



DIGITAL MIGRATION STATE OF READINESS:

PRESENTATION TO THE PORTFOLIO COMMITTEE ON COMMUNICATIONS

27 - 28 November 2012



SENTECH
connecting You

- **Mr Thabo Mongake** Chairperson
- **Mr Mesuli Dhlamini** Non-Executive Director
- **Ms Zanele Hlatshwayo** Non-Executive Director
- **Ms Leah Khumalo** Non-Executive Director
- **Mr Paris Mashile** Non-Executive Director
- **Mr Sipho Mjwara** Non-Executive Director
- **Mr Steven Molala** Non-Executive Director

- **Dr Setumo Mohapi** Chief Executive Officer
- **Mr Kganki Matabane** Chief Operating Officer
- **Adv Makhotsa Chimombe** Company Secretary (Acting)

- SENTECH thanks the Parliamentary Portfolio on Communications (PCC) for the opportunity to present on the Company's readiness for the launch of the country's Digital Terrestrial Television (DTT) broadcasting services.
- Since our last appearance in front of the Committee, SENTECH has made significant progress in ensuring alignment with the provisions of the Broadcasting Digital Migration (BDM) Policy, the requirements of our Customers – Broadcasting Operators and the expectations of the country's Citizens.
- SENTECH, however remains concerned with a number of uncertainties in the DTT ecosystem, most notably:
 - Digital Terrestrial Television Migration Regulations;
 - Industry Coordination Project Office/Team; and
 - Set-Top Box Subsidy Scheme
- As the country moves closer to the promised 'digital implosion', SENTECH is confident that the Committee, our Shareholder and all partners in the DTT ecosystem will provide the necessary impetus to realise this dream.

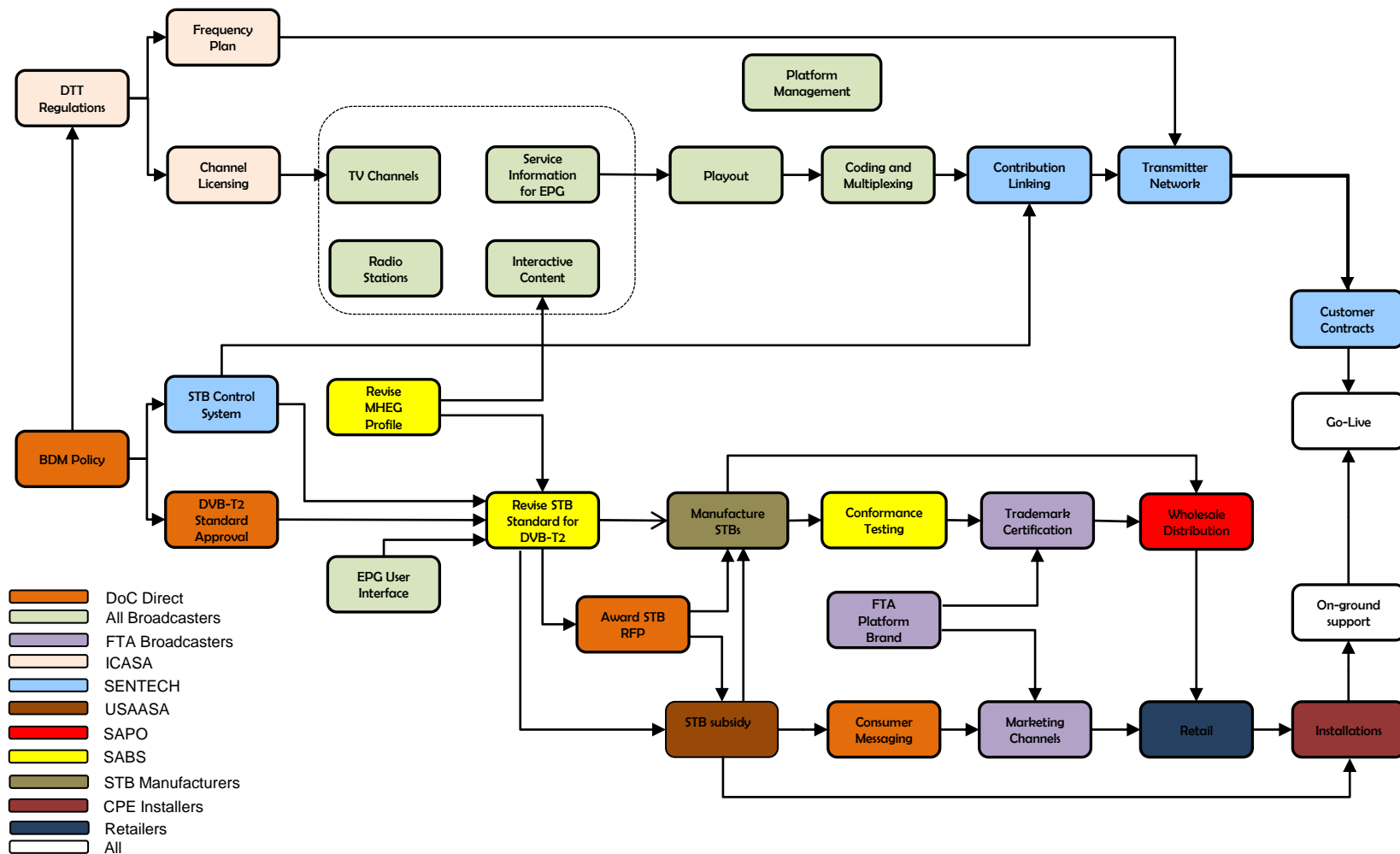
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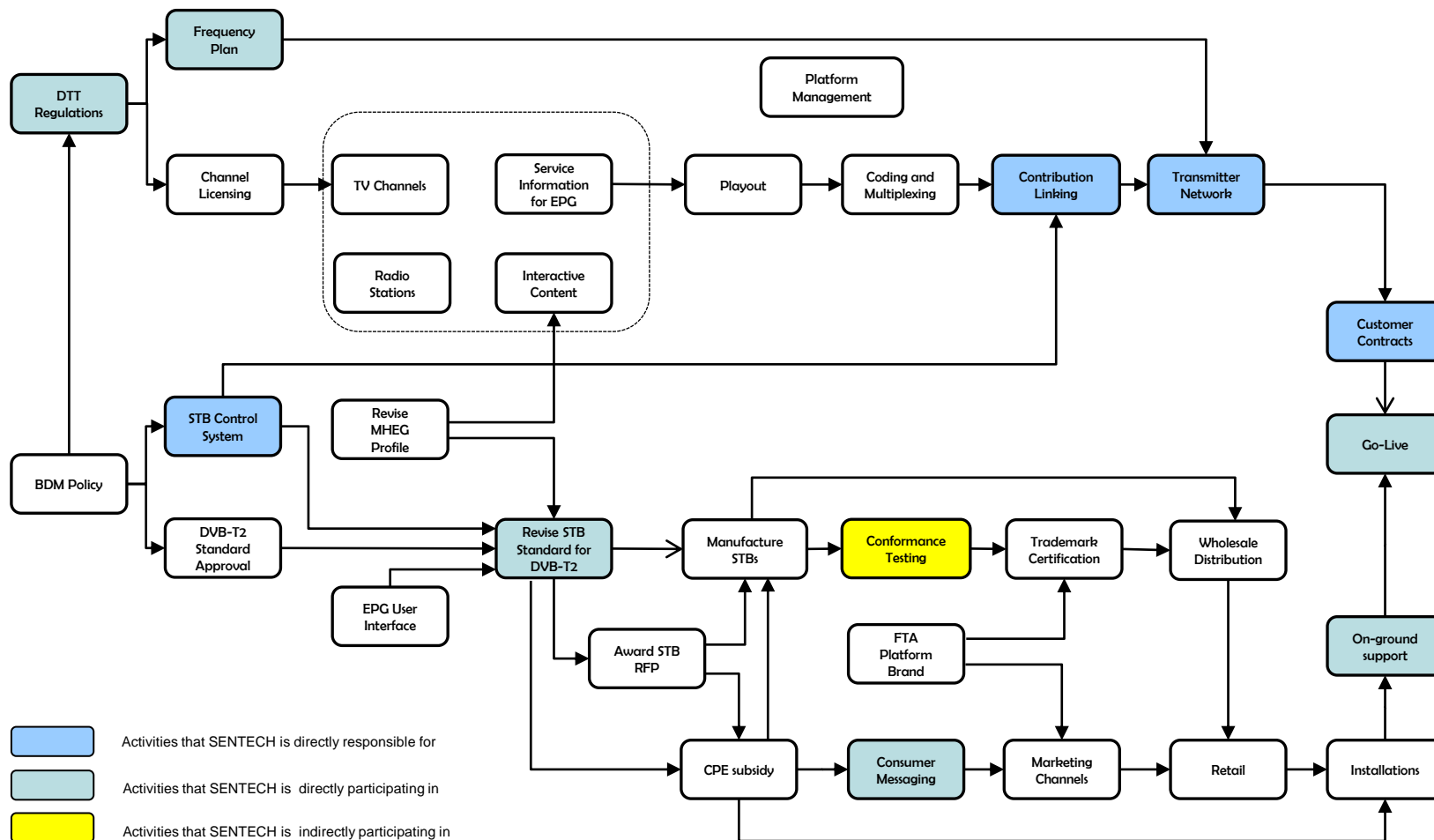
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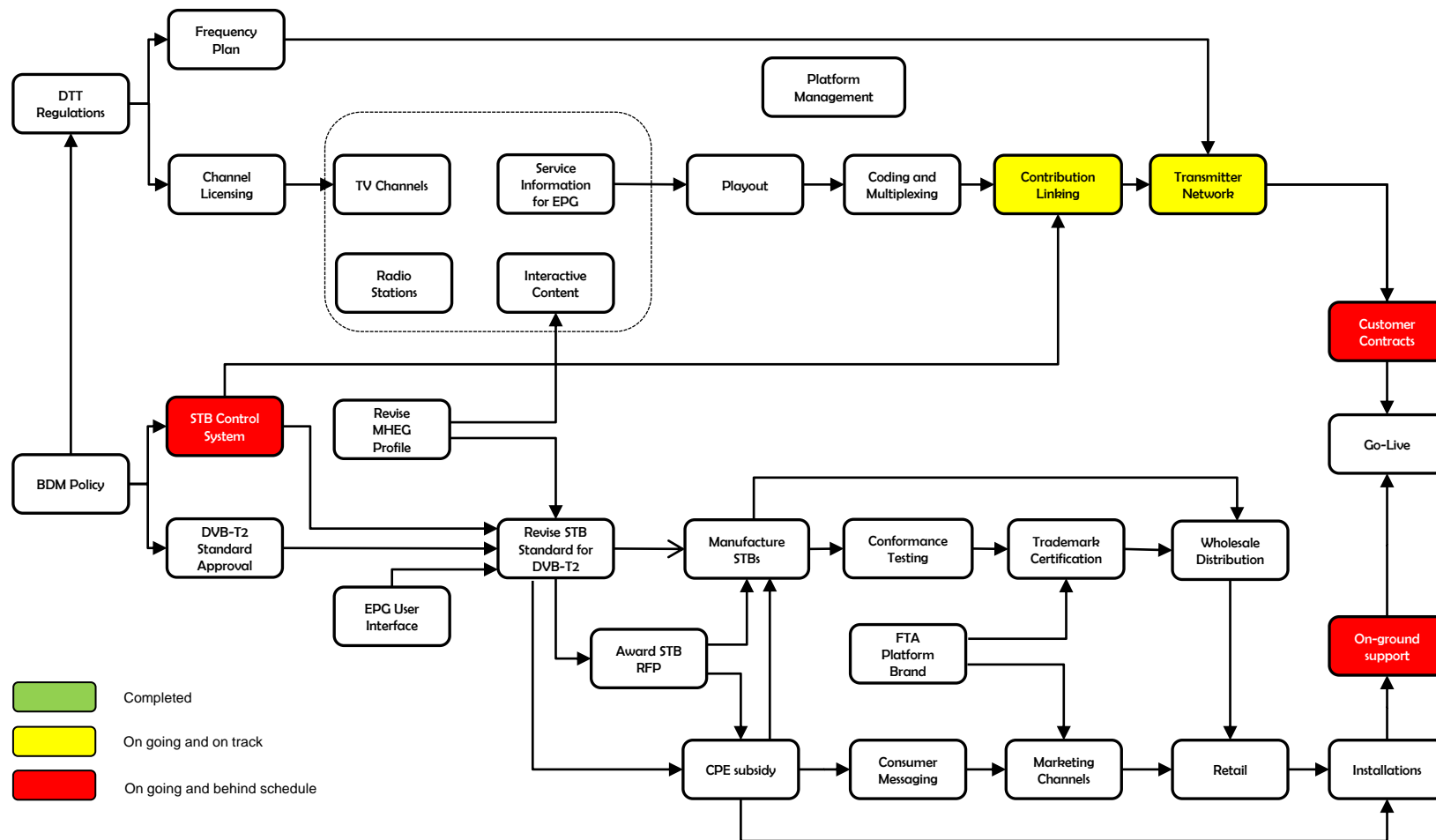
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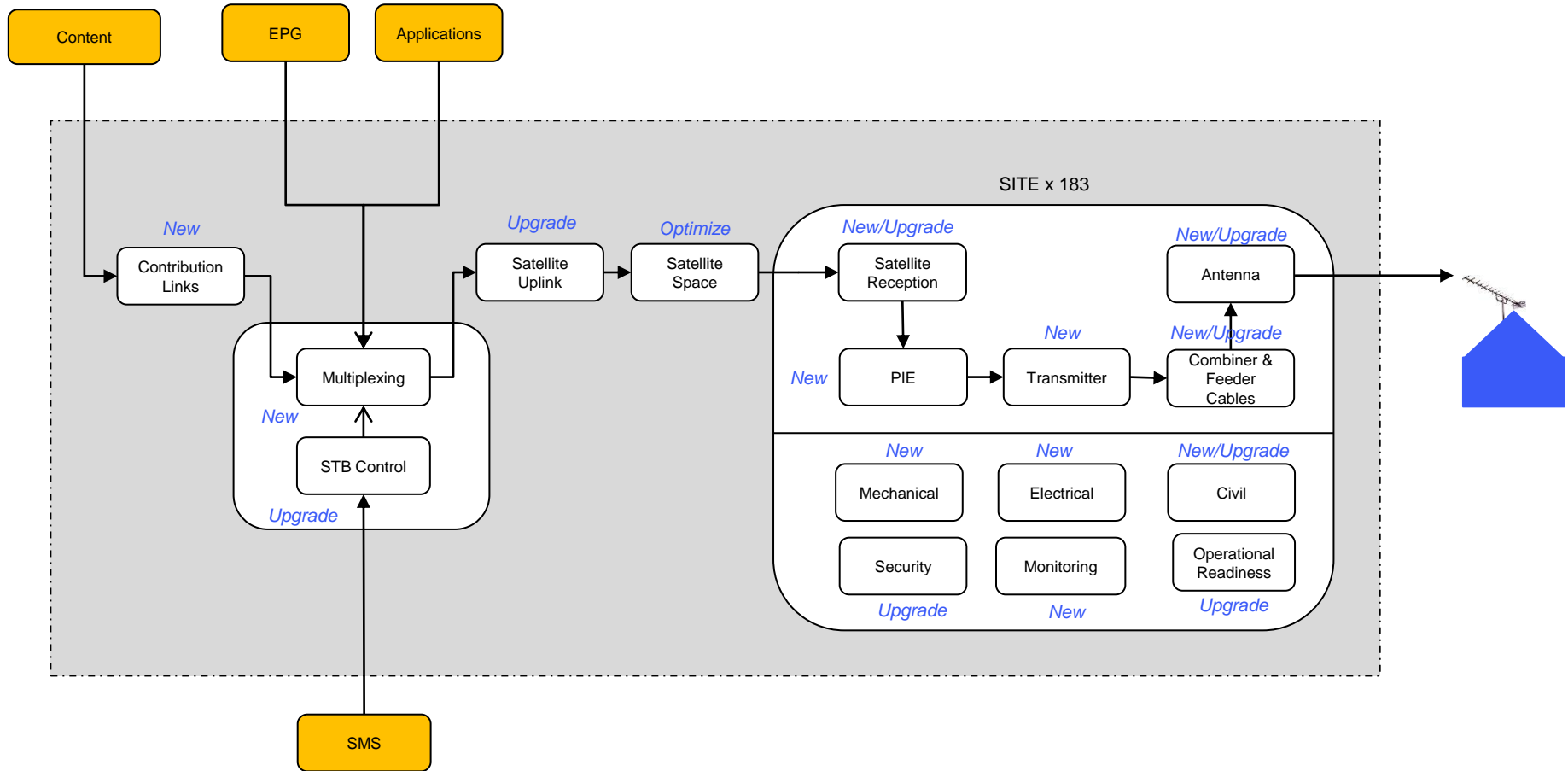
A Complex Ecosystem that Requires Central Coordination

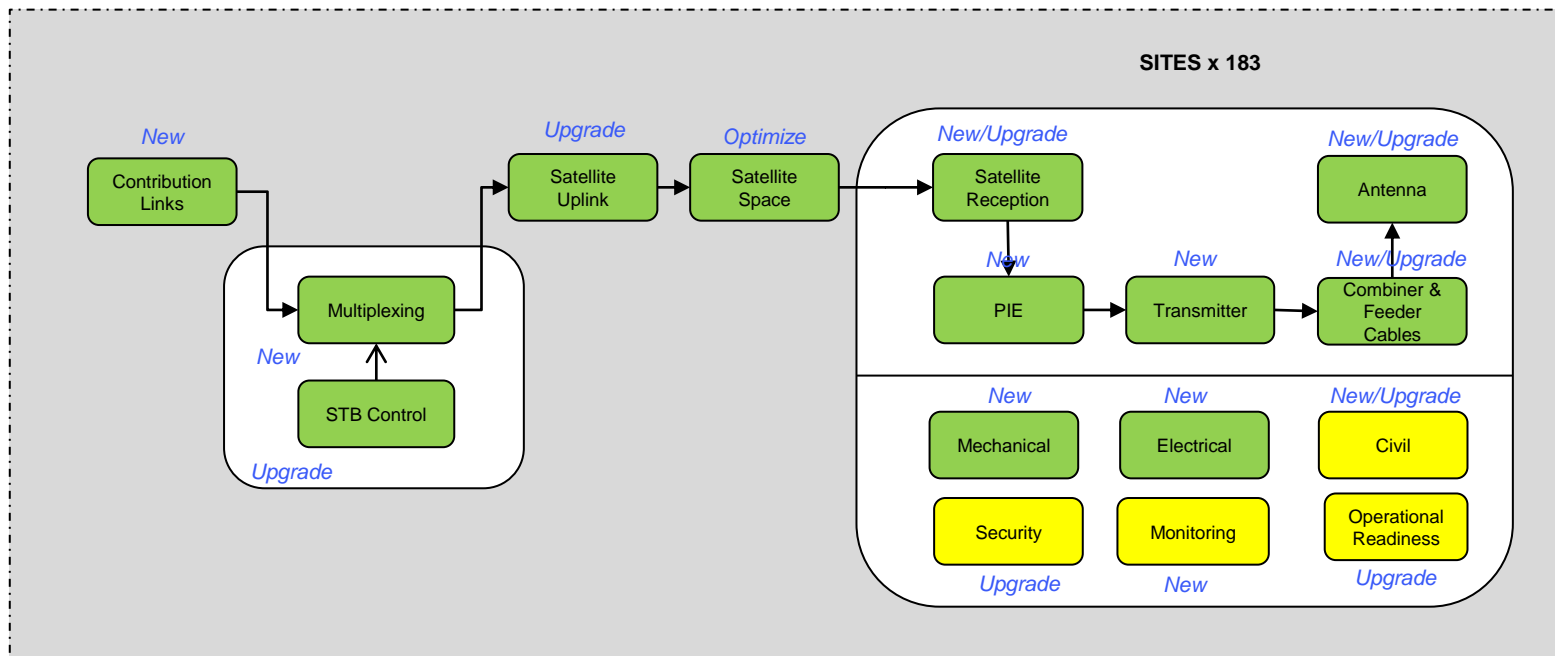


Acknowledgement: SABC









On going and on track



On going and under higher levels of risk management

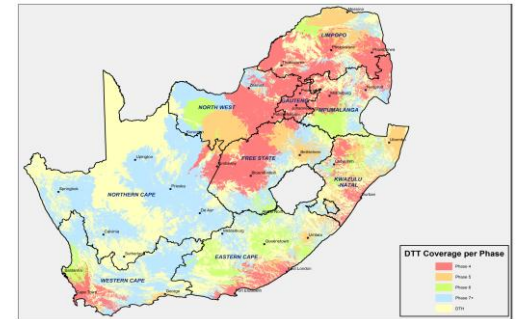
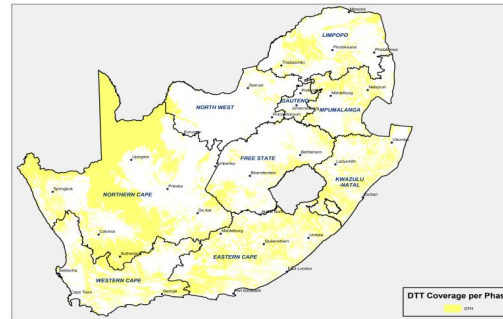
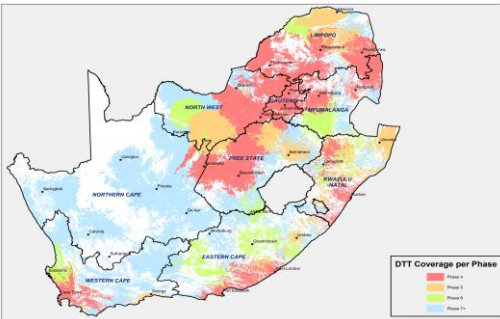
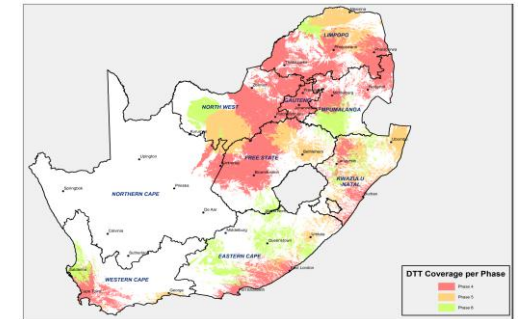
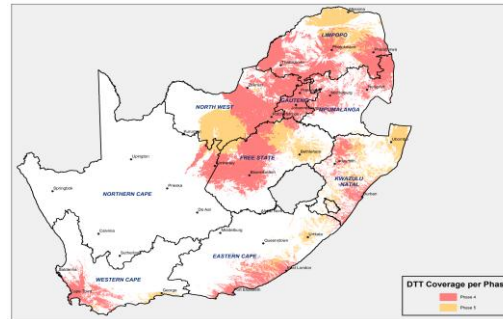
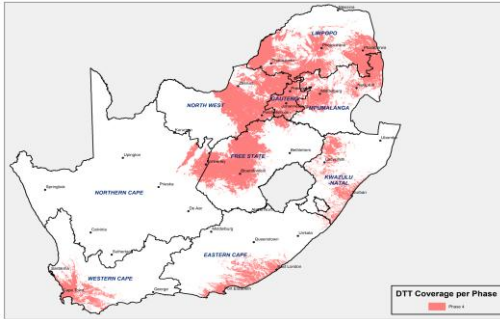
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- We noted that we had projected that by March 2012, we would have reached 74% population coverage, but submitted that we will only reach 60% coverage. We further submitted that the estimated period to cover the remaining 14 % had been affected by the need to capacitate our Supply Chain function at all levels of Governance.
- We further mentioned that SENTECH was focusing on converting completed DVB-T sites to DVB-T2 technology whilst continuing with the rollout of new DVB-T2 sites following change of the country's transmission standard.
- Below are Project macro-activities that we committed to executing during the 2012 financial year:
 - Trial DVB-T2 technology with clients.
 - Procure equipment, execute and complete Phase 5 & 6 of the network roll out.
 - Finalise DTT Tariff Model.
 - Establish content links between clients and SENTECH head-end systems.
 - Conclude service contracts with the broadcasters.

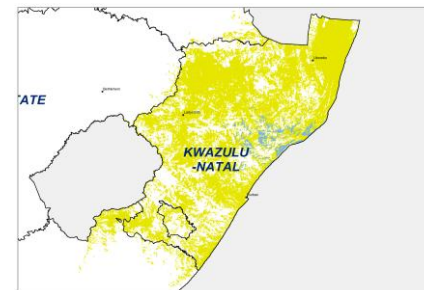
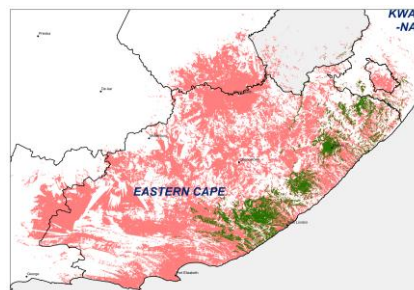
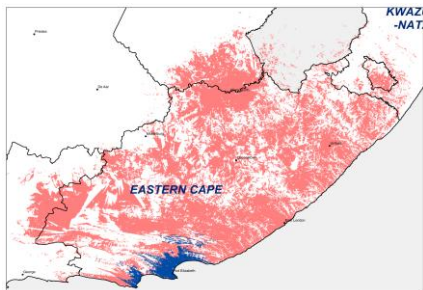
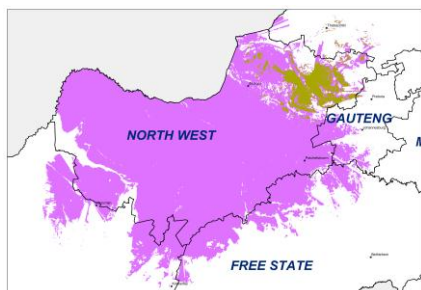
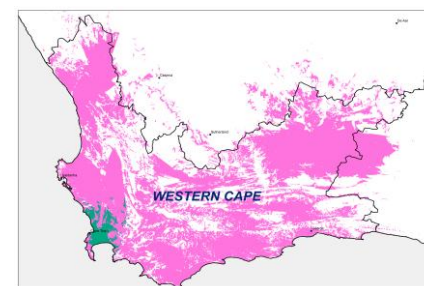
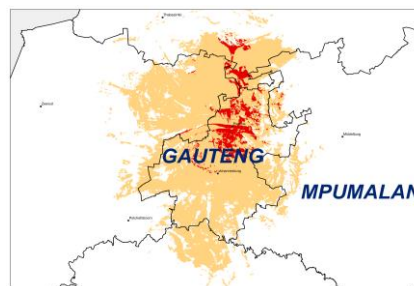
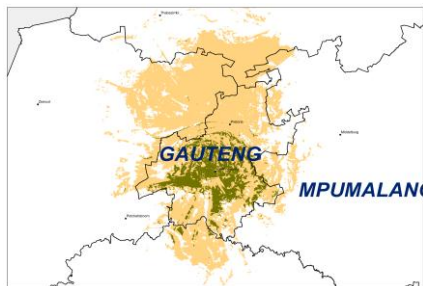
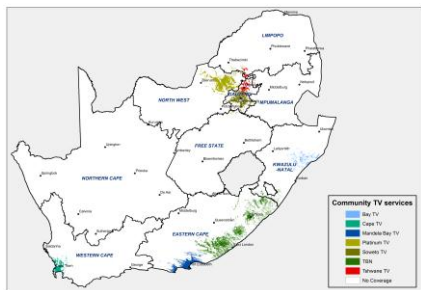
- We further submitted that a number of uncertainties in the ecosystem presents notable risks for the Project and the SENTECH, in particular:
 - Final Transmission Parameters
 - STB Control
 - Community Television Broadcasters coverage requirements
 - 'Rules of Operation' – PSI/SI Management
 - Pietermaritzburg Mast changes (CAA)
 - Alternative site for Clifton
 - Interference on Video Distribution Systems – Hotels, etc.
 - Cape Community Television frequency change
 - Despatch co-channel interference resolved

- We presented a phased roll-out plan that was driven by objective to maximise incremental population coverage.

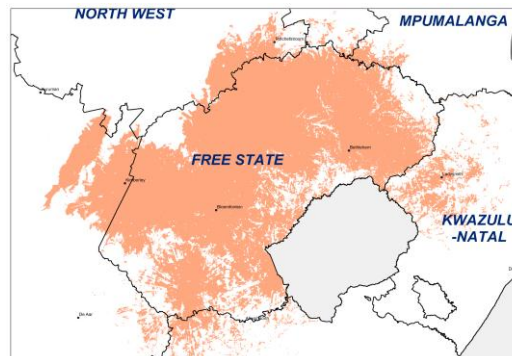
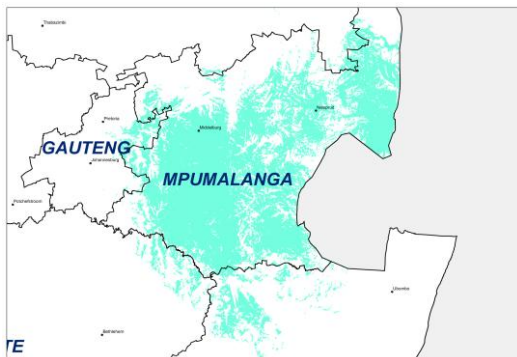
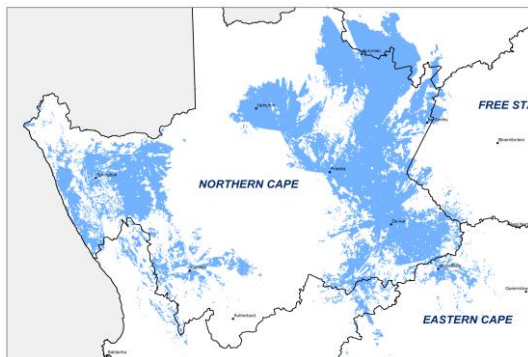


- However, we noted that this approach is not in the best interest of ensuring:
 - A balance of considerations for rural and urban populations;
 - Optimisation of the appreciation of resources of other related activities when the project is viewed from a national perspective.

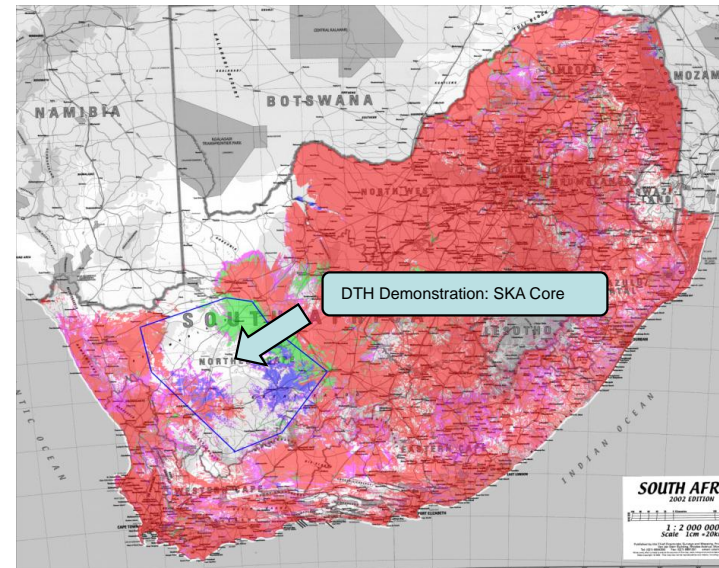
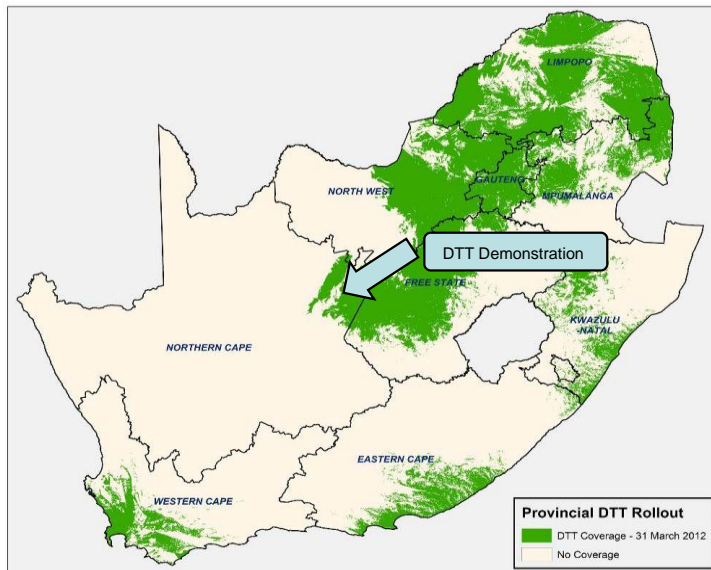
- We noted that not all Community Television broadcasters are included in the DTT Regulations and that there was scope, in the interest of maximizing spectrum usage (the 10% allocation on Multiplex 1) and strengthening the Public Interest objectives, to accommodate Community Television broadcasters during the dual illumination period.



- We also submitted that there were Provinces where there were no Community Television broadcasting services and pointed to Provinces where the 10% allocated capacity on Multiplex 1 would lie unused unless otherwise allocated by the regulator.



- We also presented the design for provision of Digital Television in areas that will not be covered by the DTT Network, with particular focus in Northern Cape region that will be impacted upon by the country's bid for the Square Kilometre Array (SKA) project.
- On 00 October 2012, the industry demonstrated its readiness to simultaneous launch DTT and Direct-To-Home (DTH) Satellite services when the Minister of Communications, Ms Dina Pule, launched the 'Proof of Concept' in Motswedimosa, Kimberley.



REVIEW OF PREVIOUS SUBMISSIONS: September 2011 State Of Readiness Presentation

- Lastly, we presented a budget for the expected Capital and Operational expenditure and noted that the Capital expenditure was underfunded by R294m whilst the Operating expenditure was underfunded by R146m.

Capex		2011/12				2012/13				2013/14				Total
		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	
EXPENDITURE	Period													
	Transmitters	1,150	38,875	68,746	-	39,475	56,418	27,204	1,414	8,176	28,969	52,509	-	322,936
	Programme input equip.	-	1,251	939	749	4,201	10,032	4,434	310	2,536	11,345	14,993	-	50,791
	Combiners	5,760	1,650	60	7,640	1,100	4,050	2,100	500	2,850	6,350	8,970	-	41,030
	Antennas/Mast	1,910	6,395	23,700	39,690	32,680	35,750	23,343	1,990	14,960	18,490	-	-	198,908
	Feeder cables	5,480	2,000	-	3,000	-	2,000	4,500	-	-	-	-	-	16,980
	Electrical	420	8,853	19,722	4,550	1,434	7,497	7,981	2,390	9,808	11,596	24,060	-	98,311
	HVAC	645	2,816	741	-	305	1,871	1,730	305	1,168	1,464	3,060	-	14,105
	Building	593	845	390	-	84	308	224	140	533	588	1,084	-	4,789
	Linking	-	-	3,131	6,262	2,609	6,784	2,087	-	-	-	-	-	20,873
	Head-end & ancillary	29,042	5,180	24,272	-	5,000	5,000	5,000	5,000	5,000	-	-	-	83,494
	TVRO's	-	1,502	1,222	1,251	4,078	4,021	2,034	-	-	280	-	-	14,389
	PM & Labour	210	300	750	180	180	420	450	150	480	630	900	-	4,650
	Total per quarter	45,210	69,667	143,673	63,322	91,146	134,152	81,087	12,199	45,511	79,712	105,576	-	871,255
	Total per quarter incl. VAT	51,539	79,420	163,787	72,187	103,907	152,933	92,439	13,907	51,882	90,872	120,357	-	993,231
	Cumulative Total	51,539	130,960	294,747	366,934	470,841	623,774	716,213	730,120	782,002	872,874	993,231	-	
FUNDING	Phase 1-5 roll over	35,585	-	-	-	-	-	-	-	-	-	-	-	35,585
	Phase 5 roll over	51,000	-	-	-	-	-	-	-	-	-	-	-	51,000
	Phase 3-5 balance drawdown	110,000	-	-	-	-	-	-	-	-	-	-	-	110,000
	New Drawdown: Phase 5 - 6	-	79,500	79,500	-	-	-	-	-	-	-	-	-	159,000
	New drawdown: Phase 6	-	-	-	-	83,475	83,475	-	-	-	-	-	-	166,950
	New drawdown: Phase 7	-	-	-	-	-	70,440	105,660	-	-	-	-	-	176,100
	Total	196,585	79,500	79,500	-	83,475	153,915	105,660	-	-	-	-	-	698,635
	Cumulative Total	196,585	276,085	355,585	355,585	439,060	592,975	698,635	-	-	-	-	-	
Surplus / (Deficit)		145,046	145,125	60,838	(11,349)	(31,781)	(30,799)	(17,578)	(31,485)	(83,367)	(174,239)	(294,596)	-	(294,596)
Opex														
Expendi Expenditure	16,815	20,237	23,236	32,217	31,563	31,563	31,563	31,563	52,466	52,466	52,466	-	376,152	
Cumulative Expenditure	16,815	37,052	60,288	92,505	124,067	155,630	187,192	218,755	271,221	323,686	376,152	-		
Funding	-	58,000	-	-	54,000	50,000	38,000	-	-	-	-	-	200,000	
Roll over	31,000	-	-	-	-	-	-	-	-	-	-	-	31,000	
Cumulative Funding	31,000	89,000	89,000	89,000	143,000	193,000	231,000	231,000	231,000	231,000	231,000	-		
Surplus / (Deficit)	14,185	51,948	28,712	(3,505)	18,933	37,370	43,808	12,245	(40,221)	(92,686)	(145,152)	-	(145,152)	
Net Surplus / (Deficit)	159,231	197,074	89,550	(14,854)	(12,848)	6,571	26,229	(19,240)	(123,588)	(266,925)	(439,748)	-	(439,748)	

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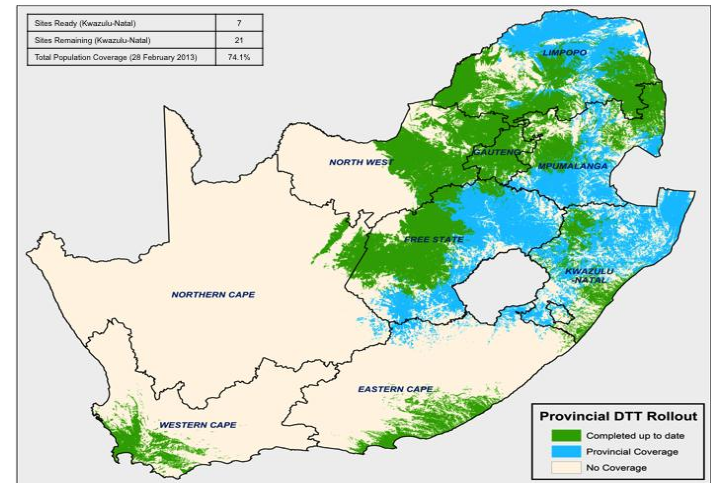
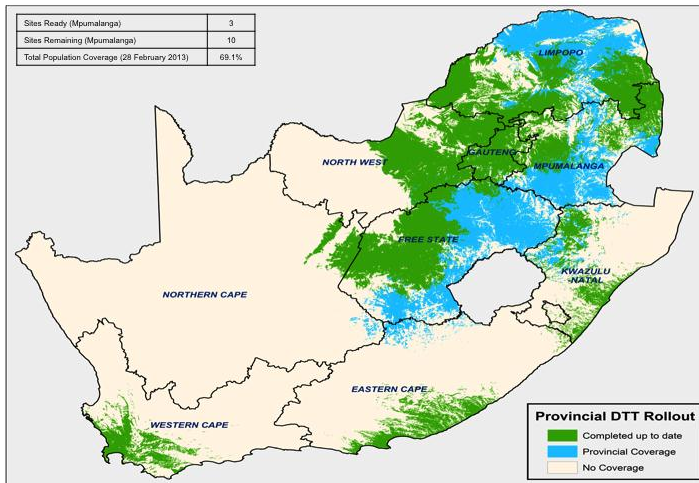
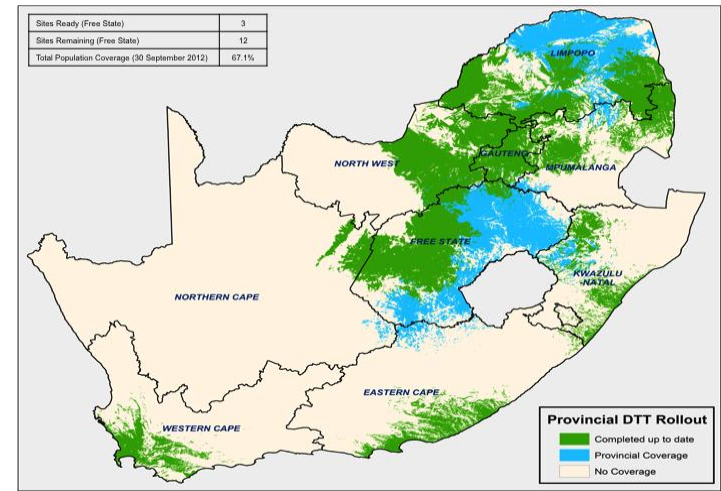
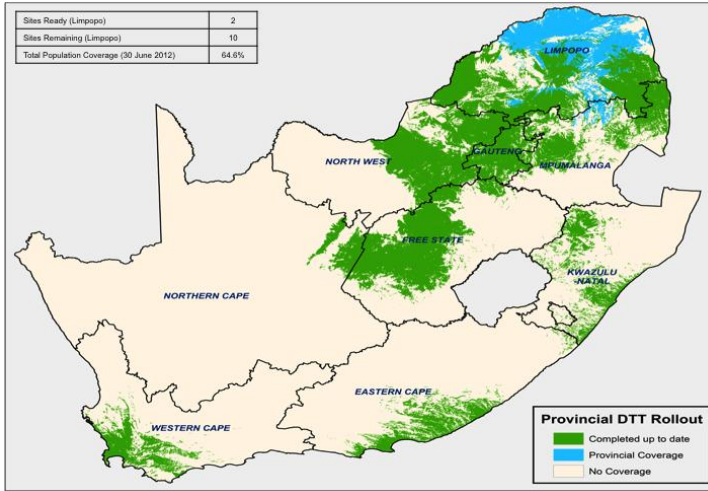
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- In its Corporate Plan for MTEF 2012-2015, SENTECH noted that the Minister had cautioned that the country's commitment to complete Analogue Switch-Off (ASO) by 2013 may not be met as a result of pending issues within the DTT ecosystem.

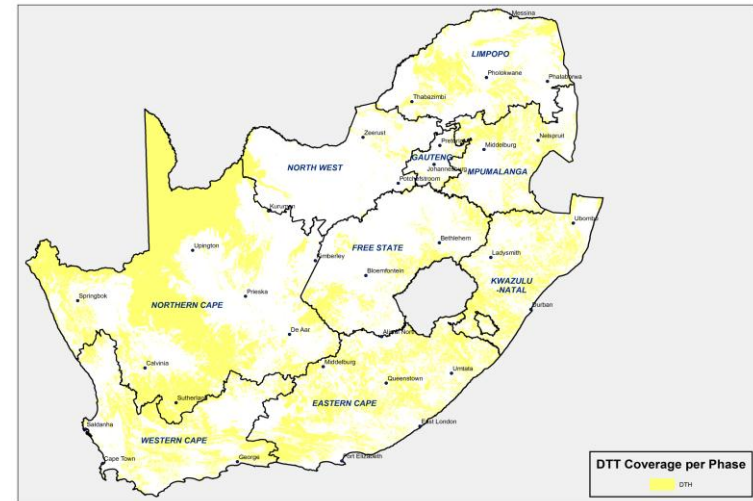
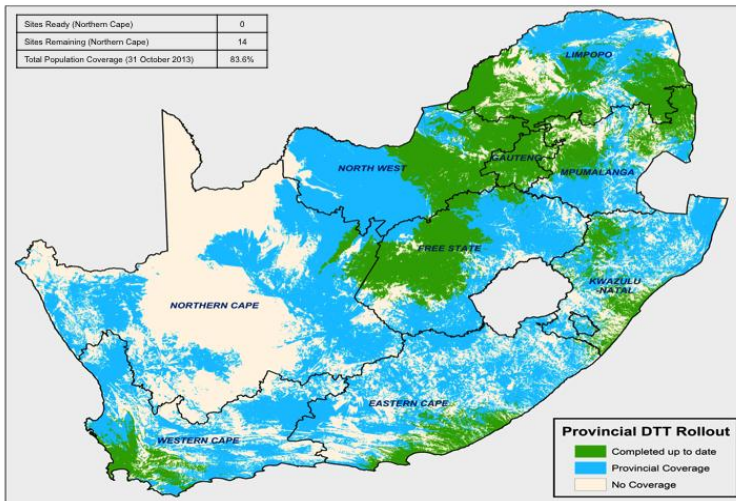
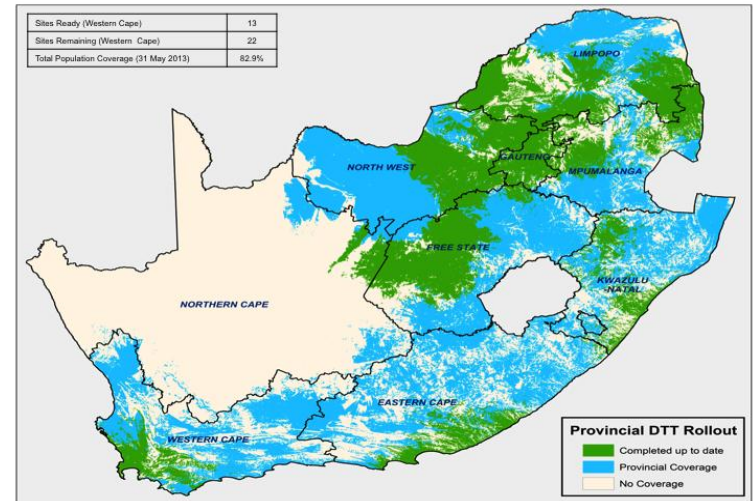
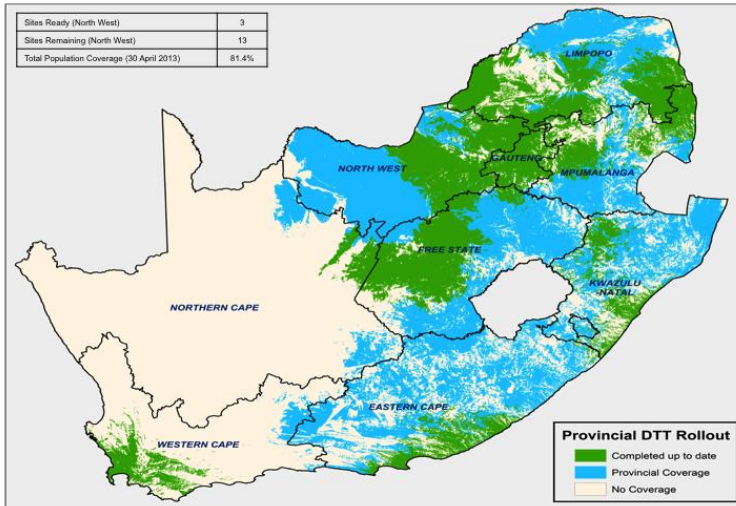
- The Minister however made a commitment that there will be a launch during the 3rd quarter of the year ahead; and that the launch would have the following objectives:
 - Passage of the amended BDM Policy by the Minister
 - Passage of strategies dealing with STB ownership support and the STB manufacturing by Cabinet
 - Passage of the amended DTT migration regulations by ICASA
 - Network coverage in all provinces of the country by SENTECH
 - Content readiness by DTT broadcasters (SABC, e.tv, MNet and Community broadcasters)
 - Availability of STBs in the market

- SENTECH further noted that all key players in the DTT ecosystem have committed to both the ASO and Digital Switch-Over (DSO) timelines; and that the industry at large will work towards adopting a comprehensive and coordinated implementation plan for DTT.

REVIEW OF PREVIOUS SUBMISSIONS: Corporate Plan: MTEF 2012 - 2015



REVIEW OF PREVIOUS SUBMISSIONS: Corporate Plan: MTEF 2012 - 2015



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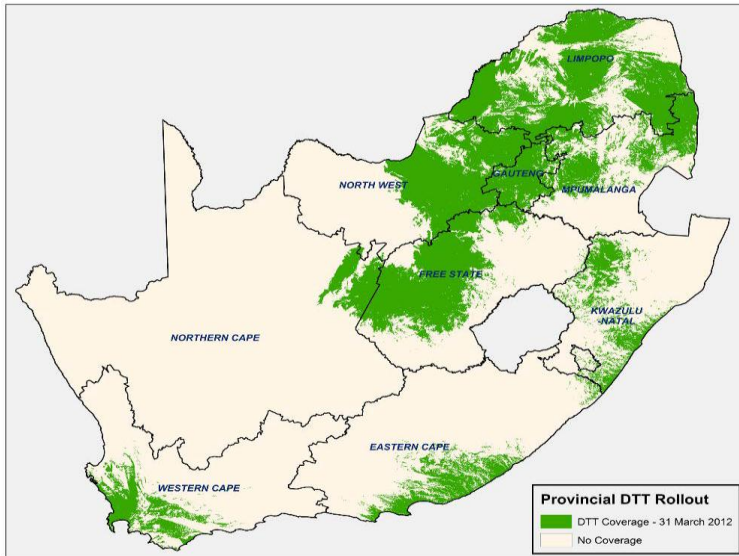
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ISSUE	DESCRIPTION		STATUS
SCM CAPACITY	Need to capacitate our Supply Chain Function at all levels of Governance.	✓	We have established new SCM processes, procedures and documentation that are compliant with the Preferential Procurement Policy Framework.
DVB-T2 CONVERSION	Trial DVB-T2 technology with clients	✓	This has been completed.
PROCUREMENT	Procure equipment, execute and complete Phase 5 & 6 of the network roll out.	↑	On the basis of the new SCM systems, we have now successfully processed 90% of tenders by value and more than 65% by quantity. The remaining items are related to purchase of test and measurement equipment and site buildings.
COMMERCIAL	Finalise DTT Tariff Model	↑	We have completed our tariff model, generated draft tariffs and continue to engage broadcasters on the new tariff regime.
	Establish content links between clients and SENTECH head-end systems.	↑	SABC content links are established and we continue to work with other customers on their own contribution links.
	Conclude service contracts with the incumbent broadcasters	↑	We have presented draft contracts and SLAs to some of the customers as part of the continuing engagement on new commercial terms.
TECHNICAL	Final Transmission Parameters	↑	This is on-going with broadcasters and the Regulator and assisted by the use of DVB-T2 mPLP in transmission.
	STB Control	↓	The issue of what constitutes STB Control, on which STBs it should be applied and who should manage it has been sent to Court.
	Community Television Broadcasters requirements	↑	This has partly been resolved and community broadcasters are now included in DTT plans.
	'Rules of Operation' – PSI/SI Management	↑	This is on-going with the broadcasters
	Pietermaritzburg Mast changes (CAA)	✓	This has been completed
	Alternative site for Clifton	↑	A new site has been identified. Currently processing necessary municipal approvals.
	Interference on Video Distribution Systems	↑	Due to the fact that the usage of frequencies is unregulated, we will continue to address the issue on case-by-case basis as we switch on transmitters. The Cape Town situation has been dealt with.
	Cape Community Television frequency change	↓	This is on-going with the Cape TV and the Regulator.
	Despatch co-channel interference resolved	✓	The specific issue has been completed, but general problem will be dealt with on case-by-case basis.

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Transmitter Network For 60% Population Coverage



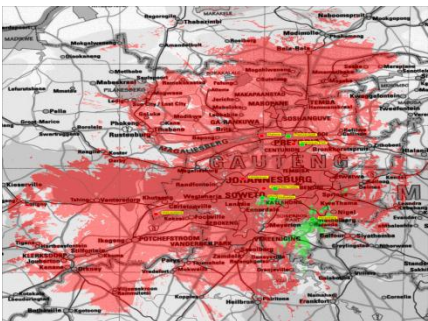
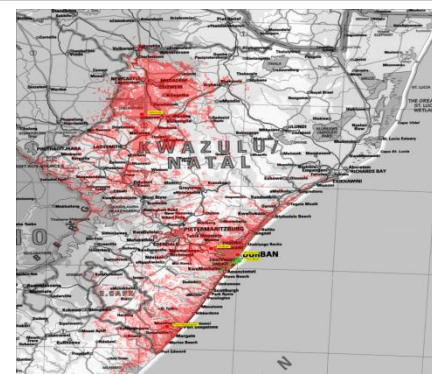
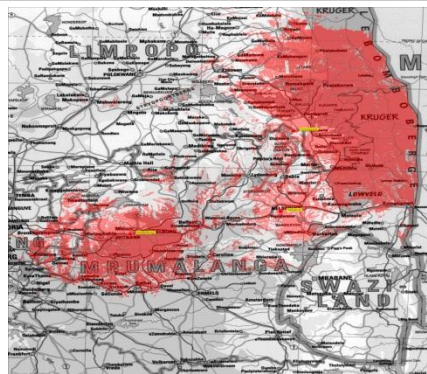
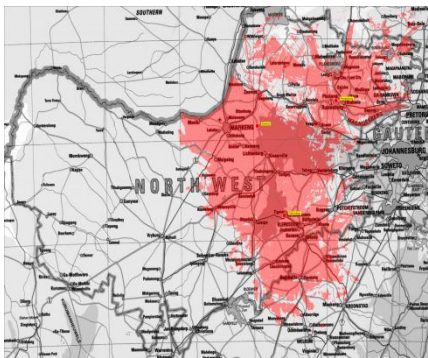
	Contribution		60% DVB-T2 Provincial Coverage		60% DVB-T2 National Coverage	
	Population	Geography	Population	Geography	Population	Geography
Gauteng	22%	2%	99%	89%	22%	1%
Limpopo	11%	10%	56%	63%	6%	6%
Free State	6%	11%	59%	41%	3%	4%
Mpumalanga	7%	6%	55%	40%	4%	3%
Kwazulu-Natal	21%	8%	49%	20%	10%	2%
Eastern Cape	13%	14%	34%	11%	5%	2%
North West	6%	8%	79%	47%	5%	4%
Western Cape	10%	11%	79%	12%	8%	1%
Northern Cape	2%	31%	28%	3%	1%	1%

* Based on Statistics SA 2010 population estimates

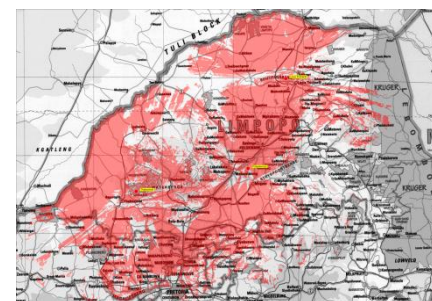
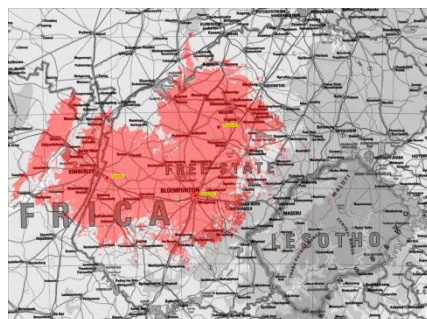
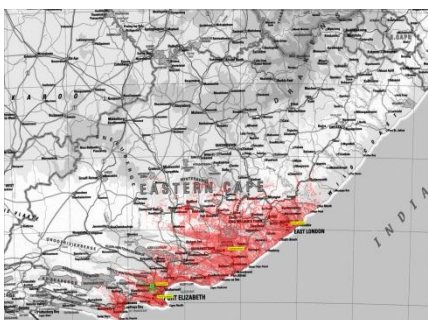
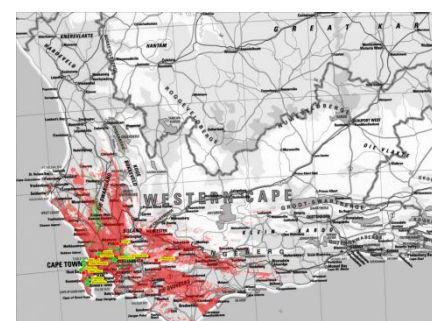
- The current coverage is based on plans that were made in 2006;
- However, the DTT coverage still touches every province even though there is a skew towards urban areas;
- The provincial rollout programme moving forward will ensure that moving forward, there is always a balance between rural and urban areas.

	Rural	Urban
Launch (60% roll-out)	12%	49%
Gauteng	9%	91%
Limpopo	82%	18%
Free State	22%	78%
Mpumalanga	51%	49%
Kwazulu Natal	43%	57%
Eastern Cape	52%	48%
North West	55%	45%
Western Cape	6%	94%
Northern Cape	26%	74%
TOTAL	36%	64%

STATUS UPDATE: Transmitter Network For 60% Population Coverage

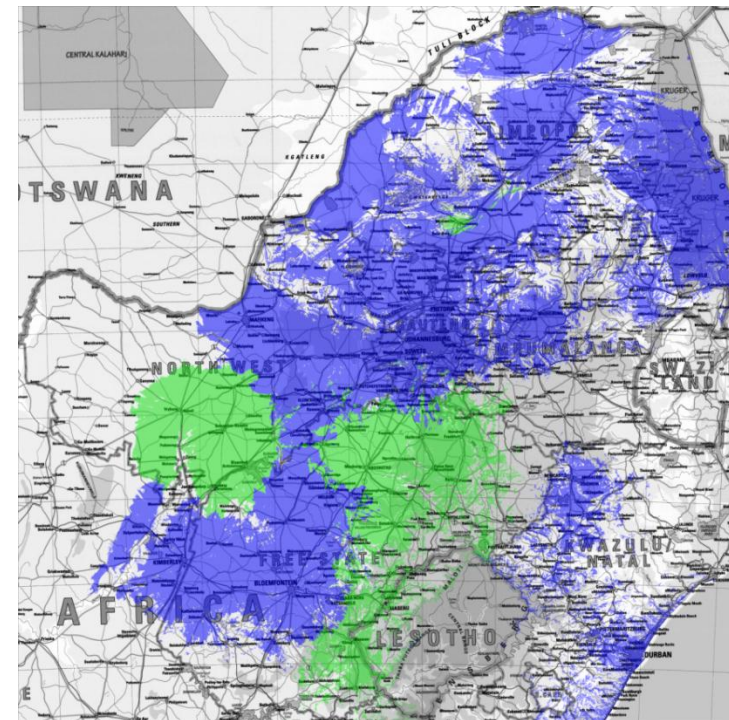


GAUTENG	LIMPOPO	KWAZULU NATAL	WESTERN CAPE	NORTH WEST
PRETORIA	THABAZIMBI	GLENCOE	TYGERBERG	KLERKSDORP
SUNNYSIDE	POTGIETERSRUS	DURBAN	FRANSCHHOEK	RUSTENBURG
WELVERDIEND	LOUIS TRICHARDT	OVERPORT	VILLIERSDORP	ZEERUST
PRETORIA NORTH	HOEDSPRUIT	PORT SHEPSTONE	CAPE TOWN	
MENLO PARK		THE BLUFF	AURORA	NORTHERN CAPE
HELDERKRUIN	MPUMALANGA	VERULAM	HOUT BAY	KIMBERLEY
JOHANNESBURG	NELSPRUIT		PAARL	
HEIDELBERG	MIDDELBURG	EASTERN CAPE	FISHHOEK	
LINMEYER		EAST LONDON	STELLENBOSCH	
MONDEOR	FREE STATE	PORT ELIZABETH	TABLE MOUNTAIN	
MULBARTON	THEUNISSEN	DESPATCH	SEA POINT	
BEZ VALLEY	BLOEMFONTEIN	GRAHAMSTOWN	SIMONSTOWN	



- By the end of November 2012, an additional 8 sites will be completed adding an additional 2.02% in Population coverage to 63% and Geographic coverage to 25%:

	Population Contribution	% Population Contribution	Geographic Contribution (km ²)	% Geographic Contribution
Kroonstad (FS)	209 291	0.42%	8 794	0.7%
Boesmanskop (FS)	59 036	0.12%	7 782	0.61%
Senekal (FS)	48 490	0.10%	6 720	0.53%
Petrus Steyn (FS)	94 097	0.19%	10 925	0.86%
Ladybrand (FS)	54 805	0.11%	4 516	0.35%
Witsieshoek (FS)	184 340	0.37%	1 164	0.09%
Nylstroom (LP)	34 771	0.07%	579	0.05%
Schweizer Reneke (NW)	324 601	0.65%	24 543	1.93%
TOTAL	1 009 431	2.02%	579	5.12%

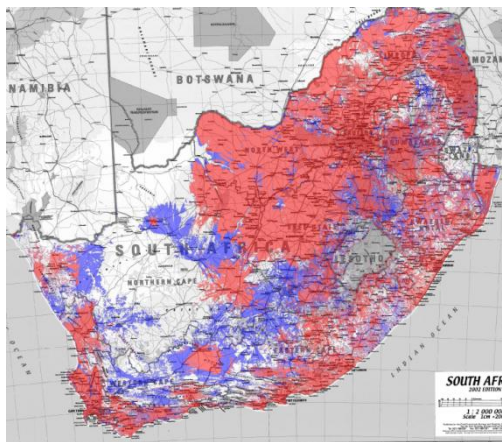


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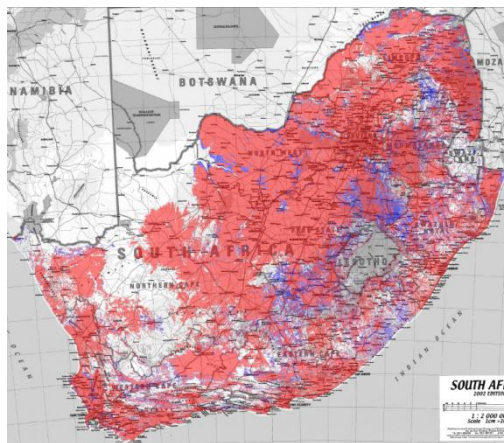
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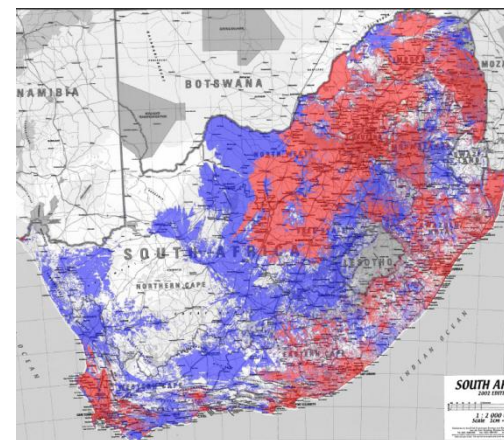
- All SABC channels will be transmitted from the same sites, with varying degrees of increases in both population and geographic coverage.



	SABC 1	DTT Mux 1
Population Covered	40 711 270	43 970 922
% of Total Population	81.4	87.9
% Change	8%	
Geographic Coverage (km ²)	581 940	789 020
% of Total RSA Area	45.8	62.1
% Change	36%	
Number of sites	146	183



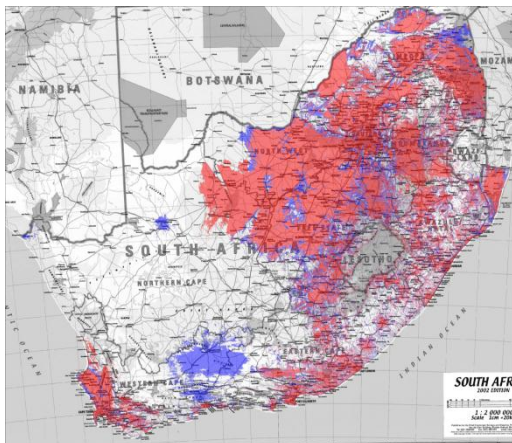
	SABC 2	DTT Mux 1
Population Covered	41 268 816	43 970 922
% of Total Population	82.5	87.9
% Change	7%	
Geographic Coverage (km ²)	742 390	789 020
% of Total RSA Area	58.4	62.1
% Change	6%	
Number of sites	179	183



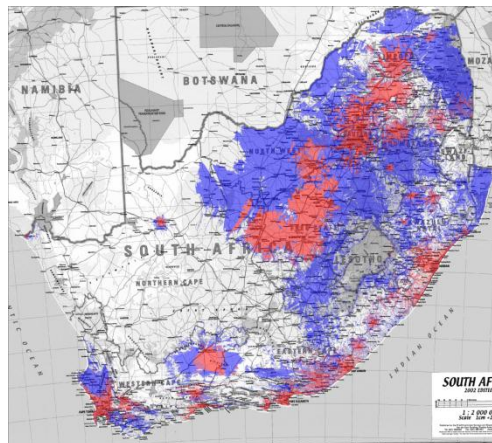
	SABC 3	DTT Mux 1
Population Covered	37 580 832	43 970 922
% of Total Population	75.2	87.9
% Change	17%	
Geographic Coverage (km ²)	377 770	789 020
% of Total RSA Area	29.7	62.1
% Change	109%	
Number of sites	104	183

 DTT  Analogue TV

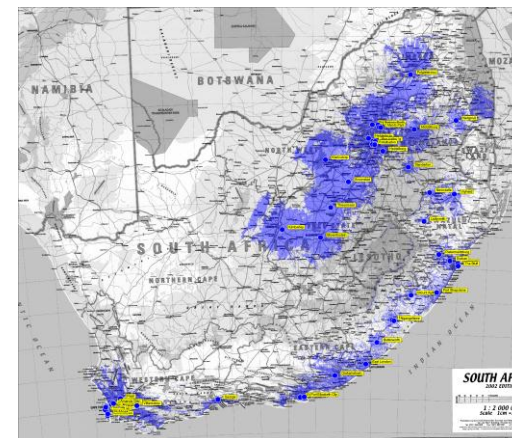
- The coverage requirements for e.tv and MNET remains a technical and financial challenge for SENTECH



	e.tv	DTT Mux 2*
Population Covered	34 737 660	40 682 924
% of Total Population	69.5	81.4
% Change	17%	
Geographic Coverage (km ²)	407 530	548 660
% of Total RSA Area	32.1	43.2
% Change	35%	
Number of sites	95	102



	MNET	DTT Mux 2
Population Covered	27 574 880	40 924 682
% of Total Population	55.1	81.4
% Change	48%	
Geographic Coverage (km ²)	155 060	548 660
% of Total RSA Area	12.2	43.2
% Change	254%	
Number of sites	58	102



	DTT Mux 2**
Population Covered	31 627 787
% of Total Population	63.2%
Geographic Coverage (km ²)	230 160
% of Total RSA Area	18.1
Number of sites	51

* e.tv and MNET are present at sites for DTT where either (one or the other) of them is present for ATV.

** e.tv and MNET are only present at sites for DTT where both of them are present for ATV

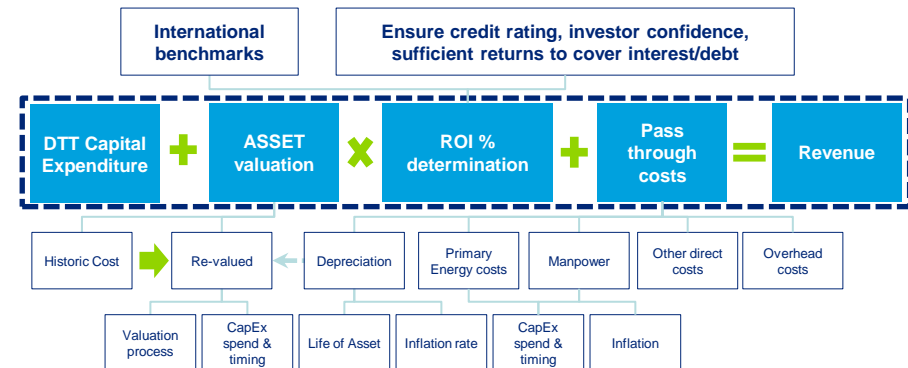
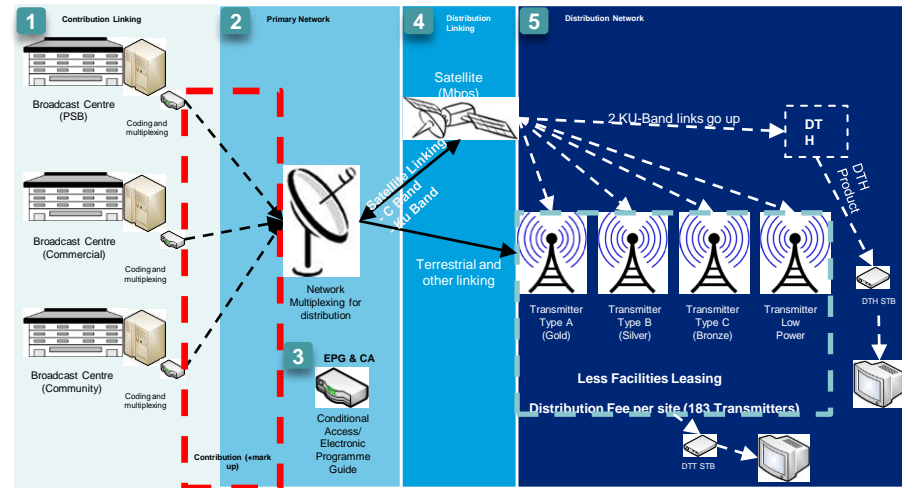
- We are in discussion with the broadcasters in finalizing these matters. However, we submit that their resolution may require Regulatory intervention, which we hope will be addressed in the final DTT Migration Regulations.

 DTT  Analogue TV

- The tariff model is based on consideration of a number of factors, including but not limited to:
 - the acceptance of the discretion that broadcasters retain on the elements of the SENTECH network that they may choose to use;
 - shared assets and operating costs; and
 - costs that vary depending on multiplexor allocations and coverage areas.

- The model is based on re-valuation of assets and consideration of operating costs specific to DTT and SLA commitments.

- The tariff model has been shared with Broadcasters and the Regulator

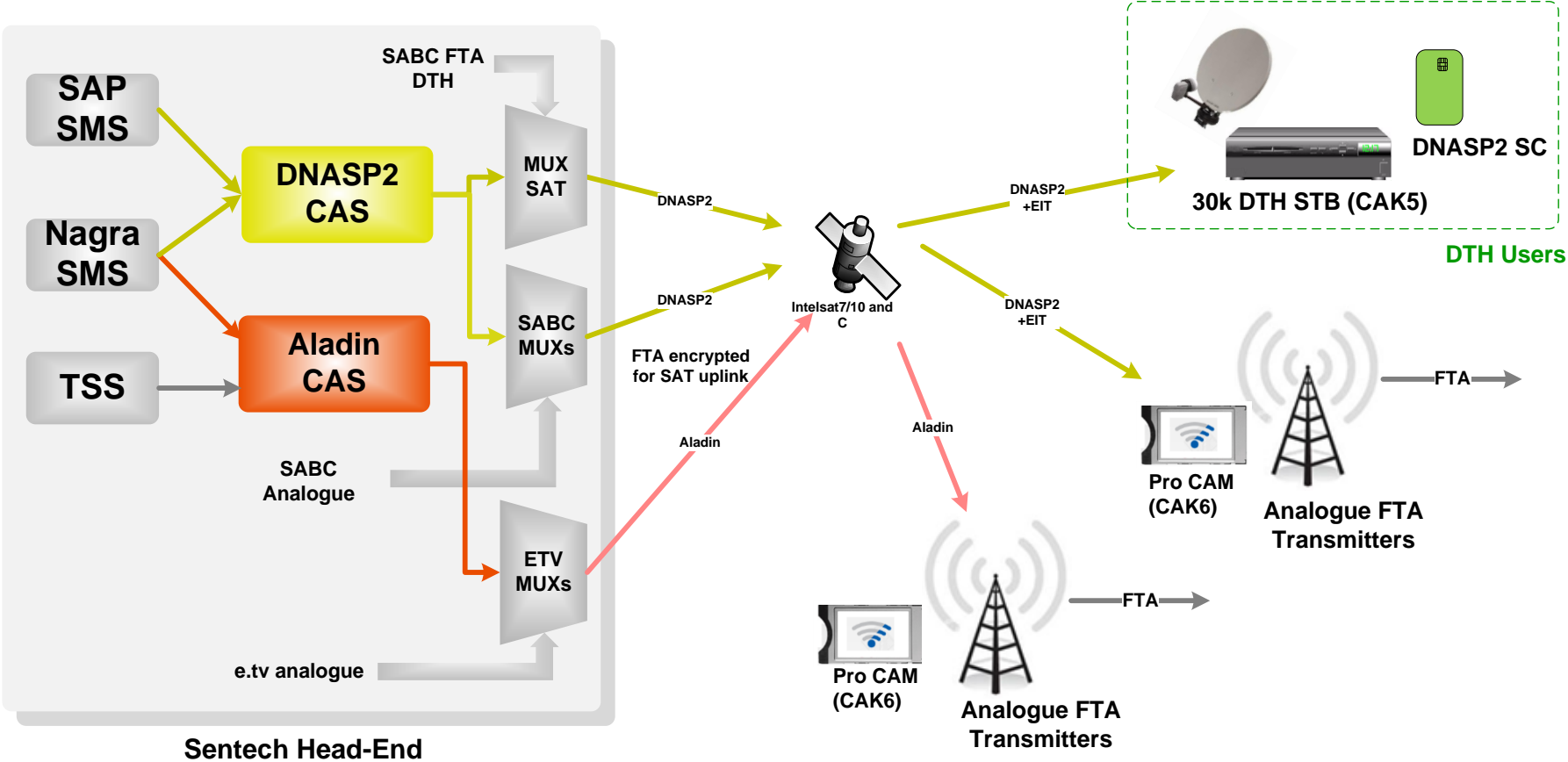


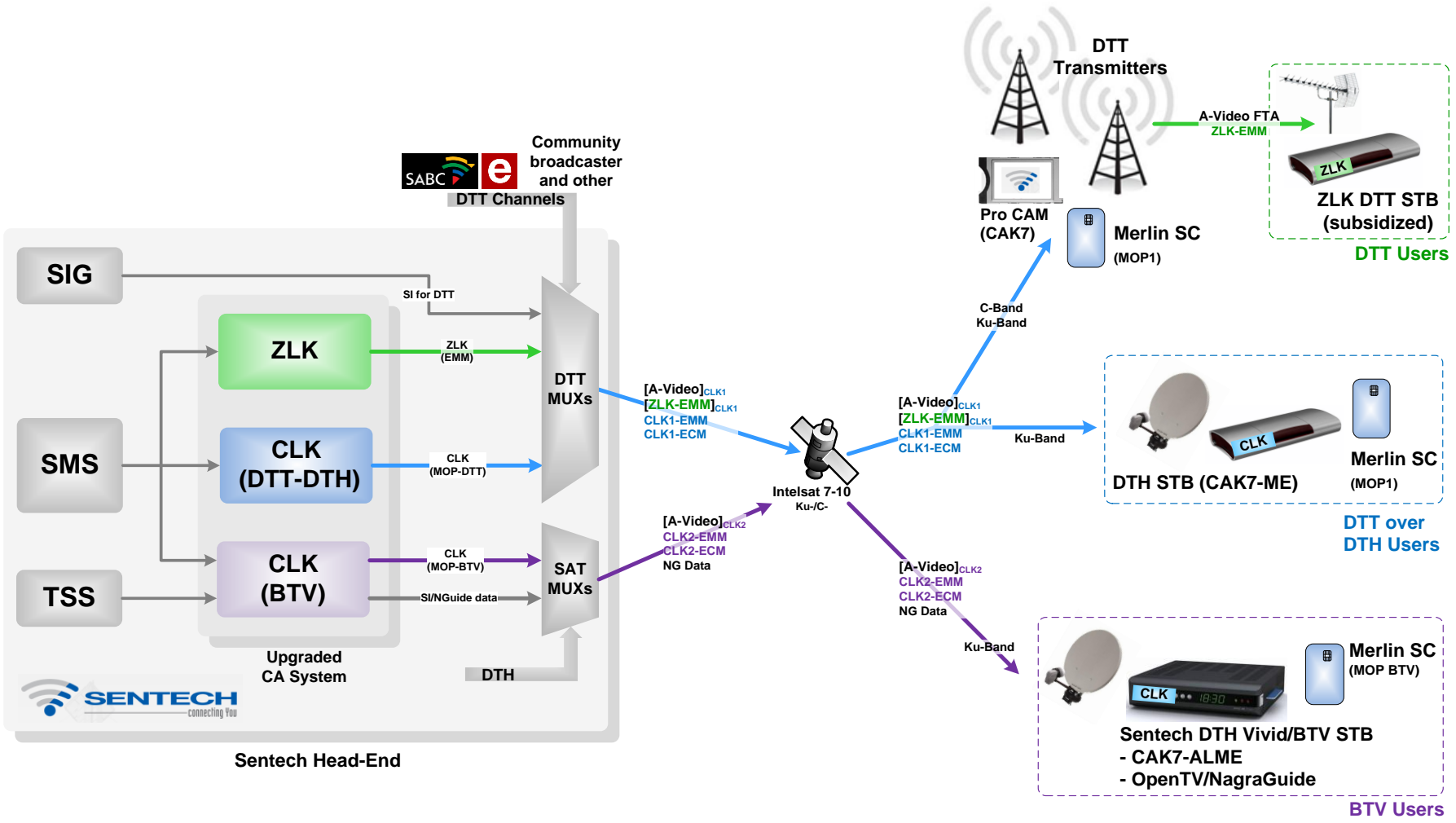
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- The amended Broadcast Digital Migration (BDM) Policy, provides that the STB must include a STB Control System to protect the investment by Government in the Subsidy Scheme;
- SANS 862 states that the main elements specified for security within the STB control function for government-subsidized STBS are:
 - a secure over-the-air software and bootstrap loader;
 - a mechanism to prevent STB decoders from functioning in non-RSA DTT networks;
 - STB Control System that will enable mass messaging.
- Furthermore, SANS 862 states that STB decoder manufacturers are responsible for the implementation of the security requirements specified by the Free-To-Air individual broadcasting service licensees in South Africa and for the proper configuration of the chipsets. In this regard, manufacturers can obtain the security requirements from the free-to-air individual broadcasting service licensees in South Africa or from their appointed agents (trusted third parties).

- A directive from Minister mandated SENTECH to establish and operate the STB control system. SENTECH understands that the scope of the directive does not necessarily include the STB User Interface (UI) and the Subscriber Management System (SMS) operations other than that for STB control operations. Furthermore, SENTECH's current understanding is that this mandate is limited to Government-subsidized STBs;
- In this regard, SENTECH has already started with the upgrade of its existing conditional access system (CA) to cater for the needs of some basic DTT functions such as distribution linking and the DTH gap filler system. A subset of this system will also be used for the STB control function for Government-subsidized STBs;
- This design will meet the minimum requirements of the BDM Policy, when read in conjunction with SANS 862;
- Currently various disputed issues around the STB control function, including but not limited to, its definition, applicability and ownership and control, have been brought to the South Gauteng High Court for resolution.

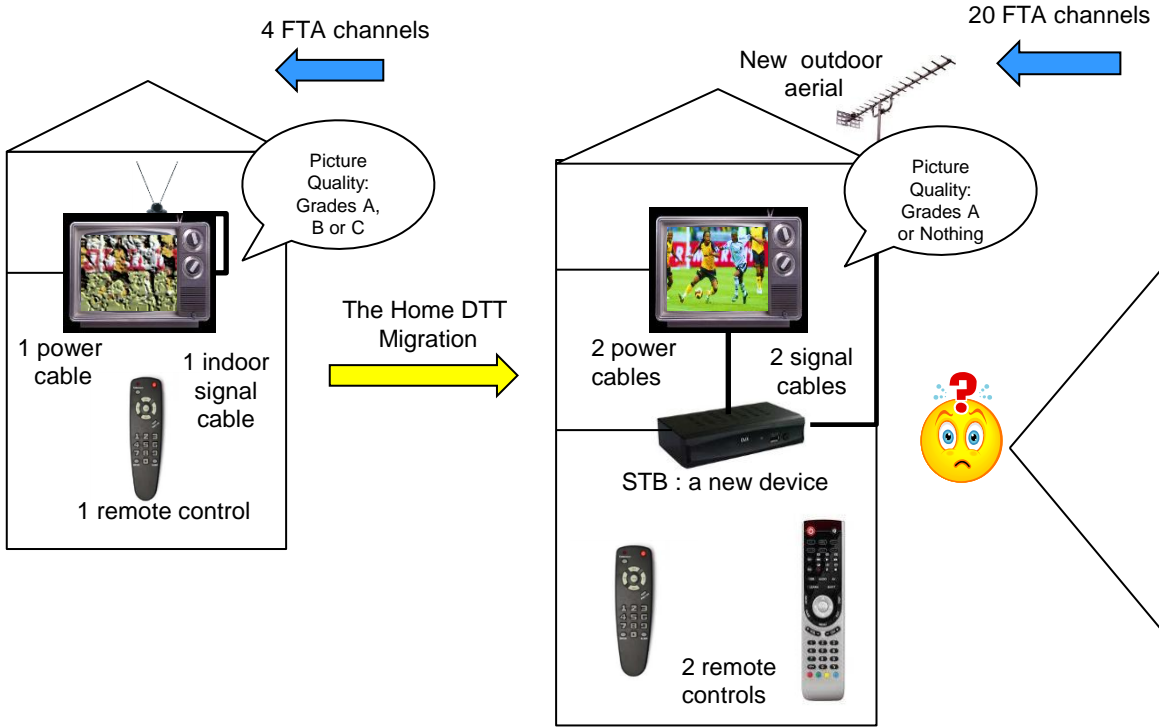




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- SENTECH has been asked by the DTT Project Office to assist in the establishment of a Contact Center that will provide Citizen support on all matters technical, including but not limited to matters related to signal reception and the general increased technical complexity of the home environment.
- The development of this Contact Center is currently in planning phase, but will be operational at the start of Commercial DTT services.
- Some of the key considerations that SENTECH is taking into account in modelling the Contact Center are:
 - Only 4 million of 12 million TV owning households are used to the complex home environment that will come with digital terrestrial television;
 - The remaining 8 million households will need support as they get used to the increased complexity in the homes;



Content Support



Logistic Support



Technical Support

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- In the MTEF 2012 – 2015 Corporate Plan, SENTECH submitted that the Analogue Switch-Off (ASO) date of June 2015 requires the Company to accelerate Network Infrastructure rollout.
- In order to meet this deadline, SENTECH will require all CAPEX funding for DTT to be allocated in the 2013/2014 financial year to enable procurement of capital infrastructure.

DTT CAPEX FUNDING (ZAR 000's)

FINANCIAL YEAR	2007	2008	2009	2010	2011	2012	2013	Cum to FY2013	2014	2015	Total
Capex											
Capital Received	95	120	150	160	51	269	166	1 011	305	172	1 488
Vat on funds received	(12)	(15)	(18)	(20)	(6)	(33)	(20)	(124)	(37)	(21)	(183)
Interest Earned up to March 2013	-	-	-	-	-	32	-	32	-	-	32
Net Capital funds received	83	105	132	140	45	268	146	919	268	151	1 337
Capital expenditure	(80)	(52)	(106)	(164)	(30)	(56)	(432)	(919)	(418)	-	(1 337)
Cumulative Capital fund balance	4	57	82	59	74	286	-	-	(150)	0	0

- Accordingly, SENTECH with the support of the Department of Communications has submitted a request to National Treasury for the allocation of the R172m in the coming financial year.

- In the MTEF 2012 – 2015 Corporate Plan, SENTECH further submitted that in terms of the rollout plan and the planned regional ASO's, the Company will require Dual-Illumination funding for the 2014 and 2015 financial years.
- This funding is necessary in order charging broadcasters for the digital signal until national ASO.
- The requisite additional funding allocation of R207 million as shown below.

DTT DUAL-ILLUMINATION FUNDING REQUIREMENTS

FINANCIAL YEAR	2007	2008	2009	2010	2011	2012	2013	Cum to FY2013	2014	2015	Total
Opex (dual illumination)											
Opex Received	-	-	-	100	20	120	-	240	-	-	240
Vat on funds received	-	-	-	(12)	(2)	(15)	-	(29)	-	-	(29)
Interest Earned up to March 2013	-	-	-	-	-	-	8	8	-	-	8
Net Opex funds received	-	-	-	88	18	105	8	219	-	-	219
Opex expenditure	-	-	(16)	(39)	(39)	(39)	(78)	(211)	(108)	(107)	(426)
Cummulative Capital fund balance	-	-	(16)	33	11	78	8	8	(100)	(207)	

- SENTECH previously submitted a business case for the funding of the STB Control System to the Department of Communications in order to fulfil the objectives of the amended BDM Policy. The request was made as an adjustment to the budget allocated to SENTECH for the financial year 2012/2013.
- Subsequently, National Treasury has approved SENTECH's request to retain interest earned on DTT CAPEX & OPEX funding. The total cost for the STB Control as beneath:

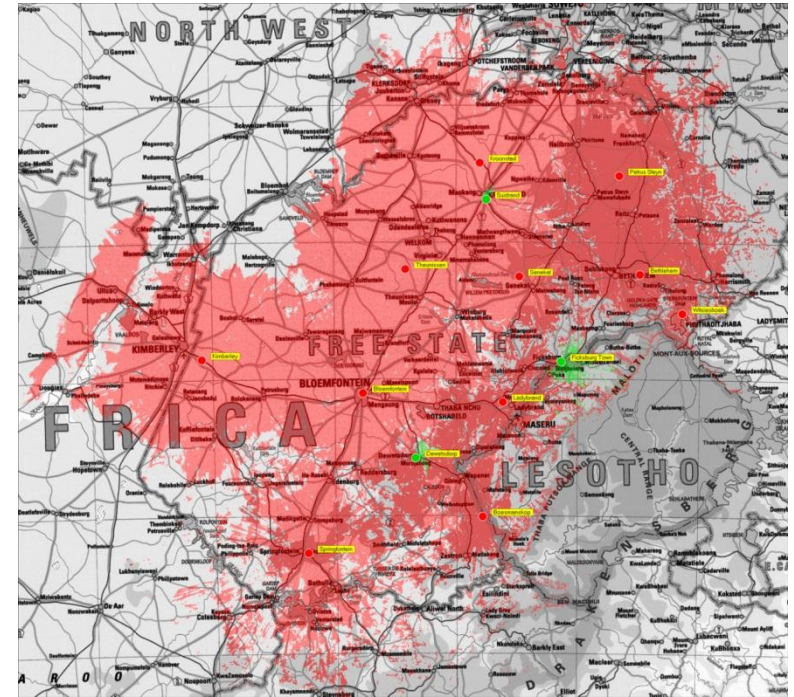
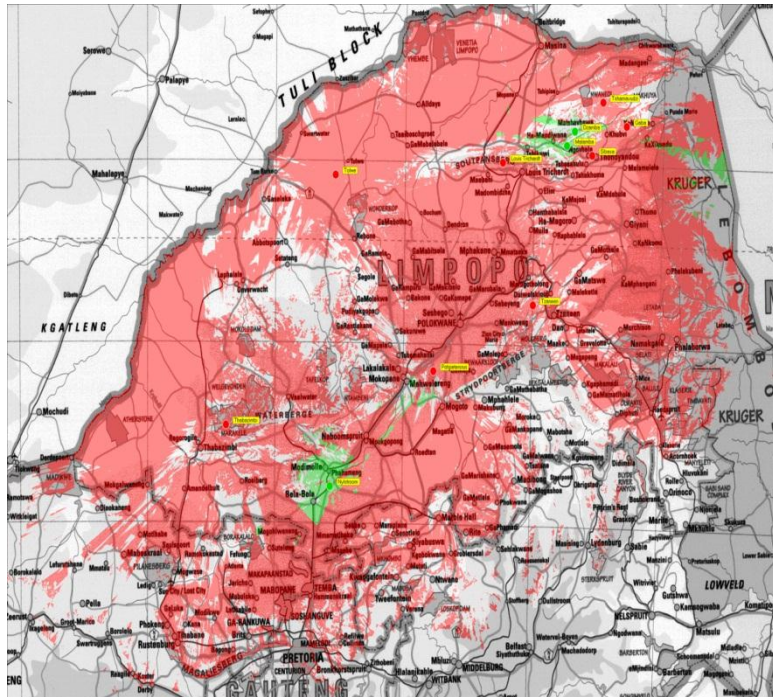
	ZAR
CAPEX	1 253,700
IMS Upgrade	533,700
Adaptation & Installation Service	450,000
Professional Services	270,000
<hr/>	
OPEX	1 947,000
Hardware Maintanance (Annual Cost)	219,000
STB Mainatance (Annual Cost)	1 728,000
<hr/>	
TOTAL	3 200,700

- Accordingly, the STB Control CAPEX and OPEX for year 1 are now fully funded. SENTECH, however submits that there are additional costs associated with STB Control, and these will be provided for in the STB RFP between the STB Control Vendor, STB Manufactures and the Department of Communications.

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DTT schedule_26 Oct							
ID	Task Name	Duration	Start	2012			
				Qtr 1	Qtr 2	Qtr 3	Qtr 4
0	DTT Programme_Ver 1.5E [2011]	1564 days	Mon 07/04/02				
1	80% Terrestrial Coverage	1564 days	Mon 07/04/02				
2	Project Resourcing	40 days	Mon 12/07/09				
17	PIE 60% upgrade	74 days	Mon 12/09/03				
76	Regionalisation	120 days	Mon 12/07/02				
96	Transmitter deliveries	27 days	Thu 12/10/11				
101	LIMPOPO	303 days	Mon 12/01/30				
382	FREE STATE	316 days	Mon 11/09/26				
383	Implementation Planning	50 days	Thu 12/03/22				
385	Antenna replacements	41 days	Mon 12/10/08				
405	Satellite antenna installations	51 days	Wed 12/09/19				
460	KROONSTAD (R & S)	162 days	Wed 12/04/18				
496	SUIDRAND (R & S)	154 days	Tue 12/04/24				
525	BETHLEHEM (R & S)	307 days	Mon 11/09/26				
553	SENEKAL (R & S)	101 days	Mon 12/07/23				
578	BOESMANSKOP (R & S)	93 days	Mon 12/07/23				
606	DEWETSDORP (R & S)	82 days	Mon 12/07/30				
625	FICKSBURG TOWN (R & S)	136 days	Mon 12/06/04				
652	LADYBRAND (R & S)	112 days	Mon 12/07/09				
676	PETRUS STEYN (R & S)	85 days	Mon 12/07/23				
702	SPRINGFONTEIN (R & S)	136 days	Mon 12/06/04				
735	WITSIESHOEK (R & S)	136 days	Mon 12/06/04				
766	MPUMALANGA	199 days	Tue 12/06/26				
1059	KWAZULU NATAL	1560 days	Mon 07/04/02				
1809	EASTERN CAPE	1564 days	Mon 07/04/02				
2139	NORTH WEST	1548 days	Mon 07/04/02				
2205	WESTERN CAPE	889 days	Mon 09/11/02				

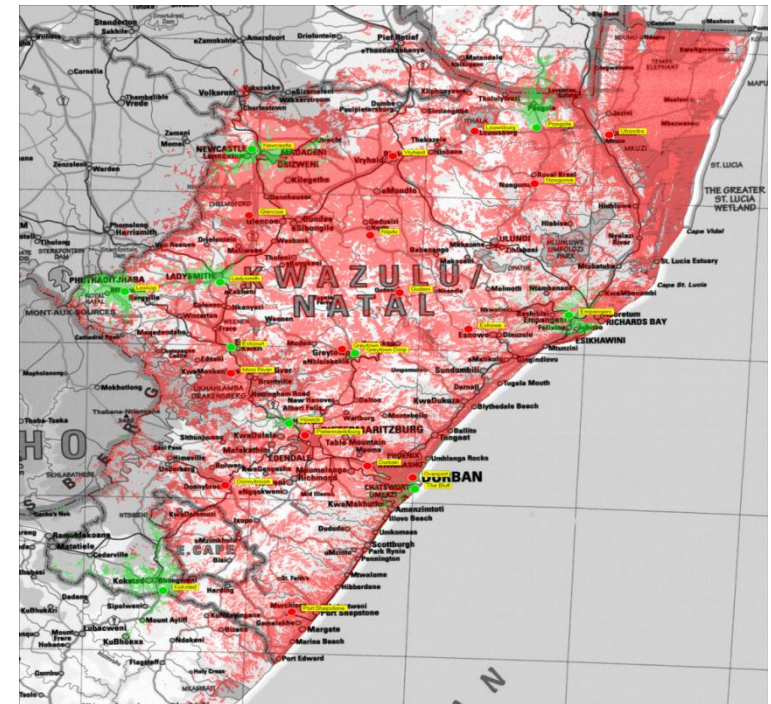
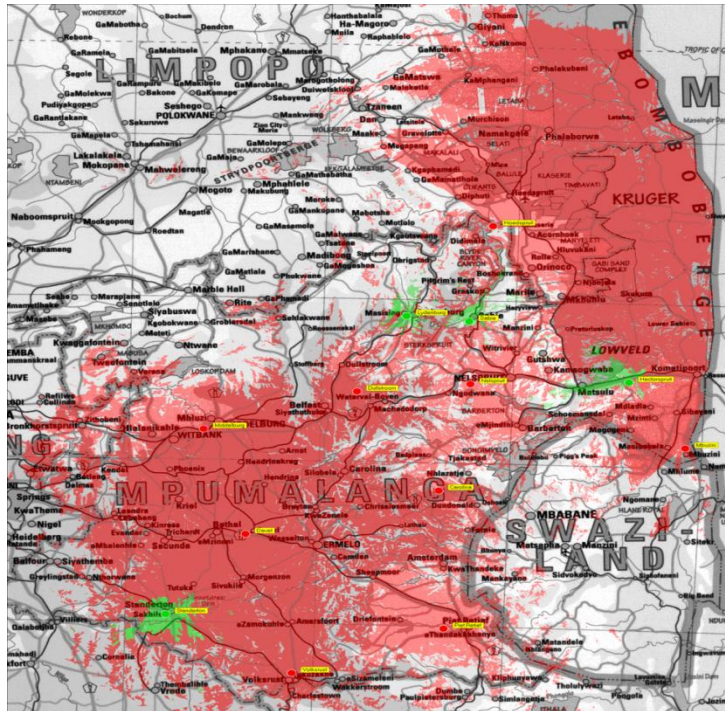


LIMPOPO (8)
DZAMBA
MALAMBA
NYLSTROOM
TZANEEN
GABA
SIBASA
TSHAMAVUDZI
TOLWE

Total Population	5 440 732
Current Population Coverage	56%
80% Population Coverage	77%
80% Population Covered	4 187 949
Total Geographic Area	125 430
Current Geographic	63%
80% Geographic Coverage	75%

FREE STATE (11)
SUIDRAND
FICKSBURG TOWN
DEWETSDORP
KROONSTAD
BETHEHEM
BOESMANSKOP
SENEKAL
LADYBRAND
SPRINGFONTEIN
WITSIESHOEK
PETRUS STEYN

Total Population	2 824 570
Current Population Coverage	59%
80% Population Coverage	94%
80% Population Covered	2 641 914
Total Geographic Area	129 770
Current Geographic	41%
80% Geographic Coverage	82%



MPUMALANGA (10)
SABIE
STANDERTON
HECTORSPRUIT
LYDENBURG
DULLSTROOM
PIET RETIEF
DAVEL
CAROLINA
VOLKSRUST
MBUZINI

Total Population	3 615 376
Current Population Coverage	55%
80% Population Coverage	82%
80% Population Covered	2 963 738
Total Geographic Area	76 156
Current Geographic	40%
80% Geographic Coverage	76%

KWAZULU NATAL (21)
ESHOWE
PIETERMARITZBURG
HOWICK
LOSKOP
EMPANGENI
UBOMBO
ESTCOURT
GREYTOWN DORP
KOKSTAD
LADYSMITH
NEWCASTLE
PONGOLA
DONNYBROOK
MOORIVER
GREYTOWN
NONGOMA
VRYHEID
LOUWSBURG
NQUTU
QUDENI

Total Population	10 651 365
Current Population Coverage	49%
80% Population Coverage	75%
80% Population Covered	8 029 481
Total Geographic Area	93 436
Current Geographic	20%
80% Geographic Coverage	62%

- The target for this financial year is to complete the roll out to all the 50 sites in Limpopo, Free State, Mpumalanga and Kwazulu Natal (with the exception of Ulundi), and to an additional 18 sites in Western Cape, North west and Eastern Cape to reach 80% population coverage.

DTT 80% population coverage rollout				
Province	Planned Stations	Remaining stations	Cumulative population Coverage	Target Date###
Free State	11	1 ^{##}	66.32%	14-Dec 12
Limpopo	8	1 ^{##}	63.85%	27-Mar-13
Mpumalanga	10	0	68.84%	29-Mar-13
Kwazulu Natal	21	1*	75%	25-Mar-13
Western Cape	6	16**	75.93%	29-Mar-13
North West	2	11**	76.60%	07-Mar-13
Eastern Cape	10	21**	80%	29-Mar-13
Nothern Cape	0	14**		
### - Dates reflect the final site commissioning for that province. Sites are commissioned on an ongoing basis.				
## - New transmitter stations to constructed, Harrismith & Burgersfort				
* - Ulundi requires a new Mast and UHF antenna system				
**-Sites beyond 60%				

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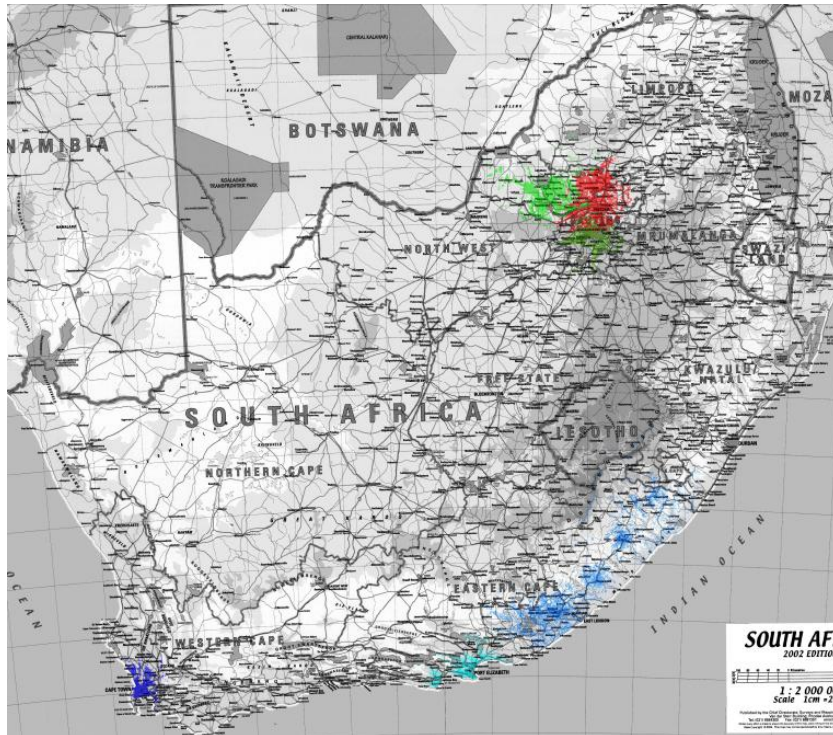
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31 July 2012	Workshop with Customers	Completed
27 July 2012	Board Consideration of Draft Commercial Tariffs	Completed
Mid August 2012	Further Customer Engagements	On-going
Mid September 2012	Long-term Business Plan Update	On-going
Mid September 2012	Board Approval of New Long Term Business Plan	On-going
End September 2012	Shareholder Engagement on Long Term Business Plan	Delayed *
End September 2012	Final Submission of Tariffs and Commercial Offers to Customers	Delayed *
End September 2012	Submission of Customer Commercial Offers to ICASA	Delayed *

* This is due to the delays in the finalisation of the DTT Regulation by ICASA.

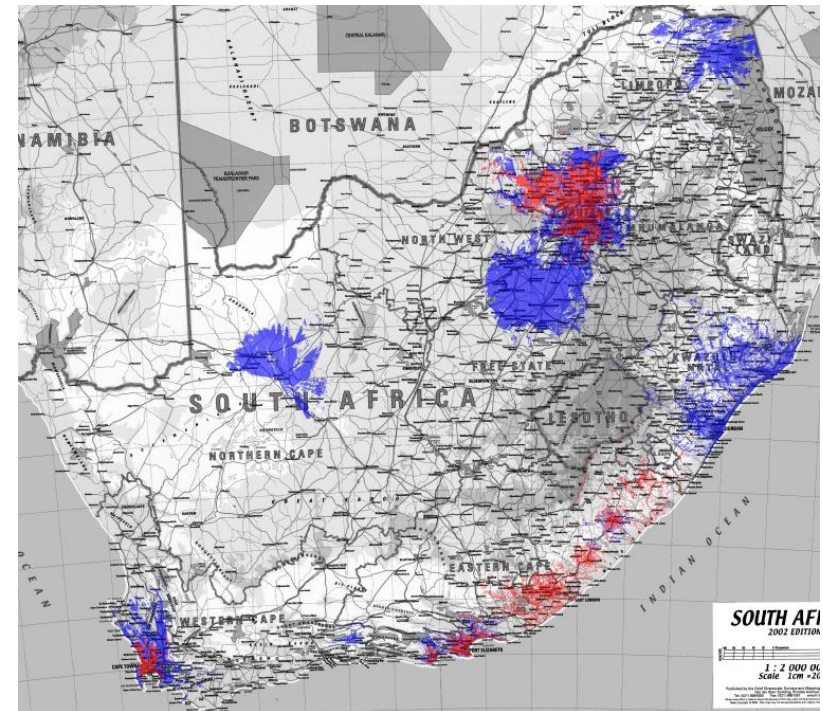
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Current analogue coverage:

- Limited to metropolitan areas
- TBN has much wider coverage in EC



DTT coverage under current regulations:

- Still limited to metropolitan areas
- Coverage increases slightly with SFNs
- Highly inefficient use of spectrum on Mux 1
- Not aligned with universal access imperatives

- Community broadcasters allocated 10% capacity on Multiplexor with only limited allocations have been made so far and with rural populations have not been catered for in local television (outside the programmes that may be generated by the public broadcaster);
- With respect to cost recovery, SENTECH is not in a position to recover the cost of the 10% Mux allocation in places where no such allocation has been made, from the incumbent broadcasters; as a result, SENTECH has to carry the cost of the rather insufficient mux allocation;
- SENTECH has made the following proposal in response to the draft regulations on DTT: *In regions where there are no community broadcasting services, SENTECH is of the view that an allocation of the spare capacity should be assigned to any interested broadcaster at regional level (i.e. minimum provincial coverage) in the spirit of efficiency, fairness and enhancement of competition in the broadcasting industry.*

- A similar problem arises on Multiplexor 2 where
 - ETV and MNET may not use all the spectrum assigned to them; this is normally addressed in broadcaster's license conditions and it is currently not clear what these will be; in the meantime, SENTECH only intends to rollout Mux 2 in areas where one of the two sharing broadcasters requires coverage; the other may then have to follow, otherwise there will be under-recovery of costs; the issue requires regulatory clarity since it is specific to digital terrestrial broadcasting
 - 10% allocation for "test" purposes; there will be under-recovery as long as there is no allocation made to specific testers after ASO.
- The SENTECH proposals with respect to community television broadcasters under DTT have been as follows:
 - For incumbent broadcasters, with limited geographic footprints, applicable subsidies should be increased in line with the new cost dynamics facing these broadcasters;
 - For areas where there are no community broadcasters, the Regulator should be mandated to license regional commercial broadcasters who will make use of the 10% available capacity; this will be consistent with the BDM Policy as amended and universal access imperatives as contained in various other relevant policies.

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RISK	DESCRIPTION	LIKELIHOOD	MITIGATION
Exchange Rates	Satellite and equipment costs are primarily paid for in foreign currency. Foreign exchange fluctuation may have a major unpredictable impact on DTT costs.	Med	There will be quarterly reconciliation of foreign exchange related costs to credit or debit customer accounts for over or under recovery. Forward cover on exchange rates is also an option.
Community Broadcasters Tariff	There will be a significant increase in network coverage and network utilisation for Community Broadcasters which will result in a sharp increase from their current tariffs. This raises uncertainty on how sustainable the current Community Broadcasting model can be in a post Analogue Switch off environment.	High	Engagement with the DoC and MDDA on subsidisation for Community Broadcasters. A review with ICASA of the current model of Community Broadcasting.
Dual Illumination Funding	The period of DTT Dual Illumination is unclear and funding for this period has not been finalised. Should the period be protracted, broadcasters have asserted they are not in a position to cover dual illumination and Sentech will also not be in a position to carry these costs.	High	Industry and Government need to engage as soon as possible on the funding and subsidy plan for dual illumination.
Regulatory and Policy	There has not been finalisation of DTT Migration and Spectrum Frequency regulations to date. In addition ICASA continues to amend even the draft regulations. This imposes major uncertainty on Sentech, its business strategy and its future operations and how future regulations and policies will impact these.	High	Provide ICASA with the necessary support to enable the speedy finalisation of DTT and Spectrum regulations that consider all important aspects of the current and future requirements for DTT

SENTECH SOC Limited