

ACSA AIRPORT INFRASTRUCTURE

1. CURRENT DECLARED CAPACITY

The stated capacities are based on the typical peak hour capacity that Airports Company South Africa (ACSA) used as a design parameter.

AIRPORT	TRAFFIC	EXISTING CAPACITY PER MILLION PASSENGERS PER ANNUM	NEW CAPACITY UPON COMPLETION OF PLANNED PROJECTS
Johannesburg	Domestic	12	13 (end 2009)
	International	8.5	11 (end 2009)
Cape Town	Domestic	5.5	11 (end 2009)
	International	2.5	3 (end 2009)
Durban	Domestic	4	5.7
	International	0.0055	0.070
Port Elizabeth		1.8	2.5
East London		0.7	1.2 (2007/8)
George		0.5	1.0 (2007/8)
Bloemfontein		0.5	
Kimberly		0.2	
Upington		0.1	
Pilanesberg		0.1	

2. AIRPORT MASTER PLANS

ACSA is in the process of finalizing their long term Master Plan for Johannesburg International Airport which will define developments for the ultimate airport capacity of 55-60 million passengers a year. Cargo development is included in the planning process and it is envisaged that the cargo development will provide for capacity in excess of 1 million tonnes a year. These developments will be implemented in phases dependant on projected demand.

Master planning for Cape Town International Airport will commence within the next few months.

3. FUTURE AIRPORT CAPACITY:

The following improvements have been proposed to accommodate the forecasted increase in movements of passengers and cargo:

3.1 Johannesburg International Airport:

Proposed development between 2006 and 2010:

2007:

R218 million Echo Apron Development

Nine new aircraft stands will be constructed with air-bridge links directly to the terminal to increase airside capacity. Four of these stands will be able to accommodate the A380 aircraft and will be equipped with dual air bridges to facilitate the simultaneous boarding and disembarking of passengers through both the upper and lower levels (2 decks make up the A380) of the aircraft at the same time.

R512 million International Pier Development

This new pier will allow for a substantial increase in the number of passengers boarding and disembarking through air bridges. The improved passenger service resulting from this will help airlines improve their turnaround times. The pier development will also provide additional passenger holding space and offer an expanded Duty Free mall for international passengers. The pier will also include a bus station to serve departures to remotely parked aircraft.

R81 million International Departures Concourse Expansion

The international departures concourse has been redesigned to accommodate the high growth in international passenger traffic and to relieve the congestion currently being experienced at the international check-in area. Completion is scheduled for early 2007.

R475 million Multi-Storey Parkade

Five thousand additional parking bays will be added to the current 6900 bays through the construction of a second multi-storey Parkade. The first phase is scheduled to open to the public in November 2007.

2009:

R1.8 billion Central Terminal Building

The Central Terminal Building currently under constructed will link the international and domestic terminals. This will accommodate a central passenger-processing unit for both domestic and international passengers. The facility will be equipped with infrastructure for baggage handling for the Airbus A380 and will be connected to the Gautrain Rapid Rail Link for ease of access by rail.

After 2010:

Third multi story parkade will be build after 2010 to meet passenger demands.

3.2 Cape Town International Airport:

Current developments:

R900 million New Central Terminal Building

This new Central Terminal Building will integrate the international and domestic terminals and form the basis for future expansion at Cape Town International Airport.

The new development will consolidate the current two terminals into a single passenger-processing unit for both international and domestic passengers and provide sufficient capacity for the airport until 2015. The terminal, which will be served by air-bridges, will also incorporate an elevated road, similar to Johannesburg airport, which will separate the arrivals from the departures. This project will change the face of Cape Town International Airport completely.

Parking

Cape Town International Airport has just completed its first Multi-Storey Parkade, with 2,000 parking bays built at a cost of R100 million. This new Parkade has almost doubled the airport's car parking capacity from 2,600 to 4,600 public car parking bays.

ACSA is due to commence the construction of a second multi storey Parkade with capacity for 2,500 parking bays later this year. This facility, which is estimated to cost R160 million is expected to come on stream early in 2008.

Medium Term Strategy:

Extra space to enhance apron, runway and taxiway capacity will be created through the construction of a new runway and converting the existing runway into a taxiway.

Long Term Strategy (Beyond 2015):

The proposed development of the airport site to its envisaged maximum potential includes the following:

- Construction of two independent parallel main runways;
- Midfield terminal development if minimum runway separation is achieved;
- Expansion of the existing precinct if required runway separation is achieved.

3.3 Durban International Airport:

Minimal additional capacity necessary for Durban International Airport in the form of:

Parking

Durban International has commenced with the construction of a R90 million 1 500 bay Multi-Storey Parkade (MSP). The first phase of the Parkade is expected to be available for use by the end of 2006 with full occupation during 2007.

Terminal

The existing terminal will be upgraded to meet projected capacity needs for passenger traffic which includes the provision of more check-in and baggage reclaim facilities.

3.4 Port Elizabeth:

- Runway extension
- Additional aircraft stands
- Structured car parking
- Minor terminal reconfiguration to include additional check-in facilities and holding lounge improvements

3.5 East London:

- Two additional aircraft stands
- Expansion of the public parking and associated road re-alignment
- Terminal reconfiguration and upgrade to accommodate increasing capacity.

3.6 George:

- Two additional aircraft stands
- Expansion of the public parking
- Terminal extension

3.7 Bloemfontein:

- Additional aircraft stands
- Expansion of the public parking and associated road re-alignment
- Terminal upgrade to accommodate the expected capacity increases

3.8 Kimberley:

Additional public parking

3.9 Upington:

Additional public parking

AIRSPACE INFRASTRUCTURE

1. AIRCRAFT MOVEMENTS

Movements (arrivals and departures) recorded by the Air Traffic and Navigational Services Company (ATNS), for the periods from April 2003 to March 2004, April 2004 to March 2005 and April 2005 to March 2006 at each of the airports at which they provide air navigational support are as follows:

AIRPORT	2003/4	2004/5	2005/6
Johannesburg	181926	190762	203505
Cape Town	98989	102722	104621
Kimberley	9333	10611	12097
Bloemfontein	17230	17646	18515
Durban	48264	46301	50283
East London	21052	22333	25154
George	21827	22704	27753
Port Elizabeth	44573	42921	47266
Upington	4747	5316	6220
Lanseria	78561	75198	75292
Grand Central	59062	52081	52108
Rand	39763	51517	55077
Total Annual Movements	625327	640118	677891

Source: ATNS 2006

2. PROJECTED GROWTH IN AIR TRAFFIC:

The total movements for the last three years until March 2006 were 625327, 640118 and 677891 respectively. According to the ATNS Annual Report for 2005, an annual average growth in total movement of 2.5% to 3.5% is expected until 2016/17. Current expectation is that the average annual growth rate will be 5.4% for the period 2006 to 2018.

3. CURRENT DECLARED CAPACITY PER AIRPORT:

Johannesburg International Airport, Cape Town International Airport and Durban International Airport are the only co-ordinated airports in South Africa, i.e., where slot allocation procedures are in place. Johannesburg International has dedicated arrival and departure slots. The slots available for both arrival and departure movements at Cape Town and Durban International Airports respectively, are combined.

The current airspace capacity declared at each of these coordinated airports is as follows:

AIRPORT	SLOT ALLOCATION (movements per hour)	SPLIT
Johannesburg International	52	24 departures and 28 arrivals
Cape Town International	30	Combined
Durban International	24	Combined

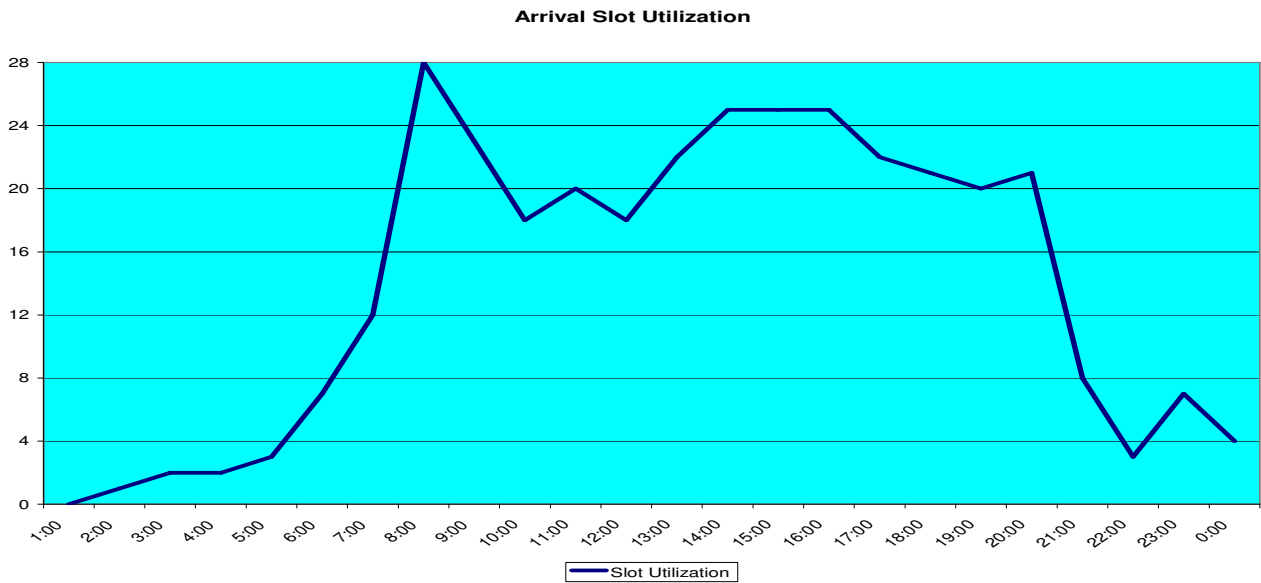
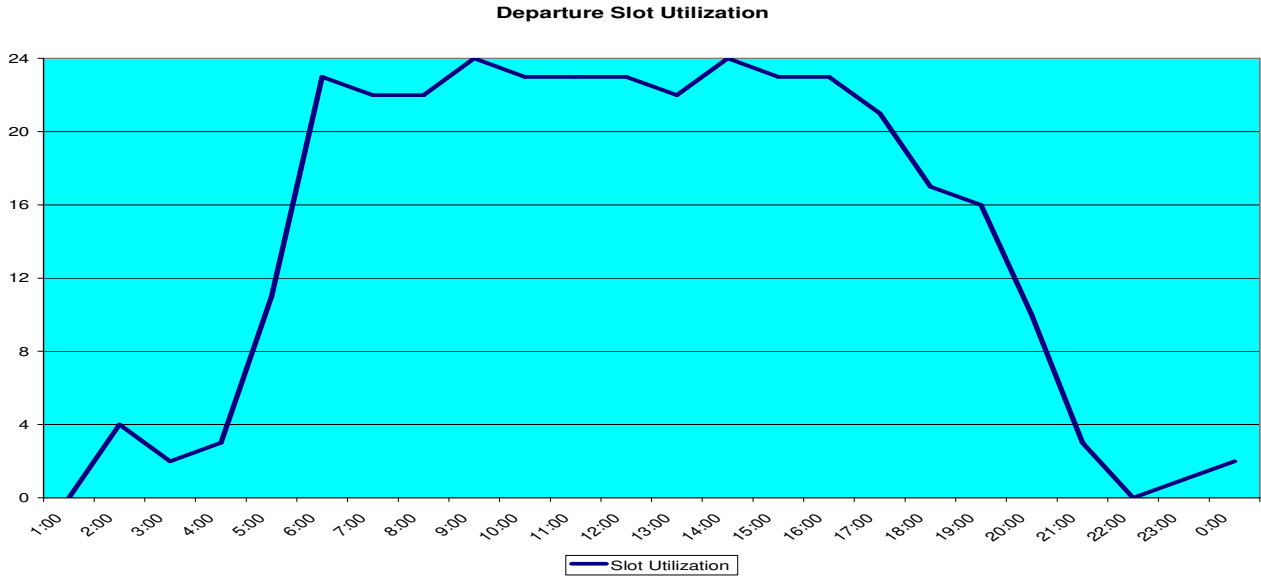
Source: ATNS 2006

4. INFORMATION REGARDING SLOT-COORDINATED AIRPORTS:

4.1. Periods Of Peak Demand Per Airport:

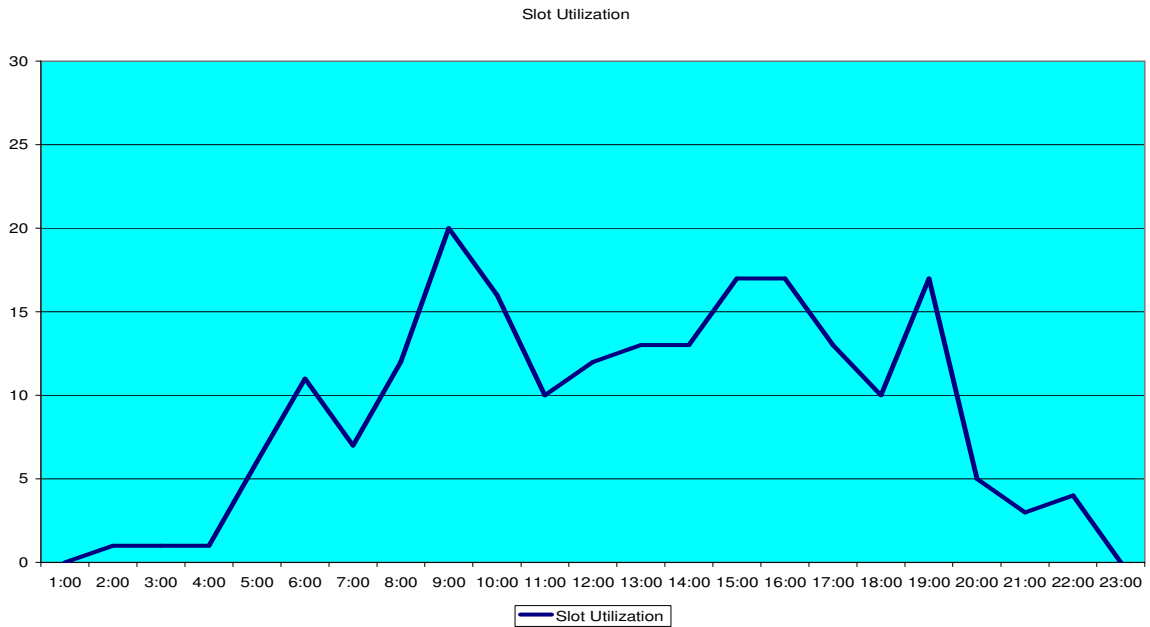
4.1.1 Johannesburg International Airport

As Friday is the busiest day of the week it was chosen as the bases of this document. The graphs below indicate the number of departure and arrival slots utilized on any given Friday in the present season:



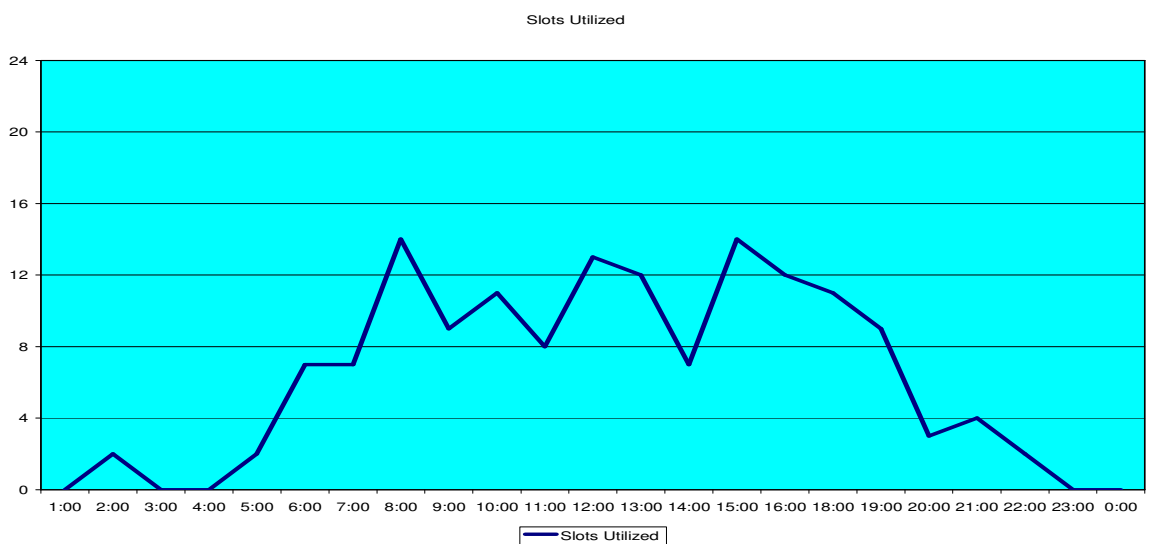
4.1.2 Cape Town International Airport

Cape Town slots are combined, i.e., should there be a demand for arrival slots, they will be awarded but the departure slots will be limited. Friday was again used as peak period. Note that the graph indicates scheduled traffic only.



4.1.3 Durban International Airport

Durban slots are combined, i.e., should there be a demand for arrival slots, they will be awarded but the departure slots will be limited. Friday was again used as peak period and the graph indicates scheduled traffic only.



4.2. Ability to meet current peak demands:

Capacity at Johannesburg International airport is currently constrained and unable to meet demand during peak periods. Flights (traffic) are now spread over a large period of the day to ensure that all departures are accommodated. In an attempt to ease the congestion during peak periods, departure capacity at Johannesburg International will increase from 24 to 28 flights per hour as of the 28th of October 2006.

There is currently excess capacity available at both Cape Town International and at Durban International. Both airports do, however on occasion, experience 10-minute periods where slots may be full. In such instances, ATNS will offer alternate slots as close to the originally requested time as possible.

4.3. Plans to improve ability to deal with peak demands:

4.3.1. Planned Future Capacities:

Previously, slots were only specifically dedicated to arrivals and departures at Johannesburg International. As of October 2007, it is envisaged that departure and arrivals slots will also be declared at both Cape Town International and Durban International. The following slot allocations are envisaged for each of the three airports over the next three to four years:

AIRPORT	DECLARATION DATE	TARGET SLOT ALLOCATIONS /PER HOUR	ENVISAGED SPLIT
Johannesburg International	October 2006	56 movements	28 departures and 28 arrivals
	October 2007	64 movements	32 departures and 32 arrivals
	End 2008	72 movements	36 departures and 26 arrivals
Cape Town International	October 2007	34 movements	17 departures and 17 arrivals
	End 2008	40 movements	20 departures and 20 arrivals
Durban International	October 2007	30 movements	15 departures and 15 arrivals
	October 2009	36 movements	18 departures and 18 arrivals

Source: ATNS 2006

4.3.2. Initiatives currently underway to reach planned capacities:

The following projects are currently underway to reach the medium term goals of increasing available capacity:

- *Reduced Final Approach Separation* which will reduce the separation on approach and increase capacity;
- *Reduced Separation: Terminal Control Area* which should increase Air Traffic in the terminal airspace;
- *Decreasing runway occupancy and pilot reaction times* which will enable the declaration of additional slots;

- *Standard instrument arrivals and departures* which should increase the rate of arrivals and departures; and
- *Fully capacitating the Central Airspace Management Unit.* This would lead to increased efficiency resulting in increased capacity.

5. FUTURE AIRSPACE CAPACITY/ EFFICIENCY IMPROVEMENTS:

ATNS' capital investment plan is frequently adapted to remain abreast of changes in demand, the changing operational environment, development and maturation of technologies and changes in international, regional and national plans and priorities.

Current proposed improvements are as follows:

2006 – 2010:

- CAMU – to be completed in 2006/7

Communications Equipment:

- Mid-life upgrade of AFTN/AIS to make it fully ATN-compliant in 2007/8. The ATN is to be deployed in 2007 through to 2010.
- Replacement of the domestic Very Small Aperture Terminal (VSAT) system in 2006. Life expectancy of this system is 7 years.
- VDL (VHF Data Link) to be available for CPDLC (Controller Pilot Data Link Communication) and for remote areas where third party networks exist and should be operational in 2009/2010.
- The High Frequency Data Link should also be operational in 2009/2010, dependant on user requirements.
- High Frequency is required as a foundation of communications in the CNS/ATM system, especially as part of the ATNS responsibility of the communications component in the vast Oceanic airspace.
- The installation of DATIS (Digital Link Automated Terminal Information systems) at Air Traffic Service Units is planned for 2006 – 2009.
- A VCCS (Voice Communication and Control Switch) similar to that used in operations by ATNS, will be installed during 2006/7 at the Aviation Training Academy to enhance the quality of training and competency testing in line with regulatory and operational requirements.

Navigational Equipment:

- *The GNSS Test Bed in the Southern African Region:*
Five terminals have been installed in Southern Africa at Johannesburg, Cape Town, East London, Windhoek and Lusaka for test bed purposes. The final deployment of the RIMS is dependant on the test bed trial results and final design.
- PRONAV1 Replacement:
The PRONAV1 project saw the replacement of VHF Omni-directional Radio Range and Directional Measuring Equipment (VOR/DME) at the major airports and en-route service enhancement. Replacement of navigation aids installed as a part of this project is planned for 2009 through to 2011.
- The TeRNS Project facilitates the replacement of all DME's and other terrestrial facilities which had not been replaced as part of the PRONAV1 project, during 2004 – 2007

Surveillance:

- *r4sa Project:*

The project was commissioned to allow for reduced separation during approach at each of the airports concerned. The initial scope of the above project included the commissioning of a second approach radar at both Johannesburg International (2005) and Cape Town International (2006). This contract has been extended to include commissioning of approach radars at both East London (2006) and Port Elizabeth (2007).

- *Height Monitoring Unit (HMU):*

To effectively reduce vertical separation minima, aircraft operators are required to validate their height measuring avionics regularly. To do this, a passive ground based system that measures the aircraft height while it keeps over an approximate circular area. The purchase and installation of the HMU is envisaged to take place during the period of 2007 – 2009.

- *Primary Radar at George Airport*

ATNS has engaged both SACAA and industry regarding transponder equipage. Should agreement not be reached on this issue, approach radar should be installed at George Airport during 2008/2009.

- *Replacement of Approach Radar:*

Bloemfontein – 2007/2008

- *SSR Replacement (Mode S Radar)*

- Bloemfontein – 2007
- Rhodes – approximately 2008
- Wakkerstroom – approximately 2009
- Potgietersrus and De Aar – 2010
- Blesburg – 2014
- Sutherland - 2018

5.1 2011 – 2018:

- Construction of two new area control centres at Johannesburg International and Cape Town International, including all communication infrastructure and facilities at new locations in 2011/12 to become operational in 2013/14.

Communications Equipment:

- Full system replacement of AFTN/AIS in 2012/2013.
- Replacement of the domestic VSAT system is due in 2013/2014.
- Replacement of SADC VSAT system due for 2013/2014.
- NAFISAT also due for replacement during 2013/2014.
- Replacement of VHF Equipment from 2009 onwards
- Life expectancy of the HF upgrade lasts 10 years and will be upgraded again during 2017/18.

Navigational Equipment:

- *GNSS (Global Navigation Satellite System):*

The International Civil Aviation Organisation (ICAO), as part of the concept adopted on future aviation needs, envisages the GNSS as the navigation system of the future.

GNSS in the African Indian Ocean Region:

ICAO has approved the African Indian Ocean Plan (AFI) adopted by the AFI states which includes a GNSS test bed in AFI as a part of the European Geostationary Navigation Overlay Service (EGNOS), as well as the conditional deployment of an operational system. This implementation will have three phases:

- Phase one has already been completed. It involved a Test-bed with 12 mobile Range and Integrity Monitoring stations (RIMS). These were deployed within AFI on a regional basis.
- Phase two should be completed during 2006 through 2011. It focuses on operational applications, which must comply with 20m vertical accuracy en-route to approach with vertical guidance everywhere within AFI region.
- During phase three, operations should meet CAT-1 either using Space Based Augmentation Systems (SBAS) or Ground Based Augmentation Systems (GBAS) from 2012 onwards.

VOR/DME Network:

The abovementioned network is expected to continue to provide service, en-route as well as at terminal areas and aerodromes until GNSS is established and has been accepted. At that stage, GNSS will become the sole system for en-route navigation. The VOR/DME system will continue to provide a service in terminal areas and at aerodromes.

Surveillance:

- *Replacement of Approach Radar:*
 - Cape Town -2012 and again in 2018:
 - Johannesburg – 2012 and again in 2017
 - Durban – 2011
 - Port Elizabeth – 2019
 - East London – 2018
- *SSR Replacement (Mode S Radars):*
 - Blesberg – 2014
 - Sutherland - 2018

ANNEXURE D

LIBERALISATION TARGETS

ELEMENT	CURRENT SITUATION	TARGET 2006- 2010				
		2006	2007	2008	2009	2010
Implementation of the Yamoussoukro Decision	<p>Seven states have agreed to implement the key elements of the Yamoussoukro Decision with South Africa. These are Botswana, Kenya, Ethiopia, Uganda, Libya, Gabon and Egypt, representing approximately 13% of YD-States.</p> <p>Note: Implementation targets are subject to readiness of African States to implement YD.</p>	15%	25%	35%	50%	65%
Multiple Designation	Provided in 76% of total agreements.	80%	85%	90%	95%	97%
Tariff liberalisation	Provided in 57% of total agreements.	65%	70%	75%	80%	85%
Code-share	Provided in 40% of total agreements.	50%	60%	70%	80%	90%
Non-scheduled: Passenger services:	<p>Safety/ security major consideration. Potential impact on low density routes served by scheduled airlines to be considered.</p> <p>Accelerated liberalisation / strict safety security regulation to be ensured (policy implementation)</p>	<p>Research to be conducted re impact</p> <p>100%</p>				
All-cargo services:						

ANNEXURE E

TACTICAL APPROACH TO KEY ELEMENTS RELATING TO THE MODERNISATION OF THE AIR SERVICES FRAMEWORK

Liberalisation of the air services framework should be considered according to area / region of activity, with due consideration of the potential impact on the whole network of air services. The following tactical approaches to be adopted in respect to the Strategic Approach as reflected in paragraph 5.3.3 of the Airlift Strategy 2006:

1. Regional approaches to air transport regulation:

1.1 Domestic air services:

Domestic market to *remain* fully deregulated, subject only to safety and security oversight as well as competition rules applicable to all industries.

1.2 Intra-African liberalisation:

Measures aimed at accelerating implementation of the Yamoussoukro Decision (YD) to be implemented. Full implementation will lead to a liberal intra-African air services framework (with exception of cabotage rights).

Due to dependency on implementation by other African states and current incompatibilities with South African domestic law, implementation to be guided by the dedicated strategy for the accelerated implementation of the YD which is currently being developed

Tactical Approach - YD Implementation:

- *Implementation of the spirit of YD on bilateral level with willing partners to be accelerated as an interim measure, pending full implementation of the Yamoussoukro Decision across Africa.*
- *In particular, the following approach to the implementation of the YD to be implemented:*
 - *Prioritisation of negotiations with Angola, Mozambique and Nigeria to ease capacity constraints;*
 - *Development of an approach aimed at accelerating the implementation of YD, including an econometric study to quantify the economic cost of regulatory constraints, including benefits that could be reaped as a direct result of the implementation of the Yamoussoukro Decision. This will guide South Africa's approach towards YD when engaging with the African Union, NEPAD and bilateral counterparts in Africa.*
 - *Addressing airline safety oversight capacity at an institutional level.*

1.3 Overseas” Markets (i.e. excluding states bound by YD):

Principle of managed capacity liberalisation based on market demand, pending further developments in respect of an “open-skies” approach, to apply. In addition, growing of markets vis-à-vis re-direction of existing traffic (6th freedom traffic¹⁶) through rapidly expanding hubs / newly created hubs, impacting on the network of air services serving SA and its key markets requires close scrutiny and should be addressed as follows:.

Tactical Approach - Hubs:

Competition issues (level playing fields, slot-constrained airports) as well as impact of rapid expansion of hubs in one region impacting on services operated to other regions to be considered during mandate setting process, including alignment with South Africa’s policy on foreign relations.

2. Tariff regulation:

Airlines should be free to set tariffs based on market demands and in reaction to competition. The following tactical approach to be adopted:

Tactical Approach to tariff regulation based on market segment:

- **DOMESTIC MARKET:** Retain full tariff liberalisation. Market only subject to competition rules applicable to all industries;
- **INTRA-AFRICAN MARKET:** Tariff control only in respect of tariff increases, subject to regional/Continental competition rules, in line with the Yamoussoukro Decision.
- **OVERSEAS MARKETS:** Airlines to be allowed to rapidly and effectively respond to market demands. Flexible arrangement requiring filing of tariffs only when considered potentially anti-competitive, based on the double disapproval model for tariff control to be applied.

3. Pricing and competition:

Price leadership by dominant SA Airlines and/or artificially high tariffs due to capacity constrained routes could lead to the following:

- **Domestic and African Markets:** Tariffs could be too high / low due to abuse of dominant position.
- **Overseas market:** SA airlines tariffs may not be competitive with foreign airlines, leading to shift in market share and such airline(s) insisting on protection through

¹⁶ Definitions contained in Annexure H

capacity constraints imposed in the relevant Bilateral Air Services Agreement(s).

The following tactical approach to be adopted:

<u>Tactical Approach – Pricing and competition:</u>
<ul style="list-style-type: none"> <i>If tariffs charged by airlines are considered to be excessively high or low, it should be referred to the Competition Commission¹ for further consideration and implementation of the necessary corrective measures.</i> <i>In the case of constrained routes, capacity to be increased in respect of relevant Agreement(s) to ensure provision of adequate number of seats at reasonable prices.</i> <i>In the case of high fares charged by SA airlines on capacity constrained routes, and such constraint is due to intervention by the airline(s) concerned, such tariffs to be subjected to a competitive pricing comparison process by Competition Commission to determine acceptability and/or corrective action to be taken.</i>

4. Fifth freedom traffic rights¹⁷

The free exchange of fifth freedom rights is an important element of an open-skies arrangement and may impact negatively on the network of air transport services. The following Table reflects the advantages and disadvantages of 5th freedom traffic rights.

TABLE: Summary of advantages and disadvantages relating to the exchange of 5th Freedom Traffic Rights

	ADVANTAGES:	DISADVANTAGES:
1.	<ul style="list-style-type: none"> Provision of additional air services between states in the region: Fifth freedom traffic rights granted at destinations without existing air services will enable the establishment of a new air service to/from these points. Local third/fourth freedom airlines may not be able to render profitable services between these points due to a lack of demand for services. Introduction of new long distance air services: Granting of 5th freedom rights may enable the introduction of new long distance, multiple sector, air services to South 	<ul style="list-style-type: none"> Impact on introduction of new, direct air services by regional airlines: Fifth freedom traffic rights could impact negatively on the introduction of new 3rd/4th freedom air services due to the strong competitive advantage of the 5th freedom airline. This problem is normally compounded by a relatively low passenger demand for services on such routes. Ineffective implementation of the Yamoussoukro Decision: The granting of 5th freedom to airlines other than African airlines may have serious consequences for the liberalisation initiatives as envisaged

¹⁷ Definitions contained in Annexure H