
GENERAL NOTICE

NOTICE 983 OF 2009 DEPARTMENT OF COMMUNICATIONS

NOTICE FOR THE PUBLICATION OF DRAFT SET-TOP-BOX MANUFACTURING SECTOR DEVELOPMENT STRATEGY FOR SOUTH AFRICA FOR PUBLIC COMMENT

The Department of Communications intends publishing Set Top Box Manufacturing Sector Development Strategy for South Africa by September 2009. The Department of Communications invites written comments on the proposed Strategy and must be received within 14 working days of the date of publication of this notice (i.e. 07 August 2009) at any of the following addresses: This Strategy is published for public comment within the Promotion of Public Justice Act (PAJA) (2000).

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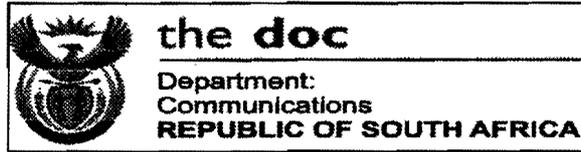
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Please note that comments received after the closing date may be disregarded

Mr. Sithembiso Manzini can be reached at tel. (012) 427 8287 for any enquiries

The Strategy can be obtained at the Department's website: www.doc.gov.za or at Government Printers.



**SET-TOP-BOX MANUFACTURING SECTOR
DEVELOPMENT STRATEGY FOR SOUTH AFRICA**

JULY 2009

DRAFT

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1. INTRODUCTION

- 1.1 The South African government took a decision to switch-on digital signals and switch off analogue signals on 01 November 2008 and 01 November 2011 respectively. To this end, Cabinet approved the Broadcasting Digital Migration (BDM) Policy to guide the digital migration process in South Africa.
- 1.2 In recognizing that most existing analogue television (TV) sets would need set-top-boxes (STBs) to receive digital content, the BDM policy provides that STBs would primarily be sourced from local manufacturers. This provision is informed by the need to support the development of a world class electronics manufacturing industry in South Africa, thus contributing to job creation and the transformation of the sector.
- 1.3 The STB Manufacturing Sector Development Strategy (‘the Strategy’) is being developed as part of implementing the National Industrial Policy Framework for South Africa. The Strategy outlines government’s vision and approach to strengthening the local electronic manufacturing industry.
- 1.4 The Strategy seeks to achieve the following objectives:
- 1.4.1 To establish local capacity to manufacture STBs;
 - 1.4.2 To strengthen and expand domestic technical, design and software engineering skills base;
 - 1.4.3 To build an industry with export capabilities for locally produced STBs and digital TV applications and products;

- 1.4.4 To encourage industry participation in driving the vision of building a world class electronic industry; and
- 1.4.5 To maximize opportunities for introducing new players within the STB manufacturing value chain.
- 1.5 This Strategy focuses on the overview of the STB sector, competitive capabilities (growth areas) and implementation mechanisms.

2. OVERVIEW OF THE STB MANUFACTURING SECTOR

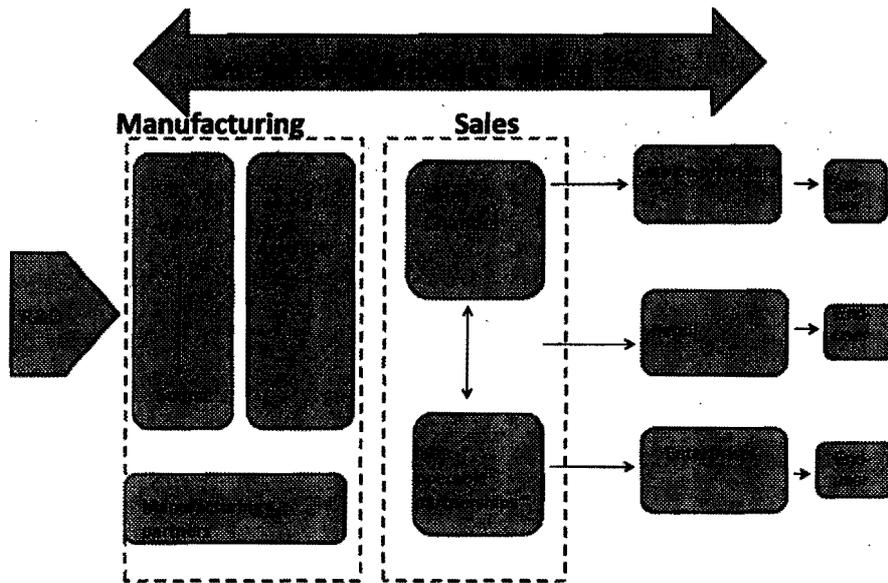
- 2.1 The World is migrating to the digital terrestrial television, and South Africa is not an exception. This move is expected to significantly boost the digital terrestrial television (DTT) set-top box market worldwide. In 2008, the combined (i.e. standard and high definition (HD) DTT STBs) shipments of DTT STBs amounted to 36 million units and expected to reach 44 million in 2009. It is expected that by 2010 HD STBs will account for 30 percent of the total world shipments.
- 2.2 Currently, the South African free-to-air DTT STB market is estimated at 8 million in total. There is potential for further growth as more people embrace the digital migration process. Hence, the government's decision to manufacture these STBs locally. There are also expectations that by creating this capacity would offer opportunities for local companies to export to the rest of the African continent.
- 2.3 The South African electronics manufacturing sector is characterized by large, middle-sized and small manufacturers with primary focus on the assembling and manufacturing of electronics consumer

products such as TVs, telecommunications equipment, and STBs for the pay television market. Most of these companies have been built within South Africa and they exhibit varying degrees of expertise. These manufacturers have strong engineering design capabilities particularly in software and systems development which is a critical element in the manufacturing of STBs. Some of the manufacturers already have established relationships with the retail market and have distribution networks, with easy access to outlets in the cities and towns throughout the country.

- 2.4 In the recent past years the sector shed jobs resulting in some skilled employees being employed on a temporary basis. Whilst there was an opportunity to employ more workers to manually install components in old style televisions and other tools, the new machines diminish the large scale employment of semi-skilled labourers in manufacturing.
- 2.5 In implementing the Strategy, local STB manufacturers would be required to immediately make significant investments in order to increase production capacities to meet the demand for STBs. It is anticipated that manufacturers will invest between R2.5 million to R30 million to meet the demand. The cost of building a new factory for new companies is expected to range between R30 million and R60 million.

3. COMPETITIVE CAPABILITIES IN STB MANUFACTURING

- 3.1 Competitive strategies and technologies are driven by electronic consumer product requirements. In assessing the capabilities of the South African electronics manufacturers measures such as product design, process automation (manufacturing), proved useful.
- 3.2 In most economies where ICT industry became a critical element in advancing socio-economic development, governments played a strategic supporting role in the development of these capabilities. This will ensure that South Africa has to take advantage of the growing global electronics consumer market. The manufacturing of STBs locally provides South Africa with the opportunity to further develop competitive advantage in these areas.
- 3.3 The broadcasting digital migration would require the supply of STBs in large volumes to satisfy the eight (8) million domestic STB market. This presents an opportunity to revitalize and grow the electronics and related industries in the long run. The manufacturing of electronic consumer products incorporates a variety of value-add activities within the value chain.
- 3.4 Figure 1 below depicts a diagrammatic overview the STB manufacturing value chain.

Figure 1 - Overview of growth opportunities.

3.4.1 RESEARCH AND DEVELOPMENT (R&D)

3.4.1.1 The production of electronic consumer products is a highly technical and competitive process where new ideas and product concepts are created and tested, thus encouraging innovation in the industry. It is not possible to build a globally competitive electronics industry without dedicated research and development aspect to drive innovation. The innovation and manufacturing of the cutting edge electronic products are the drivers of successful electronic consumer industries.

3.4.1.2 The promotion of R&D activities in this area will create a conducive environment to enable the manufacturing of

integrated digital TVs (IDTVs) and other electronic consumer devices in the long-run. To ensure continuous product development, government will work in partnership with the private sector and the academia in advancing R&D activities in this area. Such partnerships will also ensure that there is continuous supply of highly skills set required by the industry as a whole.

- 3.4.1.3 The R&D programme would prioritize the development of software applications which enables e-government services in South Africa.

3.4.2 PRODUCT DESIGN

- 3.4.2.1 As part of implementing the digital migration policy, government took a decision to source the digital STBs from local manufacturers, thus ensuring the manufacturing of STBs in large volumes to satisfy the local market. This presents opportunities for further investment in local engineering design capabilities.
- 3.4.2.2 The common critical feature for all the major global electronics companies is engineering design capabilities and Intellectual property (IP) ownership. To this end the development of the local design capabilities of the STB engineering, architecture and its related applications present significant opportunities for building a local STB and related industry with export capabilities.
- 3.4.2.3 Some local companies have engineering design capabilities and own intellectual property thereof. In order to promote investment, innovation and excellence in the industry, it is recommended that only locally developed IPs be considered for the manufacturing

of subsidized set-top-boxes. Local IP will be chosen with the understanding such an IP will be shared with other manufacturers of the subsidized boxes who may not have the design capabilities. In this regard, not more than four (4) local IPs would be chosen. All STB designs will be tested, and type approved by the Independent Communications Authority of South Africa (ICASA) before being allocated manufacturing volumes to minimize the risk of product failure.

3.4.3 STBs MANUFACTURING

3.4.3.1 To stay cost-competitive, the domestic STB manufacturers have installed capital-intensive production lines to mount and place chips surface mount technology assembly. The final assembly of the STB remains labour-intensive and provides opportunities for job creation.

3.4.3.2 The manufacturing of STBs largely consists of assembling electronics components in accordance with the engineering designs. This maximizing the value in the manufacturing process ensures that many local manufacturers participate in the full manufacturing value chain. This will result in the improvement of capabilities for the manufacturing of specific electronic components. For example, printed circuit boards' skills and capabilities reside within South Africa and could be improved to be incorporated into the DTT programme.

3.4.3.3 In order to meet the expected domestic demand for STBs significant volumes of these consumer products will be required.

Thus the local industry must gear itself to satisfy this demand through increasing investments in production capacities. Local manufacturing of STBs also presents opportunities for growth in other supporting industries such as plastics, packaging, metals, and manuals.

3.4.3.4 There are at least six existing STB/TV manufacturers in the country with three of these having engineering design capabilities. The existing manufacturers are of varying sizes and capabilities. It is also expected more new manufacturers will enter this market. This presents an opportunity for the growth and transformation of the industry through increasing participation by historically disadvantaged persons.

3.4.3.5 In order to achieve the objective of growing and transforming this industry, the Strategy adopts an Inclusive Government-Industry Partnership that envisages the participation of the existing and new local manufacturers. Each of these manufacturers will participate according to a formula, to be agreed upon by all, including government, which takes into account the contribution and total value of the party in the value chain (see Appendix 2 for criteria for allocating volumes). It will be required that manufacturers cooperate with one another to deliver a service to the end users. It will also include the scale of participation by these manufacturers, which will be determined in accordance with the capacity, capability and expertise of each player within the manufacturing value chain.

3.4.3.6 Given the size of the market, it is proposed that up to four (4) manufacturers be allocated subsidized STB volumes as prime manufacturers. These will come from local manufacturers with

engineering design expertise and capacity to produce in larger volumes. These primary manufacturers will be required to work with other players to be identified by government. The percentage to be subcontracted will be determined by the capacity and expertise of the secondary manufacturers. The subcontracting shall be subject to standard performance agreements and quality standards. The objective here is to ensure that smaller players benefit from the ability of bigger player's ability to negotiate better deals on components supply. This would also ensure that there is a certain degree of skills and technology transfer between the larger and smaller companies.

3.4.3.7 The process will also enable SMME development by building on existing government programmes, such as a 40% incentive for the incorporation of SMME vendors within a national programme.

3.4.3.8 One of the most important developments in the world trading systems has been the emergence of regional cooperation. Regional cooperation has enabled the transfer of technology and manufacturing capabilities between countries allowing them to develop sequentially. Regional cooperation is a means of enhancing economic development and providing economic activity. In this regard South Africa is positioning itself as the STB manufacturing hub for the Southern African Development Community region as well as the African continent. This cooperation provides South African companies to provide DTT STBs in these regions, thus providing a further market.

3.4.4 DISTRIBUTION NETWORK AND LOGISTICS

- 3.4.4.1 The distribution network and logistics that carries the STBs from the manufacturers up to the point of sale and to the consumer provides business opportunities. The warehousing, logistics and courier sectors allow for significant participation by black owned companies and small, medium and micro enterprises.
- 3.4.4.2 In this regard, the primary manufacturers will develop and submit to government business models incorporating the distribution network designed to ensure that STBs are generally available and accessible to all consumers irrespective of their geographic location and economic status in society. Such a model must also address the issue of storage, guarantees, warranties, etc.
- 3.4.4.3 The distribution and logistics model where possible should aim to encourage the participation of SMMEs from all provinces. The strategy provides that fifty (50) percent of the volumes be channeled through black-owned enterprises and SMMEs prioritising enterprises owned by women, youth and people with disabilities. Post Offices are envisaged as potential STBs collection points, particularly in the most rural and remote areas.

3.4.5 SALES AND POST SALES SUPPORT

- 3.4.5.1 Sales of STBs to the end-users would be done through appointed service providers, retailers and enterprises. The objective is to ensure that end-users do not struggle to receive the products irrespective of their localities.

- 3.4.5.2 This provides for the post sales interaction with the end user should there be a problem with the product. STB's user education, repair, maintenance, warranty, upgrades and replacement are vital for extending the life of the boxes. STB repair and maintenance is closely linked to the STB engineering design, thus there is still a need for engineering resources to travel to the end user to fix problems which may arise. It therefore logical that the prime IP designers perform this function.
- 3.4.5.3 In this regard the strategy provides that the identified prime manufacturers work closely with the identified service providers, retailers and enterprises. The post sales support system should be closely linked to or take into account the integrated distribution and logistics networks.
- 3.4.5.4 This aspect of the manufacturing value chain also represents a significant opportunity for BBEE, SMMEs, training and skills transfer. Accordingly efforts should be made to capacitate youth with the necessary skills to repair STBs
- 3.4.5.5 In this regard prime contractors will identify and partner with relevant black-owned enterprises and SMMEs. The strategy provides for an equal partnership between the primary contractor and such enterprises.

3.4.6 STB INSTALLATIONS

- 3.4.6.1 The STB installations represent important aspect of the DTT roll out support system. The digital migration process is an ideal opportunity to bridge the digital divide and enable access to

government information and services. The STB installations support affords all citizens especially the vulnerable groups to take up digital broadcasting without unnecessary inconveniences. The STB installations offer a great opportunity for local SMMEs. Certified installers either or connected to manufacturers as franchises or independents will be required. The primary contractors will have the responsibility of ensuring that STB installers are capacitated with the necessary skills and are drawn from e-cadres residing in that particular province.

- 3.4.6.2 This strategy anticipates that more than one thousand (1000) youth will be employed to install these STBs.

3.4.7 CALL CENTRE MANAGEMENT

- 3.4.7.1 The project of digital migration magnitude and the roll of millions of set top boxes require a dedicated call centre to support consumer take up. A call centre to assist the consumers will be established.

3.4.8 BROADENING SMME & BEE PARTICIPATION

- 3.4.8.1 Broadening the participation of the formally economically disadvantaged groups and companies in the form of BEE, BBEE and SMME is central to industry growth and diversification.
- 3.4.8.2 The transformation of this industry has not been to satisfactory levels although some big players have some form of BBEEE ratings and shareholding schemes. The electronics manufacturing industry should be more aggressive in their empowerment drive.

Amongst other options, the manufacturers should be encouraged to look into making an employee-share-scheme to boost the broad-based empowerment of previously disadvantaged individuals whilst supporting ownership by their workforce.

- 3.4.8.3 To enforce the transformation agenda in this sector, BEE should be considered as the criteria for earning the necessary points in line with the ICT BEE Sector Code. In the case of bidding for STB Manufacturing opportunities put forth by government, BEE would be a built-in pre-qualifying criterion to all manufacturers wanting to manufacture government subsidized STBs. Most of the employees in these facilities have been working in the companies for over 15 years; employee-share-schemes can be a useful tool to reward their loyalty.

4. IMPLEMENTING THE STRATEGY

- 4.1. There is a need for an established institutional mechanism to deliver the local manufacturing of high quality and cutting edge DTT digital receivers while achieving the objectives of building a world class local electronics industry.
- 4.2. The DoC, together with the DTI and National Treasury will be responsible for the successful implementation of the strategy. Digital Dzonga working with its stakeholders will be responsible for the day-to-day review and implementation; as well as assessing progress and providing regular reports to the Minister of the Department of Communication through the Office of the Director-General.

- 4.3. Government is supporting the local industry it is important that the manufacturers are organized with a view to establish a new umbrella industry body. The objective of such a body is to tackle challenges that is besetting the sector and together work with government to ensure a vibrant manufacturing industry that creates jobs.

5. CONCLUSION

The successful implementation of the STB Manufacturing Strategy will lay a foundation for the long term development of the electronics sector in general. This Strategy calls for working together of different stakeholders to deliver a quality product to the South African market.

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