their specific environment.

Local standards, which are harmonised with international standards, encourage global competitiveness. The creation of specific national standards can hinder national industrial development and departure from international standards should only be considered where specific local conditions prevail, or where no international standards exist.

#### **d) Technology diffusion**

Business needs to have access to advanced technology (e.g. as created through measurement science) that keeps pace with developments in their industries. The building and maintenance of technical excellence within the SQAM institutions and the diffusion of these good practices into industry will enhance industries' ability to compete and provide excellent products and services in an efficient manner.

**e) Industry involvement at both technical and strategic level**

It is essential that industry is involved at both the technical and strategic level of the SQAM infrastructure. At strategic level an industry sector focus is required, whereas at the technical level it is more process and product specific. The inclusion of industry as partners in the objectives of the SQAM institutions should be driven by the various SQAM institutions, who should make it attractive to industry to participate by “selling the benefits” of participation, and delivering on the needs identified by industry.

**f) Optimum positioning, no conflict of interest and no duplication**

The needs expressed relate to the various roles of the institutions especially with regard to what activities are in the national interest and what are solely commercial functions. Institutions should not be competing with one another, nor performing functions that belong elsewhere, and when government supports national interest activities, it should not be used as a basis for unfair competition.

The institutions need to be able to meet the requirements of their national interest roles with appropriate support and without contamination by other activities. It is recognised that there are a number of facilities and activities that are regarded as being in the national interest, or potentially in the national interest. The existence of these facilities cannot be justified solely in terms of commercial funding from facility use, and Government support is essential to maintain the availability of such activities in the national interest.

**g) Technical excellence**

Technical excellence is a critical success factor for an effective and efficient SQAM infrastructure. Institutions need to ensure that they build and maintain levels of science and technological expertise. These skills need to be transferred to industry and be recognised sufficiently to improve the international credibility of the infrastructure. Institutional arrangements need to be such that this building of technical excellence is readily facilitated by either Government investment or direct support of the beneficiaries of such developments.

**5.3.4 Relevance**

South Africa, being a developing nation, has specific socio-economic objectives. It is important that SQAM institutions consider both the developing and developed aspects of the economy. This relates to issues such as the development of “indigenous” business, resource constraints,

capacity building in the SADC region, the levels of education and literacy in the country, and an explicit focus on SMME development.

SQAM institutions need to ensure that they are geared to meet the special needs of SMME organisations. This needs to be a combination of both push and pull strategies. Push strategies need to focus on the benefits of SQAM services to the SMMEs and pull strategies should be aimed at providing SMMEs with support once they understand what they require from the infrastructure. It is possible to provide subsidised services to SMMEs but a better approach may be to allow matching grant assistance from Government, which is already in place in a number of areas.

### **5.3.5 Funding optimisation**

As mentioned earlier, South Africa is a country with many resource constraints. Government is unlikely to be a source of extensive funding for SQAM based on the fact that there are a wide number of competing priorities such as health, education, welfare, security etc. This means that SQAM needs to make clear the value of its contribution to the country in the context of national goals and objectives. Furthermore, the SQAM model needs to ensure that there is no artificial cross-subsidisation between institutions, or within institutions. This creates an inaccurate view of the financial situation and will encourage inappropriate institutional development.

South Africa needs to look carefully at what is funded in the national interest, as well as mechanisms which ensure proper allocation of funds to priority areas. This should be based on international best practice, and what is appropriate in terms of funding when considering national imperatives, and the current state of development of the SQAM infrastructure in South Africa. Proper strategic coordination and direction must be established if the infrastructure is to act as one to support South African needs. The funding mix of the institutions (government and commercial) needs to be carefully defined.

### **5.3.6 Accountability and transparency**

The activities of the various SQAM institutions need to be open and subject to scrutiny. They should not be open to capture by vested interests be they academic, business, government or community interests.

The SQAM system must be viewed as ethical and operating in the public interest. This can only be achieved through transparency, with mechanisms that ensure accountability to stakeholders, and an effective and efficient trade and legal metrology system. The latter is of specific

importance for the consumer as well as industry. Consumers should be confident that their health and safety, as well as the environment is adequately protected. Industry should be confident that they are protected against unscrupulous importers and producers who do not comply with technical regulations.

The need for international involvement of the SQAM institutions has been highlighted, and the achievement of credibility is closely associated with accountability of their credibility and competence to their respective international peers.

#### **5.4 Uniqueness of South African needs**

When assessing the needs of South Africa as country, particular notice needs to be taken of those issues that make South Africa different to the rest of the world. These differences need to be taken into account by all stakeholders in the SQAM environment, as follows:

- The South African economy has both first and third world components. In order to meet its goals both these components will need to be developed and enhanced.
- Much of South African industry remains inwardly focused and has yet to face up to the realities of international competition. An intense focus on competitiveness as well as an external market orientation needs to be attained. While pockets of excellence exist, most organisations are not aware of, or focused on, global market opportunities.
- South Africa operates in a regional context where many of the countries are far behind in state of development, availability of resources, and the ability to meet the requirements of global trade. South Africa needs to establish a position to play a leadership role in the region without being seen to be taking control of the region.
- The South Africa economy, through necessity, is undergoing the transition from a purely commodity based economy to a value-added producer. Historically, South Africa exported large quantities of commodities to be beneficiated and further processed in other countries. This resulted in South Africa receiving lower income than its potential, and with downstream employment being created in other countries. This shift will have an impact on the SQAM infrastructure in that it will be required to support more sophisticated industries.
- The South African economy is also undergoing a shift from being highly regulated to a more competitive environment through the privatisation of many formerly state owned enterprises as well as the deregulation of specific markets. This will place new demands on the infrastructure and new regulations may be required for many privatised activities.