



Draft Frequency Migration Regulations and Frequency Migration Plan Government Gazette 35598

ICASA
Presentation
31.10.2012

1. Thato Toko: Specialist Technical Regulatory
2. Ngoako Malatji: Specialist Policy and Licensing
3. Marius Venter: Head Network Planning

- Expected Analogue switch-off (ASO) is June 2015;
- Currently there is no Policy and Regulatory Framework for the migration of DTT services to below 790 MHz;
- The Final Terrestrial Broadcast Frequency Plan of 2008 has DTT assignments above 790 MHz;
- 790 – 862 MHz band will not be available immediately after ASO;
- No broadband/IMT terrestrial services should be allowed in the 3600 – 4200 MHz band;
- Studio Transmission Links require a dedicated band/s and should not be expected to compete for spectrum with other services;

CONTENTS

COMPANY OVERVIEW

KEY BUSINESS OBJECTIVES

POLICY & REGULATORY

STUDIO TRANSMISSION LINKS AND 3600 – 4200 MHz

DTT INFRASTRUCTURE ROLLOUT

- Implement and maintain sustainable operations around infrastructure-based ICT interventions;
- Target content-based services, including content distribution, content storage and content management;
- Measure impact on communications industry (economic development dividend) and society at large (social dividend); and
- Focus on enabling development of applications in broadcasting, education and health (e-Services).

VISION

To be a world-class provider of sustainable communications network infrastructure and services in South Africa.

MISSION

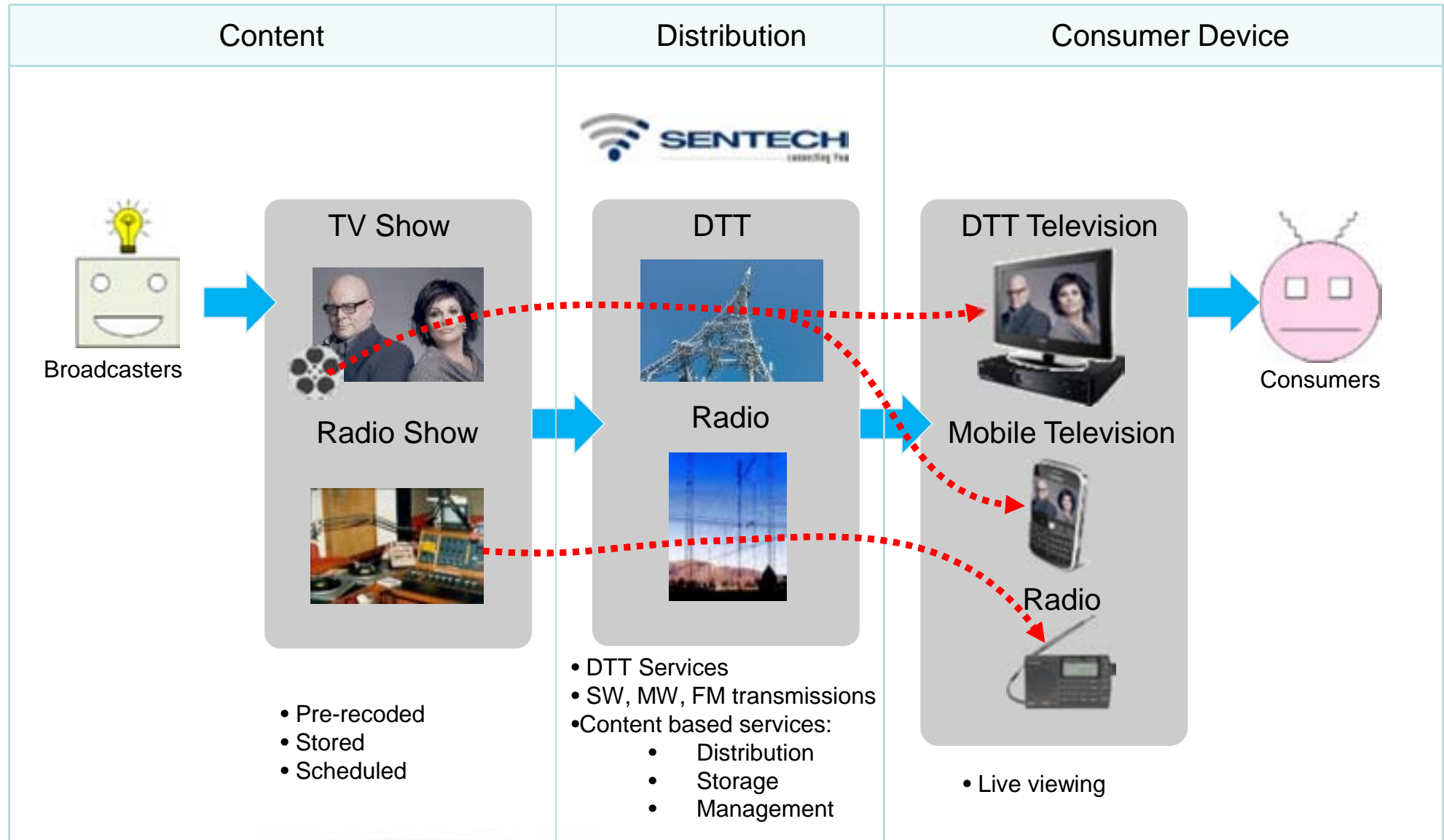
To enable affordable universal access to communication services in the context of South Africa's socio-political imperatives as a developmental state.

VALUES

- **Integrity:** *We act with honesty, fairness and openness;*
- **Quality Customer Service:** *We are committed to proactively ensuring high values of customer satisfaction and building a relationship based on trust;*
- **Innovation:** *We endeavour to develop and support creativity and responsible risk-taking;*
- **Accountability:** *We deliver on our promises and take responsibility for our actions; and*
- **Social Responsibility:** *We endeavour to fulfill our mandate in a manner that benefits our employees, customers, suppliers, communities and the environment in all the areas that the Company operates in.*

CUSTOMER BASE

- 6 analogue tv channels (excluding community broadcasting services)
- 20 SABC public radio stations
- 18 commercial radio broadcasters
- 69 community radio broadcasters
- 5 community television broadcasters



CONTENTS

COMPANY OVERVIEW

KEY BUSINESS OBJECTIVES

POLICY & REGULATORY

STUDIO TRANSMISSION LINKS AND 3600 – 4200 MHz

DTT INFRASTRUCTURE ROLLOUT

The SENTECH Board has identified and adopted six Strategic Focus Areas whose plans and activities will guide SENTECH towards achieving the company's public service mandate obligations, Shareholder priorities and business continuity – broadly, the Public Service Mandate. The key focus areas are:

- **Customers and Stakeholders**

- Understand our customer's and stakeholder's needs and expectations;
- Provide expert advice and collaborate with our customers to meet the Company's public service mandate; and
- Identify and support community projects that will deliver social and economic dividends to the respective communities.

- **Infrastructure**

- Accelerate rollout and provision of open access communications infrastructure networks to broadcasting and communications services licenses; and
- Prioritise underserved and underserved communities in the infrastructure rollout and service provision plan.

o **Solutions and Interventions**

- Consolidate the Company's analogue radio and television signal distribution business;
- Enable expansion of public broadcasting services to reflect the country's diverse socio-demographic profile; and
- Provide a multimedia content delivery platform that will enable distribution and accessibility of content on all known and future digital platforms.

o **Employees**

- Develop employee skills to manage, participate and support the SENTECH business model; and
- Implement a comprehensive management and leadership development programme to ensure personal growth, succession planning and skills retention.

- **Sustainability**

- Diversify products and solutions within the framework of the Company's Licences and market environment;
- Leverage Shareholder investment on the DTT and NWTN flagship projects to secure SENTECH's future; and
- Ensure that the Shareholder funded infrastructure-build projects enables job creation and skills development.

- **Governance**

- Define and enable SENTECH medium term strategy and achievement;
- Ensure that SENTECH complies with Legal and Regulatory provisions to maintain going-concern status;
- Develop risk management capability and ensure that risk management is embedded in all of the Company's activities; and
- Maintain collaborative and supportive relationship with the Shareholder.

These goals and objectives are the core of SENTECH's strategic plan and provide the Company tangible means of measuring its achievements and progress. SENTECH will then report in a meaningful way to the Shareholder, on how the Company has lived up to the ambitions it has set for the future.

CONTENTS

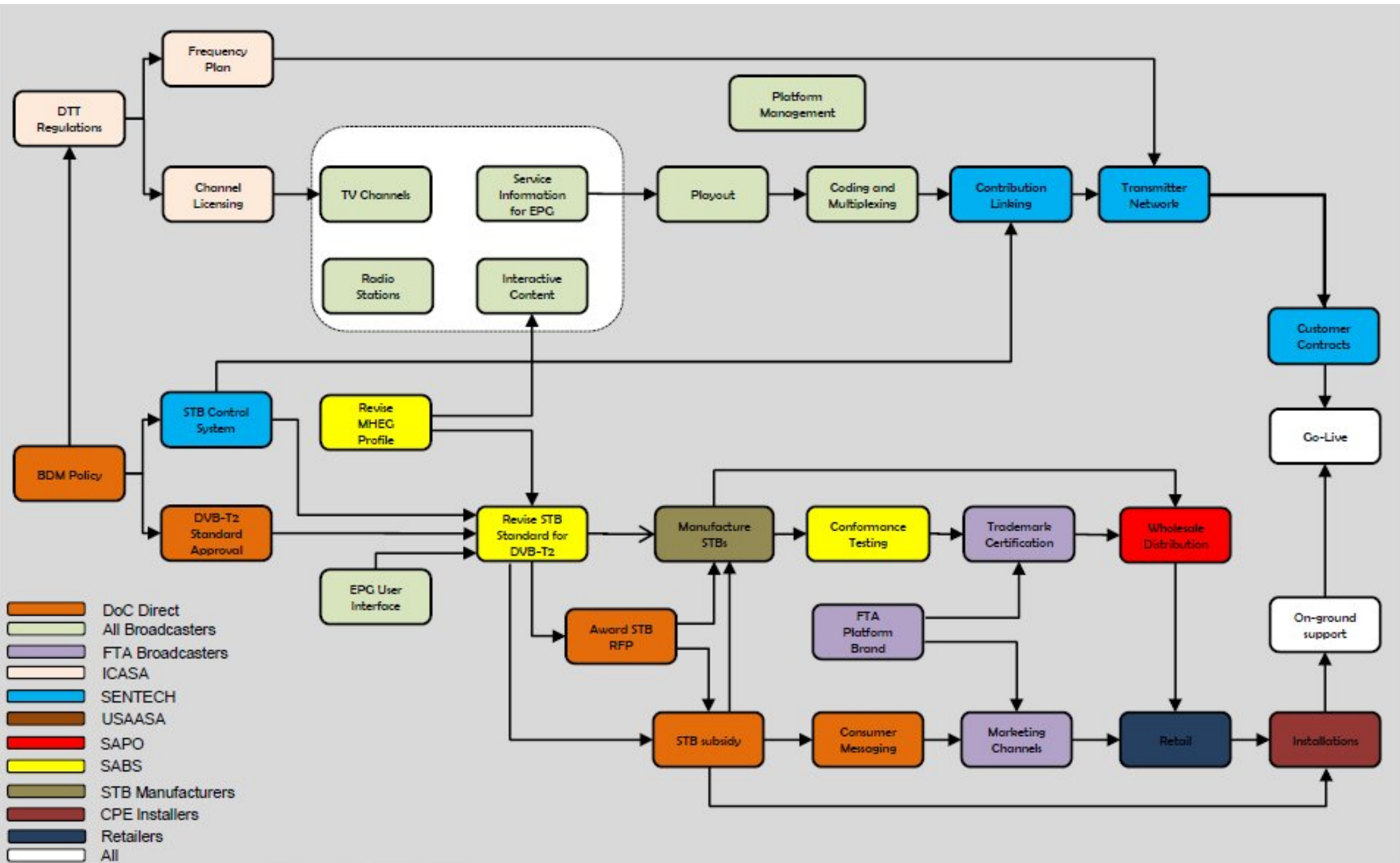
COMPANY OVERVIEW

KEY BUSINESS OBJECTIVES

POLICY & REGULATORY

STUDIO TRANSMISSION LINKS AND 3600 – 4200 MHz

DTT INFRASTRUCTURE ROLLOUT



- Broadcasting Digital Migration Policy as amended;

*The policy therefore provides the framework for migrating the country's broadcasting systems from analogue to digital and meeting the ITU resolution that all countries in Region 1 should complete their migration by **17 June 2015**.*

- Final Terrestrial Broadcast Frequency Plan of 2008;
 - 460 DTT1 and 2 assignments;
 - 182 DTT1 and 2 assignments above 694 MHz;
 - 42 DTT1 and 2 assignments above 790 MHz;
- Draft Amendments to the DTT Regulations;

*The DTT process is clearly a complex multi-stakeholder, multi-activity project in which a breakdown in any one sphere of activity has a knock-on effect on the delivery of other activities. A project of this scale is thus replete with dependencies and risks in its implementation. It is therefore important that ICASA amend its draft Digital Terrestrial Television regulations to meet any future contingencies, including the **possibility that analogue switch-off may not take place in 2015 as envisaged in the Ministerial policy**.*

- Requirements for a successful DTT-to-DTT Migration;
 - Policy Directive for the DTT-to-DTT framework;
 - Digital Dividend one (1) and two (2);
 - DTT-to-DTT project costs;
 - Revised Terrestrial Broadcast Frequency Plan;
 - All references made to broadcasting services to be migrated below 692 MHz, should be corrected to refer to 694 MHz, as the broadcasting channel 48 ends at 694 MHz and the guard band between broadcast and IMT services must be accommodated above 694 MHz.
- Transmitter DTT-to-DTT Network Plan;
 - Project schedule;
 - Determine Combiner requirements;
 - Determine Transmitter requirements;
 - Decommissioning of analogue Network;
 - Project Rollout Plan;

CONTENTS

COMPANY OVERVIEW

KEY BUSINESS OBJECTIVES

POLICY & REGULATORY

STUDIO TRANSMISSION LINKS AND 3600 – 4200 MHz

DTT INFRASTRUCTURE ROLLOUT

- Sentech proposes that the portion 821 – 830.8 MHz, in the 800 MHz band be made available for STL deployment on a non-interference basis.
- Sentech also proposes that the band 1479.5 – 1492 MHz be made available primarily for STL services.
- The choice of the lower bands is mainly influenced by the cost of the equipment.
- Sentech has approximately 143 studio-to-transmitter contribution links;
 - Average bandwidth per link is between 300 – 500 KHz;
 - Hop links range from 1 – 111 km;
- All Sentech STLs are deployed in the band 810.5MHz to 851.5MHz. This allows Sentech to keep the cost of STLs to a minimum.
- The survival of the Community Broadcasters is dependent on having access to STL services

- The Sentech's national distribution linking network is done via the satellite platform. The satellite linking distribution network is split between C-band (Primary feed) and Ku-band (Secondary Feed).
- The C-band has been assigned for satellite downlinks due to its resilience in the presence of heavy rain.
- Broadcasters prefer the C-band because of the capability to cover large areas.
- The satellite receivers in the C-band are designed to receive low-power signal emitted by transmitters located in orbit approximately 36,000 km above the equator.
- It is also important to note that satellite broadcasting services in the C-band have co-existed with microwave links for many years, because the latter system operate via tightly focused beams from fixed points unlike IMT/Broadband systems which are ubiquitous and progressively mobile/nomadic with cumulative likelihood of saturating the sensitive C-band satellite receiving systems.
- The saturation of the sensitive C-band satellite receiving systems will prove detrimental to existence of broadcasting services.
- Sentech is therefore against sharing the 3600 – 3800 MHz band with IMT/broadband services.
- Even though Sentech makes use of the Ku-band for secondary feeds to its transmitter sites for purposes of redundancy, the Ku-band is still susceptible to rain fading.

CONTENTS

COMPANY OVERVIEW

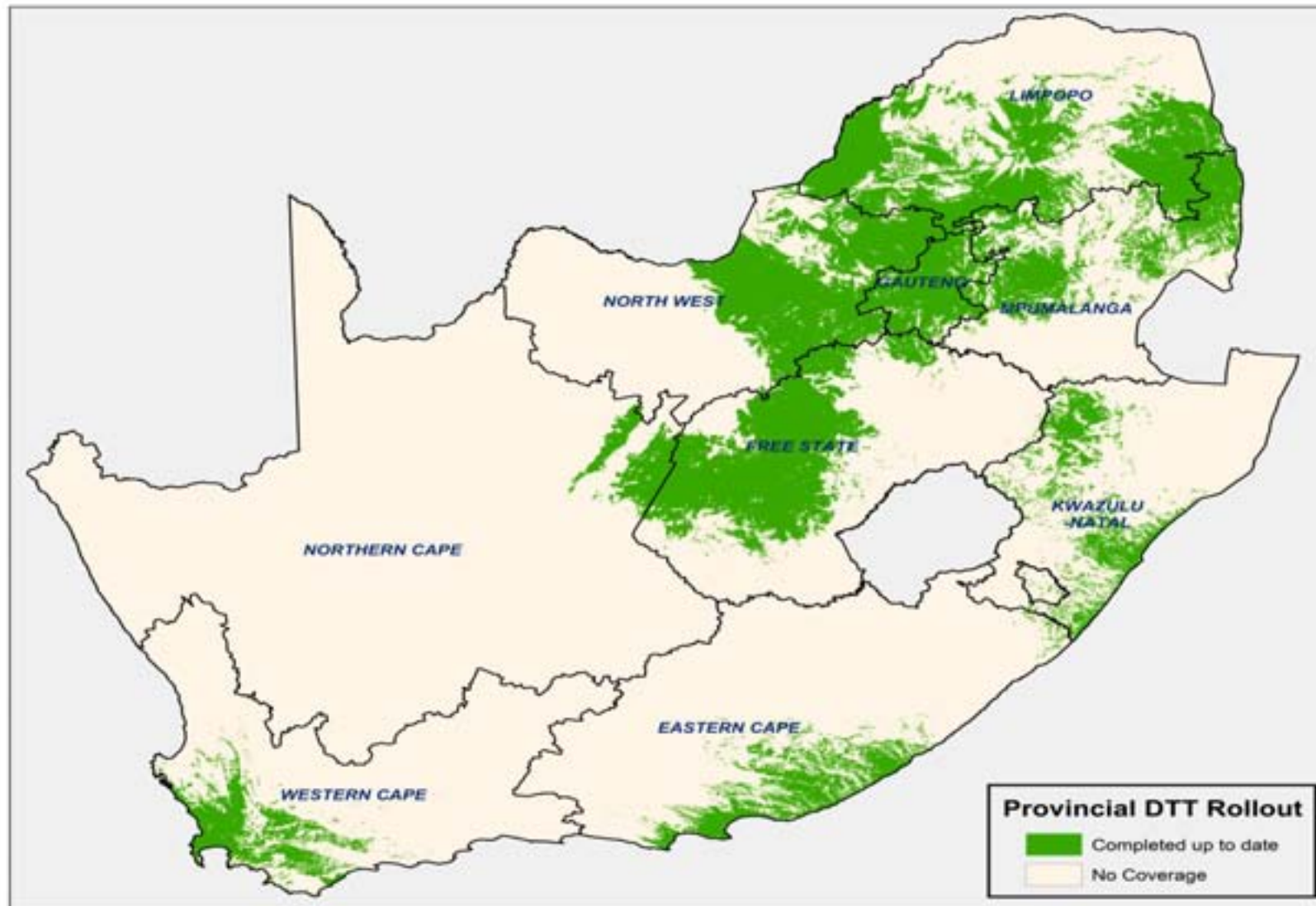
KEY BUSINESS OBJECTIVES

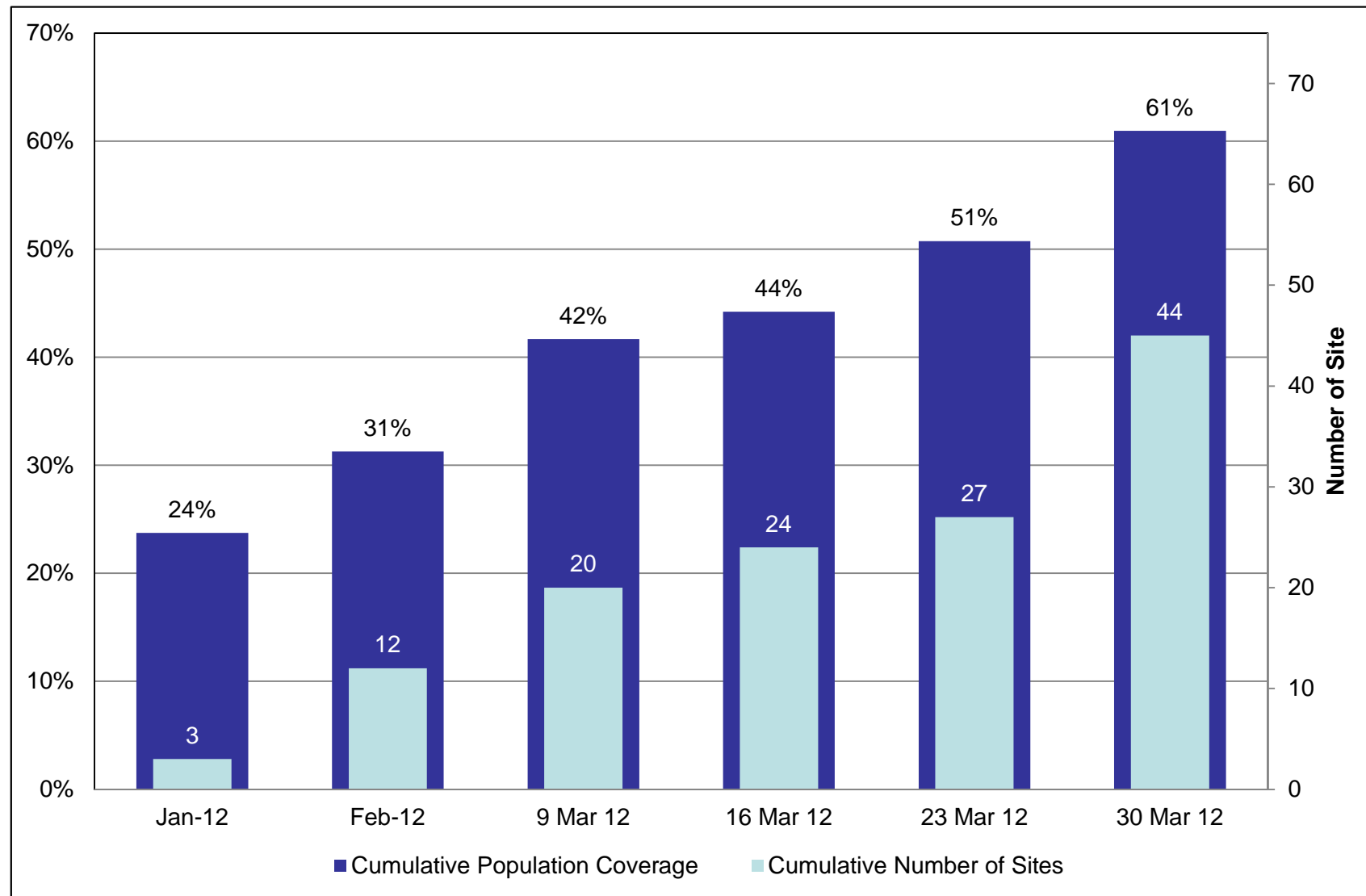
POLICY & REGULATORY

STUDIO TRANSMISSION LINKS AND 3600 – 4200 MHz

DTT INFRASTRUCTURE ROLLOUT

- The rollout of the Digital Terrestrial Television infrastructure network is one of the key projects that SENTECH will accelerate deployment of, to ensure that the country meets the June 2015 ITU commitment.
- SENTECH notes that in an address to the media industry in January 2012, the Minister of Communications, indicated that the launch of commercial DTT services will be in the 3rd quarter of 2012 to ensure that there is policy and regulatory alignment with the DVB-T2 standard that was adopted in January 2011.
- Noting the amended timelines for commercial launch of DTT services, SENTECH submits that as of 1 April 2012, 44 sites (24%) of the planned 183 sites were activated to transmit digital broadcasting services on the DVB-T2 standard reaching 60.9% of the population – within which each of the country's nine provinces have an active transmitter network.
- The population coverage stated above is based on the ICASA FTBFP 2008 Effective Radiated Powers (ERPs).

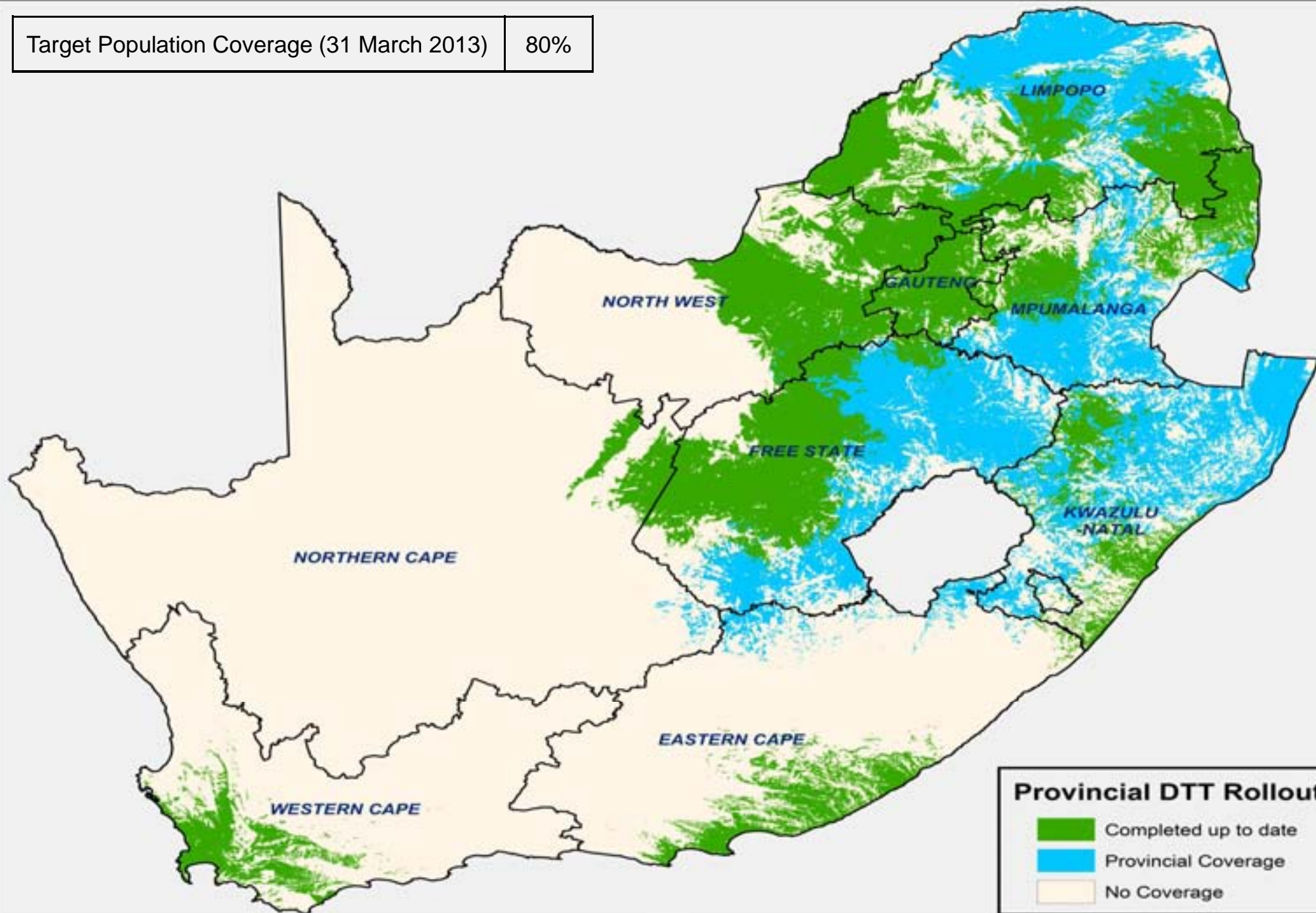




- SENTECH further notes that the Minister cautioned that the country's commitment to complete analogue switch-off by 2013 may not be met – citing the challenging policy, regulatory and industry processes that need to be completed before definitive announcement of Digital Switch-On date (DSO) and the potential push effect on ASO date
- In consideration of these challenges, the Department of Communications, together with its SOC's has recommended that a staggered provincial DTT rollout and ASO programme is necessary to ensure that broadcasting digital migration is kept top-of-mind from this moment on forward – and therefore aligned to the ever changing and dynamics of global digital migration developments.
- Accordingly, SENTECH has reviewed its DTT rollout plan to enable a rolling Provincial infrastructure rollout programme and ASO. SENTECH believes that this strategy will ensure that the country has a concerted monthly implementation and communication for DTT starting on the implementation date for DSO December 2012 until switch-over – thus ensuring a continuous top-of-mind communication for the digital migration strategy as depicted below:

Target Population Coverage (31 March 2013)

80%

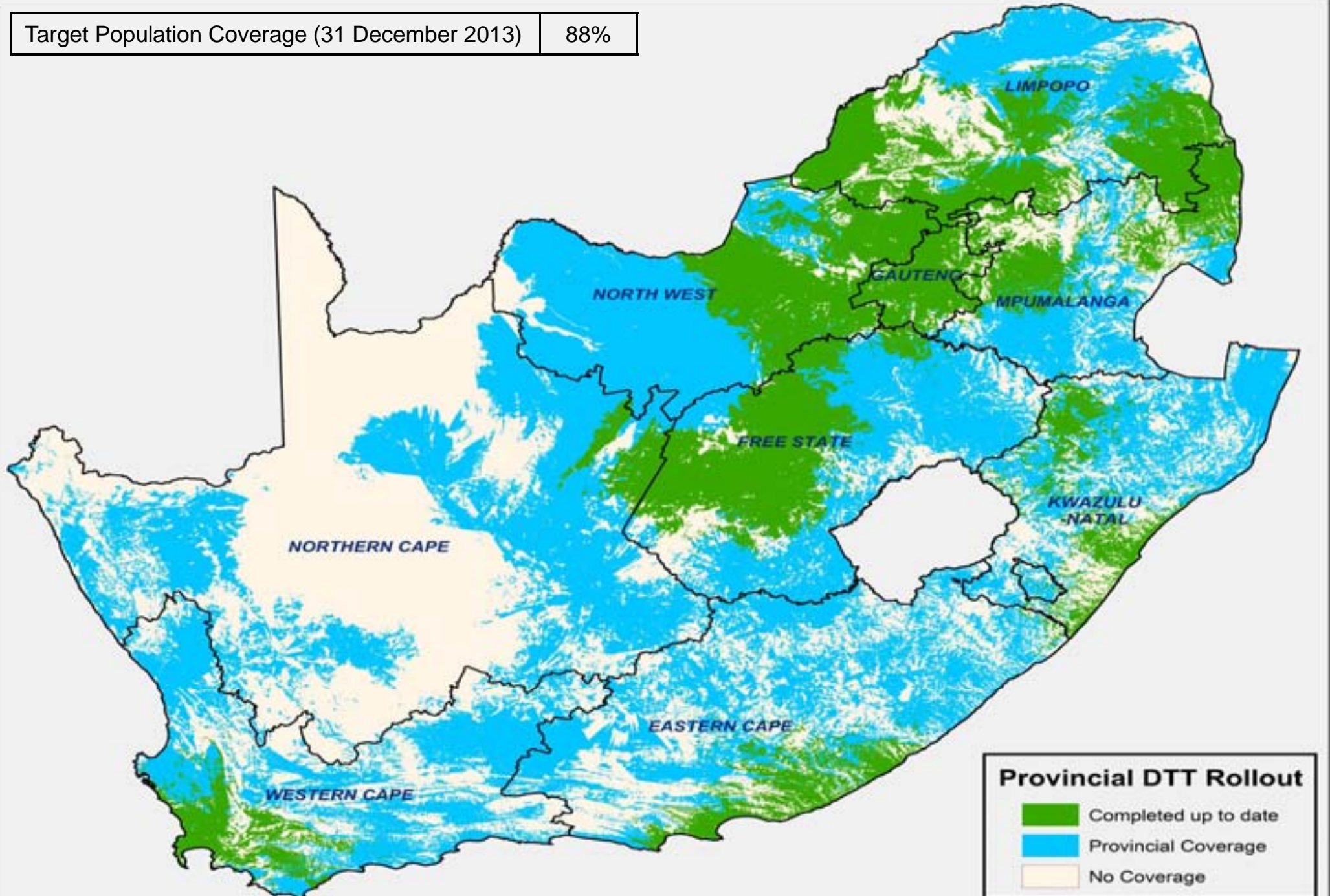


- The target for this financial year is to complete roll out of DTT to Limpopo, Free State, Mpumalanga and Kwazulu Natal and some sites in Eastern Cape, Western Cape and North West to reach 80% population coverage.

Province	Number of Stations	Additional Stations	Cumulative Population Coverage %	Additional Population Coverage %	Additional Population Coverage per Station %
Limpopo	52	8	63.85	2.95	0.37
Free State	63	11	66.32	2.47	0.22
Mpumalanga	73	10	68.84	2.52	0.25
Kwazulu Natal	94	21	75.00	6.16	0.29

- In order to reach 75% population coverage from the current 61% coverage an additional 50 sites (113% added sites) are required to provide an effective 14% further population coverage.

Target Population Coverage (31 December 2013)	88%
---	-----



DTT INFRASTRUCTURE ROLLOUT:

Provincial Rollout (cont.)

- 31 December 2013: 88% population coverage based on revised ERPs;
- Eastern Cape, Western Cape, North West and Northern Cape provinces will be completed.

Province	Number of Stations	Additional Stations	Cumulative Population Coverage %	Additional Population Coverage %	Additional Population Coverage per Station %
Eastern Cape	127	33	82.60	2.60	0.08
North West	140	13	83.89	1.29	0.10
Western Cape	163	23	85.67	1.78	0.08
Northern Cape	177	14	88.00	2.33	0.17

- In order to reach 88% population coverage from the current 61% coverage an additional 133 sites (302% added sites) are required to provide an effective 27% further population coverage.
- Direct-To-Home Satellite Platform will be fully operational by 31 December 2013;
 - Except in the Northern Cape, further rollout of transmitter sites beyond the 88% targeted coverage will be based on the opportunity cost between the cost of DTH STBs and cost of rolling out new transmitters and DTT STBs.

THANK YOU