3.1 Electronic Communications Sector

3.1.1 Legislative and policy environment

The 1996 White Paper on Telecommunications envisioned a policy environment in which the telecommunications sector balances the provision of basic universal service to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy. The White Paper sought to, amongst other things, provide for a new market structure that orientates the sector towards accelerated development and universal service, as well as take into account technological and international trends.

The market structure entailed a period of exclusivity for Telkom. After this exclusivity period, the White Paper envisaged an environment whereby various telecommunications market segments would be liberalised in a phased process, put into motion and overseen by the Regulator. This policy provision enabled the licensing of the Second National Operator in the fixed-line market, and three mobile operators. In terms of the ownership, investment and financing, the state retained a majority shareholding in Telkom and shareholding in Vodacom. The Altech Judgement in 2008 cleared the way for Value Added Network Service (VANS) licencees to self-provide their own telecommunications network, facilities and services.

A Telecommunications Regulator called the South African Telecommunications Regulatory Authority (SATRA) and the Universal Service and Access Agency of South Africa (USAASA) were set up. SATRA was established to regulate telecommunications in the public interest and also manage the radio frequency spectrum with the exception of the broadcasting services frequency bands which were then administered by the Independent Broadcasting Authority (IBA). In 2000, SATRA and the IBA merged, and the new regulator, ICASA, was established.

The White Paper sought to address issues of transformation in the sector through the economic empowerment of historically disadvantaged individuals, to ensure that meaningful participation in all aspects of productive economic activity was achieved. Regulations published by ICASA, the establishment of a new licensing framework, as well as the promulgation of the principal legislation on Broad-Based Black Economic Empowerment gave effect to the policy imperatives of broadening equity ownership, employee share-ownership schemes, creating opportunities for meaningful employment and management, the effective promotion of entrepreneurship, licensing opportunities and procurement and set-aside policies.

The issue of universal access and universal service were fundamental policy issues addressed by the White Paper on Telecommunications. In this regard, the creation of USAASA was aimed at, inter alia, providing access points for communications infrastructure and services. In addition, the White Paper also sought to address the manner in which the cost of services is determined through tariff regulation, as this aspect was critical to the achievement of universal service. The key requirement was to create a balance between affordability and the need to expand and upgrade the network.

In terms of legislative reforms, a new Telecommunications Act was promulgated in 1996. The Act provided a framework whereby the legal situation with regard to licences and supplementary agreements issued or made prior to the introduction of new telecommunications legislation was dealt with; the new licensing regime of operators was introduced; the integration of TBVC areas and the question of the interception of
telecommunications call traffic was addressed. The Electronic Communications Act of 2005 repealed the Telecommunications Act. As convergence legislation, it allowed for a separation of policy-making from that of regulation; allowed for more competition through various regulations including on facilities leasing, interconnection and the rapid rollout of ICT infrastructure and spectrum management.

3.1.2 Growth and outlook

The ICT sector in South Africa is characterised by an exponential growth of the mobile sector, with a penetration rate of about 136%. Statistics South Africa reports that the contribution of the ICT sector to GDP in 2012 was 6%, and that the telecommunications sector market alone had grown to more than R179 billion in 2011. According to Stats South Africa, the 2011 Census survey shows that 89% of the 14.5 million households in the country have access to mobile phones, whilst 75% of households have access to a television set and a further 68% have access to a radio. However, penetration of radio is much higher, reaching nearly 90% of the population. The Census survey also reveals that only 35% of households have access to the internet and only 15% have access to a landline phone.

These statistics underscore the startling growth of the ICT sector, driven in the main by the mobile sector, while fixed line continues to decline. But they also show the gaps that persist, particularly in relation to internet access.

| Table 13: Summary of ICT access in South Africa from Census 2012 and RIA ICT Survey data 2011-12 |
|-------------------------------------------------|-------------------------------------------------|
| **Census data**                                  | **RIA Survey data**                             |
| **2006**                                        | **2011**                                        | **2007**                                        | **2011-12**                                    |
| Households with fixed line                      | 18.5%                                          | 14.6%                                          | 18.2%                                          | 18.0%                                          |
| Households with computer                        | 16.6%                                          | 21.4%                                          | 14.8%                                          | 24.5%                                          |
| Households with radio                           | 76.5%                                          | 67.5%                                          | 77.7%                                          | 62.3%                                          |
| Households with television                      | 65.5%                                          | 74.5%                                          | 71.1%                                          | 78.2%                                          |
| Households with internet                        | 35.2%                                          | 4.8% (household)                               | 16.0% (individual)                             | 19.7% (household)                              | 33.7% (individual)                             |
| Cellphone ownership (household)                 | 72.7%                                          | 88.9%                                          | 62.1%                                          | 94.2%                                          |

**Source:** RIA ICT Survey Data 2011-12

The role that ICTs play in the broader society is underscored by the 2010 World Bank study that found that for every 10% increase in broadband penetration in emerging markets, there is a 1.38% increase in GDP growth.

Therefore the ability of South Africa to compete in the global economy is dependent, to a large extent, on the state of its ICT sector and in particular the country’s ability to facilitate and grow the sector to meet its citizens’ needs for affordable, accessible broadband. The rapid deployment of fast and affordable broadband infrastructure remains a powerful lever to create an internationally competitive knowledge economy, improve productivity and expand access to new markets. According to the RIA ICT Survey data 2011-2012, about 22% of internet users access the internet via ADSL but more people access it using their mobile devices.
In the current regulatory environment, BMI-T forecasts the fixed and fixed wireless connection rate to decline by 2.4%, whereas mobile connections are expected to grow by 6.2%. The continued reduction in fixed-line penetration, the saturating mobile market and the drop in data prices due to increased competition, as well as the sustained economic downturn have had an effect on growth in the past few years.

Telecoms sector revenue grew from R8.2bn in 1993 to R157bn in 2012 and is expected to grow to R187bn in 2016. In this scenario, the Compounded Average Growth Rate (CAGR) is expected to be 4.6% from 2010 to 2016, with the Public Switched Telephone Network (PSTN) fixed-line and value-added services growing at only 1.1% as opposed to the mobile cellular growth of 5.9%.

<table>
<thead>
<tr>
<th>Table 4</th>
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<tr>
<td><strong>Telecommunications services revenue forecast overview, base scenario, 2010 – 2016 (Rm)</strong></td>
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<tr>
<td>-----------------------------------------------</td>
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<tr>
<td><strong>Total mobile cellular services</strong></td>
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<td><strong>Total PSTN fixed-line and VAS</strong></td>
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<td><strong>Alternative voice services</strong></td>
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<td><strong>Total</strong></td>
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</table>

Source: BMI-T, 2013. Alternative voice services (Traditional LCR, VoIP, Hybrid VoIP / LCR) - base scenario

Despite the emergence of a sophisticated telecommunications market in South Africa in the democratic era, the central policy issue that has not been adequately addressed is that of achieving affordable access to reliable and robust communications infrastructure and services. Various research studies show that the ICT access gap is growing, particularly between rural and urban areas, as well as between those with higher and lower incomes. South Africa has effectively lost its status as continental leader in terms of the global ranking indices produced by the World Economic Forum and the International Telecommunication Union.

For instance, the Network Readiness Index (NRI) of the World Economic Forum, 2013, shows that South Africa currently ranks 70th in the world, out of a total of 144 countries. This study measures a country’s propensity to exploit opportunities offered by ICT, and the impact of ICT on the competitiveness of nations. South Africa continues to trail behind other comparator countries such as Chile, Turkey and Poland.

Despite the ICT sector’s phenomenal growth in the past two decades, the cost of communication remains relatively high. According to Gilwald, Moyo & Stork (2013), when compared with other African countries, mobile and fixed retail prices are in most cases ten times higher. The table below shows South African prepaid mobile prices in relation to the 10 cheapest countries in Africa, based on the Organisation for Economic Co-operation and Development (OECD) 2010 prepaid low-user mobile basket (40 calls per month prepaid).
According to the Telecom Regulatory Environment (TRE) assessment method, which assesses the effectiveness of sector regulation through stakeholder perception of seven regulatory dimensions, which include market entry, quality of service, anti-competitive practices and universal service obligations, South Africa scores only slightly better than one of the other 11 countries, Ethiopia. A TRE assessment probes the perceptions of stakeholders of the entire policy and regulatory environment, not the regulator per se.

The shifts in perception of the efficiency of the regulatory environment in South Africa are:

Source: RIA TRE assessment data 2011-12
3.2 Broadcasting services sector

3.2.1 Legislative and policy environment

The transformation of broadcasting in South Africa from the state controlled apartheid system to an independently regulated sector underpinned by the constitutional imperative of freedom of expression began even before the 1994 democratic elections, with the promulgation of the Independent Broadcasting Act and the appointment of a publicly nominated board of the South African Broadcasting Corporation (SABC) in 1993.

The Independent Broadcasting Authority (IBA) was appointed in 1994 and initiated, in line with its founding legislation, the Triple Inquiry into the Protection and Viability of the Public Broadcaster, Cross Media Control, and Local Content. This inquiry provided the basis for the initial re-regulation of the broadcasting sector and licensing of new community and private services. The 1998 White Paper on Broadcasting focused on extending the initial reforms through the development of a national policy and clearly defining the roles and responsibilities of parliament, the executive, the independent regulator and the broadcasting sector. The principles and approaches outlined in the White Paper are crystallised in the Broadcasting Act, no 4 of 1999, the Independent Communications Authority of South Africa Act, no 13 of 2000 and the Electronic Communications Act, no 36 of 2005.

The policy framework and related legislation emphasises the central importance of the constitution in developing the regulatory approach to the sector.

“The South African constitution guarantees a number of fundamental rights, which should be taken into account in determining broadcasting policy and its regulation. Amongst these are:

- Freedom of expression for all South Africans
- The right to equality
- The equality of all languages
- The multi-cultural nature of SA and the right of all South Africans to the promotion of their cultures
- Choice and diversity”

Within this context, the 1998 broadcasting policy framework identifies key public interest values such as universal access, diversity, equality and independence and it outlines how broadcasting services are collectively responsible for meeting these.

The policy and laws set out, among other things:

- Specific provisions to ensure fair competition between services. The EC Act in particular emphasises the role of the regulator in relation to that of competition authorities and set out processes to be followed by ICASA in determining ex-ante provisions.
- Clarity on the role of the SABC as the public broadcaster, the introduction of a Charter for Public Broadcasting and provisions for funding the public mandate via licence fees, cross-subsidisation of public services by a public commercial wing and government funding.
- Rules on ownership and control of broadcasting services to limit media concentration and promote diversity and broad-based black economic empowerment.
3.2.2 Growth and Outlook

There has been considerable growth in the number of services available in most areas, particularly in the community broadcasting area. Other significant changes are the issuing of licences by ICASA for all SABC services (which prior to the Broadcasting Act operated under grandfathered licences and did not have detailed conditions) and for satellite subscription services. The SABC is licensed to offer three analogue television channels. One of the channels is licensed as a commercial service. Two additional regional public television services licences were issued to the SABC in 2005. The reach of SABC has been continuously extended. More channels will be launched on the DTT. SABC launched a 24-hour news service on the DSTV platform with a promise that the news service will be available free-to-air on the launch of DTT. The SABC operates 18 radio stations including 15 public radio stations and 3 public commercial services. Radio XK broadcasting in in!Xu and KHWE launched in 2004. The SABC radio services cover all official languages. There is one free-to-air commercial terrestrial broadcaster that is privately owned, etv. The number of channels operated by etv will increase with the introduction of DTT. Two free-to-air Direct-to-Home (DTH) services were launched in 2013. There is one terrestrial subscription television service and two satellite subscription services. 15 commercial radio services operate in SA.

3.2.3 Penetration and uptake

In terms of reach, 6.16 million (12.3% of the population) do not have access to Radio service, 7.38 million people (14.7% of the population) do not have access to Analogue Television services, 4.15 million people (8.3% of the population) do not have access to any terrestrial broadcasting services. A total of 670 526 people (1.34% of the population) only have access to one television service.

Substantial progress has been made with respect to expanding the analogue terrestrial television broadcast network from 60% of the ‘population reach’ in 1998 to over 91.7% population coverage in 2012. In the same year the public broadcaster’s SABC 1 and SABC 2 were reported to each have population coverage of 91.2% and 92.5%, respectively with SABC 3 having 82.1% coverage. There remains a segment of the population which does not have access to television but this has been substantially reduced from 40% of population in 1998 (as reported in the White Paper) to less than 10% population coverage in 2012.
With respect to sound broadcasting, population coverage of public broadcaster’s radio station varies from the highs of 80% for SAFM, Radio 2000 (both English medium radio stations), and RSG (Afrikaans medium with national coverage) radio stations to the lows of regionally based Good Hope (English) and Tru FM (IsiXhosa) at 8% and 2%, respectively. Ukhosi FM with a total population coverage of 45% attracts the largest audience of all SABC radio stations although it has a lower overall population coverage. This is possible given its traditional target audience of IsiZulu speakers (76% IsiZulu speaking population coverage) and their geographic spread around the provinces of KZN, Gauteng, Mpumalanga, Eastern Cape and the Free State. This pattern repeats itself with other language groups’ radio stations.

Data from StatSA Census 2011 was utilised to get a snapshot of households’ access to various household goods as shown in the figure below. The national radio penetration of households stands at 67.5% of total households and that of television at 74.5% of households. The Free State has the highest levels of radio penetration at 76.4% of households. The Eastern Cape, Northern Cape and Limpopo have the lowest levels of radio penetration at 61.1%, 61.5% and 62.1% each, respectively.

The Western Cape, Gauteng and Free Sate have the highest levels of television penetration of households with 85.5%, 80.8% and 78.2% each, respectively. The Eastern Cape and KwaZulu-Natal have the lowest levels of household television penetration with 63.2% and 67%, respectively. For Limpopo, North West, Northern Cape and Mpumalanga the household television penetration falls within the ranges of 70% and 75%.

Given the geographic coverage of broadcasting services and households’ access to radio and television sets, it is likely that a lack of penetration, may be due to a combination of factors.
3.2.3.1 Audiences

3.2.3.1.1 Television

Viewership of television has grown significantly since the White Paper was finalised in 1998. In the past ten years alone, viewership has increased from 68% of the adult population in 2002 to 92% of all adults (over the past seven days) in June 2013 according to the South African Advertising and Research Foundation (SAARF). SABC 1 has the most viewers at 27.7 million. It was viewed by 78.8% of adult viewers in 2012 compared to less than 60% in 1998. SABC 2 has 24.8 million viewers and was viewed by 71% of the adult audience in 2012 (compared to 50% in 1998/1999), e.tv has 23.95 million viewers (68.6% of viewers) and SABC 3 reaches 21 million viewers. Community television has mirrored this growth and currently sits with an average weekly reach of 8.5%.

Satellite subscription television service, DSTV, has grown its audiences significantly since 1998 – from 2% in 1998/1999 to 28% of the adult population in 2012 (9.9 million viewers). This increase has been driven at least in part by the subscription service introducing a range of cheaper bouquets over the past five years.

The growth in viewership of DSTV services is obviously matched by an increase in subscriber numbers. The figure below shows the dramatic growth in subscribers for DSTV since 2005.

South African households’ viewing patterns have changed over the past 15 years. For example, South African content is increasingly popular and demanded by audiences and thus a commercial rather than only regulatory imperative for broadcasters. This has led to multi-channel satellite services introducing more local channels over and above those required by South African content regulations (such as Mzansi and eKasi channels).

3.2.3.1.2 Radio

Total radio listenership has in the meantime remained relatively stable – with All Media Products Survey (AMPS) recording a past seven day listenership of 91.8% in 2002 and 92.6% in December 2012. The listenership figures however for individual services has
increased over time as SABC public radio stations, in particular, have extended their coverage areas.

Unlike television, listenership figures for radio are not directly comparable as this is inevitably affected by their licensed coverage areas. SABC radio stations have the most extensive coverage - with Radio Sonder Grense, SAFM and Radio 2000 covering the largest areas in terms of their licence conditions. The public commercial stations, Metro FM and Radio 5, are the only commercial radio services licensed to broadcast in all major urban areas. These stations therefore obviously have higher listenership than private commercial stations (which cover cities or specific provincial areas) and community stations (which each are licensed to cover specific local communities). Over the 1998 to 2012 period Ukhozi FM has consistently had the most number of adult listeners followed by Metro FM and then Umhlobo Wenene.

While radio listenership has remained largely consistent, individual stations audiences have fluctuated. Audiences for the community radio sector as a whole has in particular shown growth – increasing its share of audience from about 16% in 2005 to 25% in June 2013 (AMPS). This reflects the growth in the number of licensed community radio stations with the introduction in the ECA of the less stringent class registration process (the number of stations licensed has doubled over the period).

3.2.4 Revenue

The total advertising spend (adspend) across the media (including adspend on print, radio, television, new media, and outdoor) grew by about 355% from 1999 to 2012. Adspend on television increased from about R2.8bn in 1999 to R16.2bn in 2012, while spend on radio over the same period grew from R916m to R5.2bn. Adspend on the internet was R832m in 2012 from 0 in 1999.

Of particular interest is the change in advertising spending patterns over the period (see figure below) Whereas print media had the biggest share of adspend in 1999 (44% share of total), television now has the largest share. Radio’s share has also grown over the period.

It is also important to compare the share of total television adspend of the different broadcasters. While SABC has the largest share of total television adspend, its share has decreased over the period. E.tv obviously had an insignificant share in 1999 given that it had just launched. It is nevertheless interesting to note that the share of television spend for FTA broadcasting (ie for SABC and e.tv collectively) as a whole has decreased over the period given the increased share allocated to subscription services (driven by growth in advertising revenue for DSTV primarily).

It is also important to consider subscription revenue over the period. According to Pricewaterhouse Coopers (PwC), the total subscription revenue for pay-tv in 2012 was R15.2bn – exceeding the total revenue from television adspend.

3.3 Postal services sector

3.3.1 Legislative and policy environment

The 1998 White Paper identified postal services as the most basic and common means by which messages can be communicated and goods delivered. It stated that postal services were a basic link serving the entire population. The postal services also serve as an important medium of communications for business and commerce. Government committed to facilitating the growth and development of the sector and to ensuring the provision of universal and affordable postal services to all South Africans, irrespective of race, gender,
class, age or geographical location. The overarching goal of the policy framework was to ensure a more accessible, equitable, efficient, and effective postal service.

The objective was to balance the provision of basic universal postal services to disadvantaged rural and urban communities, with the delivery of service capable of meeting the needs of a growing South African economy.

The fundamental policy principles were equal access to a reliable basic letter service regardless of physical location, at a uniform rate of postage and at an affordable price. The White Paper provided for the achievement of universal service by structuring the market into reserved and unreserved markets, and ensuring that SAPO receives a degree of monopoly protection, as it rolls out universal service obligations in the postal sector. These obligations are included in the licence conditions of SAPO. The licence issued in 2012 (effective from 2008) makes provision for a monopoly in a reserved sector, as well as defining universal service obligations by outlining under-serviced areas in schedule 1 of the licence and then addressing roll-out to meet these obligations in schedule 2 of the licence.

All other services, including parcel and express services, and any future services differing from those defined as reserved, are categorised as non-reserved and are subject to competition and market forces. However, these licensees do not have the any licensing obligations.

The White Paper envisaged the corporatisation of the Postbank, which would be wholly owned by Government that could encourage a culture of savings among its target clientele. A three-phased restructuring plan was implemented resulting in the Postbank as an autonomous fully-fledged savings bank, owned by the Post Office. In the interim period, Postbank was to operate as a profit centre, and to continue to be exempt from registering as a bank under the Banks Act. To this end, the Postbank Act was promulgated and is intended to provide the financial services as envisaged in the policy.

### 3.3.2 Growth and outlook

According to StatsSA, the value of postal and courier activities in the 2009/10 year was R9,1 billion. In the same period, SAPO reported total revenues of R5,5 billion. Using these revenue figures, SAPO has a total market share of 61% of the total postal and courier services.

SAPO was issued with a 25-year licence in 2001 and it is the only licensee operating in the reserved market (defined as delivering any postal items that weigh less than a kilogram). This exclusivity was confirmed in SAPO’s amended licence conditions gazetted in 2012. Its monopoly in the reserved areas was confirmed until 2017.

In terms of the unreserved market, ICASA has a total of 300 registered courier services. However, the South African yellow pages shows that there are just over 2 000 listings under ‘courier services’ in South Africa. It should be noted, however, that this listing does not provide the reader with an accurate picture in relation to which companies are operational or not. However, given the revenue data supplied by Stats South Africa, the rest of the sector is worth R4,5 billion. The SAPO revenue rose from R1,9 billion in 1994 to R5,9 billion in 2012, a 208% increase. This trend is evident from the figure below.
The Postal Services Act (Act 124 of 1998) mandates the South African Post Office (SAPO) to provide postal services on an exclusive basis to all South Africans. According to SAPO’s Annual Report the branch network extends to 2,433 access points. These access points are made up of 1,590 fully-fledged branches as well as 843 retail postal agencies.

The post offices are used to distribute goods, provide financial services and provide access points to a range of government services. SAPO’s Annual Report indicates that its customer base stands at 33.7 million adults in the country.

Of the total post office network (including branch network and points of presence), 1,763 access points are located in rural areas, with the balance of 670 in urban areas. It must be noted however, that postal services are provided mainly through agencies in rural areas.

The other mandate of SAPO is to roll-out national addresses to South Africans. In the past five years, SAPO has provided addresses to over 10 million households. More than 70% of these addresses are in rural and peri-urban areas. SAPO has more than 4 million postal boxes, and about half of these are currently in use by individuals and businesses. Of the postal boxes currently in use, about 773,000 are first addresses for private and individual/residential use. The balance is for business use. About 43,000 individual business addresses are in use.

According to the Banking Association of South Africa, 22.5 million people (67%) of adults in South Africa access banking services.

The Postbank is a savings institution that operates as a division of SAPO. It provides banking facilities to people who have previously had limited access to financial services. Currently, the Postbank operates only as a savings bank. It has 6 million customers, or roughly 2.6% of total market share.

The Banking Association of South Africa indicates that there are 17 registered banks in South Africa, of which the four major banks represent 84% of total banking assets. This makes for a highly concentrated industry. The Postbank has total assets under management within SAPO of R10 billion.
3.4 E-services (including e-commerce)

3.4.1 Legislative and policy environment

The 1999 Green Paper on e-Commerce and the Electronic and Communications and Transactions Act (ECTA) of 2002 highlighted the major areas of legislative and policy interventions in respect of e-commerce, cybercrime and cybersecurity. The ECTA further provided for the development of a three-year national e-strategy covering issues such as e-government services, roles and responsibilities, coordination, monitoring and implementation of the national e-strategy, research and development, as well as international coordination.

The ECTA provides for the building of trust and confidence in network infrastructure to ensure a secure information society. The law enables the authorities to tackle all basic types of cybercrime offences as well as operations and prosecution. The ECTA defines a number of conducts that constitute cybercrime, and establishes several procedures to enhance enforcement of the Act by law enforcement authorities.

E-signature and e-transaction is covered in the ECTA of 2002. This legislation is a solid foundation that governs e-signatures and introduces basic principles, such as ‘functional equivalence’ of electronic and paper-based signatures. Provisions are based on United Nations Commission on International Trade Law (UNCITRAL) Model Law. The DoC is the accreditation body for e-signature service providers. Two service providers have been licensed: LAWtrust and SAPO.

Online consumer and data protection in South Africa is currently based on the Electronic Communications and Transactions Act (ECTA), the National Credit Act (NCA), the Consumer Protection Act (CPA), and, in the future, the Protection of Personal information Act, (POPI), which was recently signed into law. Provisions in this Act deal with data protection and govern conditions relating to the processing of personal information, based on OECD Guidelines.

In South Africa, as in other countries, copyright is dealt with through both national and international laws and agreements. Both approaches complement each other in order to ensure adequate recognition and protection of the rights of the copyright holders. The main international treaties to which South Africa is a signatory include the Berne Convention (1978), the Trade Related Aspects of Intellectual Property Rights (TRIPS) of the General Agreement of Trade in Services (GATS) (1995), the World Intellectual Property Origination Treaty (WIPO Treaty), and a number of other treaties administered by the WIPO such as the WIPO Performance and Phonograms Treaty. The current South African national legislation is covered in the Copyright Act of 1978 and amendments.

The Department of State Security is finalising the National Cybersecurity Policy in which the issues of the protection of critical databases and critical infrastructure will be addressed. Currently the implementation of critical infrastructure protection is fragmented. Computer Emergency Response Teams (CERTs) and Computer Security Incident Response Team (CSIRT), and Cyber Security Emergency Response Teams (CSERTs) need to be established on a national level. They coordinate activities against cybersecurity threats, and ensure international cooperation. Public CERTs should be complemented with sector CERTs and private sector CERTs (for instance in the banking sector).

Chapter Ten of the ECTA deals with the Domain Name Authority. It provides for the establishment of .zaDNA as a Section 21 company and its overall mandate is to manage and administer the .za namespace. Although the ECTA provides for the appointment of Cyberinspectors to monitor online content with regard to compliance with national legislation, there are currently no cyberinspectors appointed by the DoC to check whether cryptography service providers are compliant with the law, or that authentication service
providers and data controllers, or information officers, comply with the relevant provisions of the ECTA.

3.4.2 Growth and Outlook of the commerce market

E-commerce in South Africa has grown significantly in the past several years with reports showing that in 2010 alone, R2 billion was spent in online shopping and in 2011 the number was targeted to reach R2.8 billion, a 30% increase.

South Africa is considered a leader in e-Commerce development in Africa. Based on a survey conducted by MasterCard, South Africa takes the lead in terms of the 54% of respondents who say that they usually use the internet for online shopping. This percentage is twice the regional average.

However, in comparison with developed markets such as the UK, USA and South Korea, South Africa has a long way to go in the development of its e-commerce sector. Amongst other factors, South Africa is lagging behind in terms of internet penetration, delivery infrastructure, competitive retail market and credit card usage.

The internet is changing the way business and trade is carried out, by moving it from the physical environment to an electronic one. Rapid increases in internet access and penetration around the world, will enable further developments in the e-commerce arena. The figure below illustrates this point.

Building trust and confidence in the ICT infrastructure is pivotal for an emerging online marketplace. The promotion of trust and confidence depends on a number of factors that include the application of information security standards, definition of cybersecurity organisations and education of society as a whole, from internet professionals to ordinary internet users.

A cybercrime prevention framework, which tackles two types of cybercrime offences is vital to deal with cybersecurity threats and attacks. The framework must address both the new forms of offences which include illegal access, illegal interception, misuse of devices and the old forms of offences, which include computer-related forgery, fraud, child pornography etc.
South Africa is listed in the top-five country list, clearly indicating that cybercrime is already a serious threat. For phishing, South Africa is number two; only Netherlands has a higher rate of phishing attacks. For malware, South Africa is number four. For spam, South Africa is not in the top five country list. The figures below illustrate this point.

E-government activities and service delivery

According to the UN e-Government Survey of 2012 which included 193 countries, all countries in Southern Africa fell behind in overall ranking due to continued lower levels of availability of ICT infrastructure. The table below illustrates this point.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>World e-Gov ranking 2012</th>
<th>World e-Gov ranking 2010</th>
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<tbody>
<tr>
<td>1.</td>
<td>Seychelles</td>
<td>84</td>
<td>104</td>
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<tr>
<td>2.</td>
<td>Mauritius</td>
<td>93</td>
<td>77</td>
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<td>3.</td>
<td>South Africa</td>
<td>101</td>
<td>97</td>
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<td>4.</td>
<td>Tunisia</td>
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<td>5.</td>
<td>Egypt</td>
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<td>10.</td>
<td>Namibia</td>
<td>123</td>
<td>125</td>
</tr>
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</table>

The first milestone in e-Government in South Africa, following the promulgation of the ECTA, was the adoption of the Batho Pele principles, which is a cornerstone of a framework for equal access to effective public service delivery. The Presidential Commission on the Transformation of the Public Sector paved the way for the establishment of the State Information Technology Agency (SITA). The DPSA developed the “The Digital Future” report which envisaged e-government as a key enabler of government modernisation. The e-Government pillars as envisaged in the DPSA report are demonstrated below.
The South African government has established statutory bodies to co-ordinate implementation of e-Government projects. Amongst these are the State Information Technology Agency (SITA) and Government Information Technology Officers Council (GITO Council). SITA is responsible for the acquisition, installation, implementation, and maintenance of IT in the public sector. On the other hand, the GITO Council, which consists of national and provincial IT officers, is responsible for consolidating and coordinating IT initiatives in government, including e-Government, to facilitate service delivery.

Regulatory frameworks have also been developed to direct the implementation of e-Government initiatives. The White Papers on Transforming Public Service Delivery (WPTPSD), Promotion of Access to Information Act, Electronic Communication and Transaction Act, Electronic Government Policy Framework, Minimum Information Security Standards (MISS), Minimum Interoperability Standards (MIOS) and Policy on Free and Open Software (FOSS) are noteworthy.

Collectively, the frameworks promote transparency, accountability, good governance, information security, and freedom in the acquisition and use of IT.