Experts Group Meeting
Synergy Between Airports and Urban Development for Sustainable Development
• Aerotropolis (city) represents a strategic opportunity for both the airport and the surrounding areas to achieve long-term sustainability growth and resilience.

• As Airport Cities succeed, they magnify the connective power of the airport development being part of the bigger city wide development and its surrounds and transform the hinterland urban areas into an Aerotropolis.

• Extraordinary economic potential accrues to an airport and the surrounding areas when their respective capacities and demands are formally coordinated.
Europe
- All the main hubs in Europe are served from JNB.
- Six routes are served from JNB into Europe namely- London, Paris, Zurich, Frankfurt, Amsterdam and Munich.
- Europe remains a key connecting market via JNB into Southern Africa.

Africa
- Thirty eight routes are served from JNB into the African continent
- The Zimbabwe market is the largest.
- Due to the continent having higher economic growth, mineral resources and emerging middle class the propensity to fly is higher.

North America
- Three routes are served from JNB into North America namely: SAA-New York, Delta-Atlanta and SAA-Washington DC.

Asia
- Three routes are served from JNB into Asia namely- Beijing, Hong Kong and Singapore

Middle East
- Five routes are served from JNB into the Middle East namely: Dubai, Abu Dhabi, Tel Aviv, Jeddah and Doha
- The Middle Eastern carriers have grown significantly in JNB and their traffic mainly connects to other destinations.
Infrastructure Development & Management
Historic Passenger Volumes

Total passenger volumes

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY11/12</td>
<td>19,003,54</td>
</tr>
<tr>
<td>FY12/13</td>
<td>18,621,25</td>
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<tr>
<td>FY13/14</td>
<td>18,820,98</td>
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<tr>
<td>FY14/15</td>
<td>19,135,09</td>
</tr>
<tr>
<td>FY15/16</td>
<td>20,375,62</td>
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</tbody>
</table>

Passenger volumes per sector 2015/16

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic</th>
<th>Regional</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY11/12</td>
<td>9,985,246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY12/13</td>
<td>9,437,069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY13/14</td>
<td>9,257,225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY14/15</td>
<td>9,510,809</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY15/16</td>
<td>10,586,823</td>
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<td></td>
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</tbody>
</table>

Domestic passenger volumes

International & Regional passenger volumes

Number of Passengers

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY11/12</td>
<td>8,934,080</td>
</tr>
<tr>
<td>FY12/13</td>
<td>9,103,521</td>
</tr>
<tr>
<td>FY13/14</td>
<td>9,465,054</td>
</tr>
<tr>
<td>FY14/15</td>
<td>9,528,836</td>
</tr>
<tr>
<td>FY15/16</td>
<td>9,697,567</td>
</tr>
</tbody>
</table>

Passenger volumes per sector 2015/16

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic</th>
<th>Regional</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY11/12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY12/13</td>
<td></td>
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<tr>
<td>FY13/14</td>
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</tr>
<tr>
<td>FY14/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY15/16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Infrastructure Development & Management

Historic Air Traffic Movements

Total aircraft movements

- Year on year growth:
  - DOM ATM VOL: +4.76%
  - INT & REG ATM VOL: +5.34%

- Number of Aircraft:
  - FY11/12: 212,570
  - FY12/13: 199,802
  - FY13/14: 206,603
  - FY14/15: 217,627
  - FY15/16: 224,191

- Total movements per sector 2015/16:
  - Domestic: 65,910 (33%)
  - International: 110,741 (56%)
  - Regional: 21,382 (11%)

Domestic aircraft movements

- Year on year growth:
  - DOM ATM VOL: +7.05%
  - DOM ATM P%: +6.88%

- Number of Aircraft:
  - FY11/12: 107,053
  - FY12/13: 95,869
  - FY13/14: 96,788
  - FY14/15: 103,612
  - FY15/16: 110,741

- DOM ATM P%:
  - FY11/12: 1.35%
  - FY12/13: -10.45%
  - FY13/14: 0.96%
  - FY14/15: 7.05%
  - FY15/16: 6.88%

International & Regional aircraft movements

- Year on year growth:
  - INT & REG ATM VOL: +0.74%
  - INT & REG P%: +0.29%

- Number of Aircraft:
  - FY11/12: 84,002
  - FY12/13: 82,631
  - FY13/14: 86,401
  - FY14/15: 87,038
  - FY15/16: 87,292

- INT & REG P%:
  - FY11/12: 0.89%
  - FY12/13: -1.63%
  - FY13/14: 4.56%
  - FY14/15: 0.74%
  - FY15/16: 0.29%
Infrastructure Development & Management
Passenger Traffic Forecast

Total Passenger Volumes Actual vs. Forecast

Growth over last 3 years average 3.1%

Passenger Volumes

<table>
<thead>
<tr>
<th>FY13/14</th>
<th>FY14/15</th>
<th>FY15/16</th>
<th>FY16/17</th>
<th>FY17/18</th>
<th>FY18/19</th>
<th>FY19/20</th>
<th>FY20/21</th>
<th>FY21/22</th>
<th>FY22/23</th>
<th>FY23/24</th>
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<tbody>
<tr>
<td>ACTUAL</td>
<td>18,820,988</td>
<td>19,135,093</td>
<td>20,375,626</td>
<td>20,684,785</td>
<td>21,010,963</td>
<td>21,335,867</td>
<td>21,677,906</td>
<td>22,013,800</td>
<td>22,351,504</td>
<td>22,673,263</td>
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<tr>
<td>ACSA 13 - PESS</td>
<td>18,121,643</td>
<td>18,433,144</td>
<td>18,858,900</td>
<td>19,296,858</td>
<td>19,719,477</td>
<td>20,153,715</td>
<td>20,684,785</td>
<td>21,219,488</td>
<td>21,754,259</td>
<td>22,282,570</td>
</tr>
<tr>
<td>ACSA 13 - REAL</td>
<td>18,746,554</td>
<td>19,383,703</td>
<td>20,179,793</td>
<td>21,010,963</td>
<td>21,851,593</td>
<td>22,749,559</td>
<td>23,677,906</td>
<td>24,655,600</td>
<td>25,675,473</td>
<td>26,737,637</td>
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<tr>
<td>ACSA 13 - OPT</td>
<td>19,140,501</td>
<td>20,139,590</td>
<td>21,335,867</td>
<td>22,606,722</td>
<td>23,923,270</td>
<td>25,342,602</td>
<td>26,716,987</td>
<td>28,179,638</td>
<td>29,723,263</td>
<td>31,351,504</td>
</tr>
</tbody>
</table>
Infrastructure Development & Management
Air Traffic Movement Forecast

Total Aircraft Movements Actual vs. Forecast

- Growth over last 3 years in average is 3.9%
- Optimistic
- Realistic
- Pessimistic

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>ACSA 2013 - PESS</th>
<th>ACSA 2013 - REAL</th>
<th>ACSA 2013 - OPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY13/14</td>
<td>206,603</td>
<td>176,443</td>
<td>179,559</td>
<td>181,702</td>
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<tr>
<td>FY14/15</td>
<td>217,627</td>
<td>181,055</td>
<td>186,595</td>
<td>190,818</td>
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<tr>
<td>FY15/16</td>
<td>224,191</td>
<td>192,580</td>
<td>194,586</td>
<td>201,088</td>
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<tr>
<td>FY16/17</td>
<td>224,191</td>
<td>198,614</td>
<td>195,586</td>
<td>211,911</td>
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<tr>
<td>FY17/18</td>
<td>204,839</td>
<td>202,920</td>
<td>202,920</td>
<td>223,318</td>
</tr>
<tr>
<td>FY18/19</td>
<td>211,258</td>
<td>211,611</td>
<td>211,611</td>
<td>235,454</td>
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<tr>
<td>FY19/20</td>
<td>217,694</td>
<td>220,676</td>
<td>220,676</td>
<td>248,250</td>
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<tr>
<td>FY20/21</td>
<td>224,307</td>
<td>230,129</td>
<td>230,129</td>
<td>261,277</td>
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<tr>
<td>FY21/22</td>
<td>231,121</td>
<td>239,733</td>
<td>239,733</td>
<td>274,965</td>
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<tr>
<td>FY22/23</td>
<td>238,142</td>
<td>249,738</td>
<td>249,738</td>
<td>289,370</td>
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<td>FY23/24</td>
<td>271,020</td>
<td>260,161</td>
<td>260,161</td>
<td>304,531</td>
</tr>
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</table>

Air Traffic Movements

- Infrastructure Development & Management
- Air Traffic Movement Forecast
Infrastructure Development & Management

Cargo Forecast

Cargo forecast scenarios O.R. Tambo based on ACOC figures

<table>
<thead>
<tr>
<th>Year</th>
<th>low case</th>
<th>base case</th>
<th>high case</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>389,174</td>
<td>389,174</td>
<td>389,174</td>
</tr>
<tr>
<td>2020</td>
<td>492,429</td>
<td>521,530</td>
<td>552,051</td>
</tr>
<tr>
<td>2025</td>
<td>599,115</td>
<td>665,620</td>
<td>738,768</td>
</tr>
<tr>
<td>2030</td>
<td>728,916</td>
<td>849,518</td>
<td>988,639</td>
</tr>
</tbody>
</table>
Infrastructure Development & Management
Holistic & Integrated Development Plan Process

**TODAY**
+/- 20.3 MPA

**THE FUTURE**
+/- 60 MPA

MACRO, MESO, MICRO PLANNING
Development phasing & frameworks to ensure alignment & integration
Infrastructure Development & Management

Current Layout
Infrastructure Development & Management
Current Capacities and Throughput

- Airport Site: ± 2100 ha or 3300 soccer fields
- Airport Elevation 1680 meters above sea level
- 2 Runways: Departures Runway (03L/21R): 4418m x 75m
  Arrivals Runway (03R/21L): 3400m x 75m
- Code F compliant e.g. Airbus A380, Boeing 747-800
- 81 to 130 aircraft stands (depending on configuration)
- Current Throughput:
  - 53 ATM’s per hour
  - ± 20.3 million passengers per annum
  - 224 000 ATM’s per annum
  - ± 400 000 tonnes cargo per annum
- Overall Terminal Capacity: 25 MAP
Infrastructure Development & Management

Major Medium Term Developments
Increase airside capacity with approximately an additional 10 to 15 ATM’s

Project consist of:

- 3500m x 75m (Code F) runway
- 4 x RET’s
- Parallel Taxiway
- Existing maintenance and GA Area north of the proposed runway to be re relocated to free up space for AGL, navigational aids (ILS) and OLS.
9 Code F stands in MARS configuration (9 Code F or 18 Code C) and 7 Code C stands

Linked with the Western Terminal Complex via an internal airside link road.

These stands will initially be used to accommodate long stay aircraft and later for cargo aircraft.
Midfield Terminal complex consisting of:

- ± 80 000m² Terminal buildings
- Approximately 25 Code C stands excl. remote stands
- Taxiways to access stands and runways
- Access roads and interchanges from the freeway system
- 3500 parking bays etc.
In 2015/16 O.R. Tambo International airport handled ± 400 000 tons of air cargo
  - 60% Imports and 40% Exports.
  - 30% of the air cargo was transported on dedicated cargo aircraft & 70% on passenger aircraft.
  - 2 Phase development
    - 1st phase 750 000 tonnes
    - 2nd phase 2 000 000 tonnes
  - Includes Cargo Terminal, Express Cargo, Forwarders, Staging, Storage, Aircraft Stands and Roads
  - Aerotropolis Catalyst Project
In 2012 Airports Company South Africa appointed KPMG to conduct a study to determine the Macro Economic Impact of airport infrastructure development that took place between 2007 and 2011 following a 16.6 billion investment programme.

For the Gauteng Province:

- Real GDP – R128 million.
- Tax Revenue – R100 million.
- Employment – 8,658 direct and 20,202 indirect opportunities.

The general ‘rule-of-thumb’ international gateway airports e.g. OR Tambo generates ± 1,000 jobs on-airport per million passengers and an additional 5 to 10 jobs off-airport per every job on-airport

*Airports are economic engines and catalysts for economic development.*


KPMG calculations based on the output of the Dynamic CGE model for South Africa and the TERM CGE model for South Africa
Economic Growth & Development

Aerotropolis (City)

Gauteng City Region

National Context

GDP

Employment

Transformation

Airport

Capacitated

Operationally Superior

Relevant & Competitive

Conclusion
Thank You