

# Aerotropolises & Airport Cities

State of the Industry and Best Practices

Survey of 182 Aerotropolis and Airport City Locations



## Aerotropolis / Airport City



### The Big Idea



# Aerotropolis / Airport City



## How True is the Big Idea?

- There is no evidence that having an Aerotropolis Plan induces benefits
- Aerotropolis/Airport City planning is little more than traditional airport vicinity land planning.
- Comprehensive professionally prepared Aerotropolis plans do not guarantee success.
- There is no study that has documented the “actual” contribution of an aerotropolis
- The most successful airport vicinity developments are those that evolved spontaneously, *or which were not focused on being an aerotropolis*
- Aerotropolis boundaries are artificial
- **Many aerotropolis plans do NOT adequately consider needs for future airport expansion.**

**Success** comes only as the result of **capturing demand**:

**Anticipating** demand (forecasting)

**Responding** to demand (development)

**Focusing** spontaneous demand (planning)

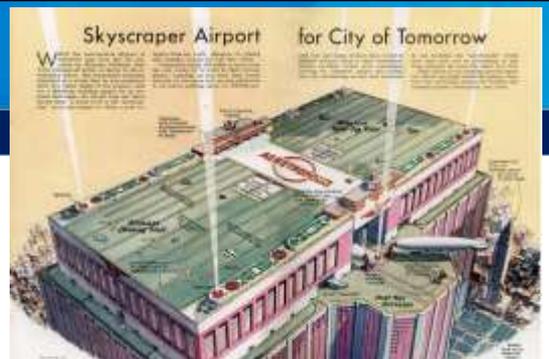
**Creating** new demand (incentivizing)

# Aerotropolis / Airport City

## Definitions

The “**aerotropolis**” term originated from Nicolas DeSantis, whose “*Skyscraper Airport for City of Tomorrow*” was published in Popular Science in **1939**, as a way to “*save time now lost in journeying to and from airports far from the heart of a city.*”

H. McKinley Conway, founder of *Site Selection* magazine, described the **airport city** phenomenon in his **1977** book, ‘*The Airport City and the Future Intermodal Transportation System*,’ examining how aviation-linked commercial land uses would evolve around airports.



### Aerotropolis vs Airport City

- **Aerotropolis** - “metropolitan sub-region where the layout, infrastructure, and economy are centred on an airport”
- **Airport City** - on-airport commercial core of the aerotropolis, which includes cargo logistics, offices, hotels and associated retail uses.

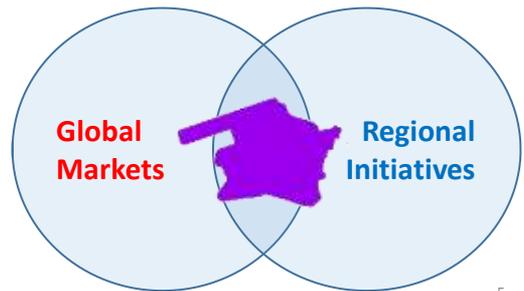
# Aerotropolis / Airport City



## Three Primary Airport Objectives

1. **Integrate airport plans with regional:**
  - a. *transportation plans*
  - b. *land use plans*
  - c. *economic development initiatives*
2. **Enhance where possible airport revenue streams**
3. **Maintain or grow the status of the airport and the region it serves**

**Increase regional economic activity.**



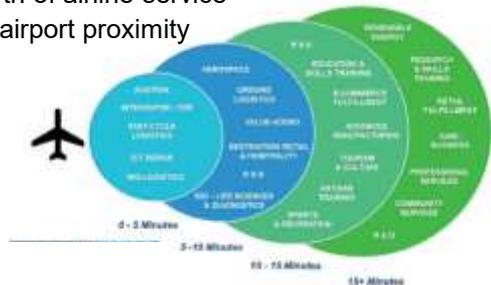
# Airport Objectives



## Integrate Airport plans with Regional Initiatives

- Regional transportation plans
  - Reduce travel times and user costs
  - Accommodate regional growth and activity center changes
  - Airport becomes a target of opportunity for changes that will happen anyway
- Regional land use plans
  - Understand airport role in world-wide transportation network
  - Make sure airport accommodates foreseeable growth of airline service
  - Organize land use with understanding of needs for airport proximity
- Economic development initiatives
  - When appropriate – use airport as a differentiator
  - Identify when long-distance or international access is needed

Annual Growth Rate	Total 25 Year Growth
1%	27%
2%	61%
3%	103%



# Airport Objectives



## Regional Planning – Time-Distance to Airport by Economic Sector

Common  
Truck Fleet



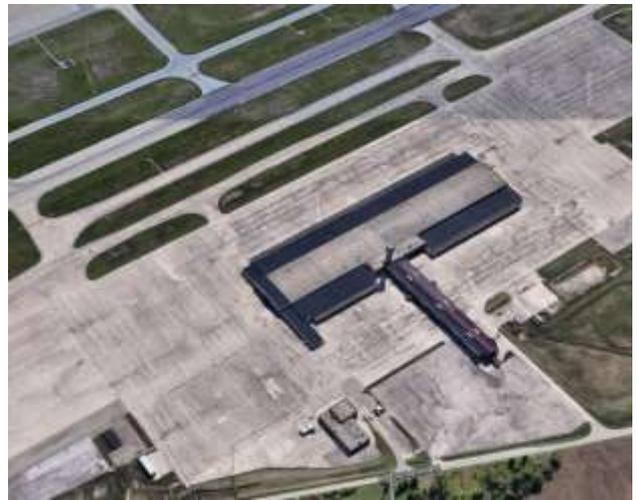
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# Airport Objectives



## Enhance Airport Revenue Streams and Grow the Status of the Region

- Enhancing airport revenue lower operating costs for users and carriers
- Some regions have successfully leveraged their airports for regional growth
  - More likely to occur with a larger airport
  - Cargo or passenger hub status makes airport more valuable
- Hub status can increase risk while increasing reward
  - More reliance on single carrier's financial well-being
  - Mergers and acquisitions can quickly change hub status
- Risk is highest when hub is outsized for the region it serves



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# Aerotropolis / Airport City

## North American Analyses

Boston (G)	Seattle (H, G)	Dallas DFW (H, G)
Charlotte (H)	Tampa	Atlanta (H, G)
Chicago O'Hare (H, G)	Toronto (H, G)	Baltimore BWI (H)
Cleveland (X)	Quebec	Greensboro (H)
Houston IAH (H, G)	Anchorage (H)	Dayton (X)
LA/LAX (G)	Cincinnati (H)	Denver (H)
Miami (G)	Huntsville (M)	Detroit (H)
Milwaukee	Kansas City (H)	Edmonton (G)
Minneapolis (H)	LA/Ontario (H)	Fort Worth Alliance (H)
New York JFK (G)	Long Beach (M)	Halifax
New York LGA (H)	Louisville (H)	Indianapolis (H)
Newark EWR (H, G)	Las Vegas (H)	NW Florida-Panama City
Oakland (H)	Memphis (H)	
Philadelphia (H, G)	Orlando (H)	
Phoenix Sky Harbor (H)	Phoenix Mesa (D)	
Pittsburgh (X)	Raleigh-Durham (H)	
Salt Lake City (H)	Columbus Rickenbacker (D)	
San Francisco (G)	Vancouver (H)	
	Washington Dulles (H)	

**Aerotropolis Types:**  
 Regional Market Driven  
 Aviation Market Driven  
 Refinement Plans  
 Development Plans



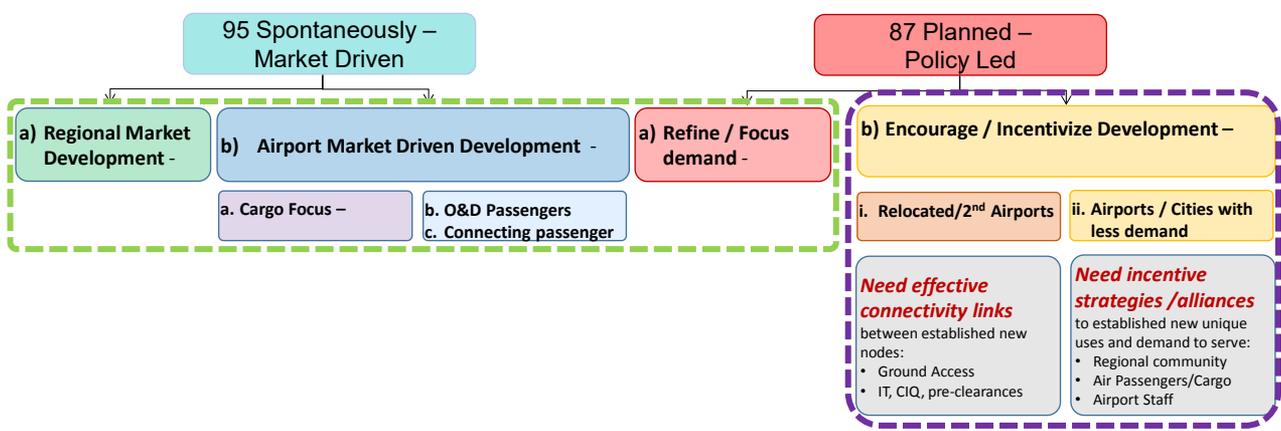
(G) Int'l Gateway  
 (H) Airline Hub  
 (M) Manufacturing  
 (D) Distribution

# Aerotropolis / Airport City

Prospective Clients



## 182 Aerotropolis / Airport Cities



## Aerotropolis / Airport City



### Current Global Trends

*The most successful aerotropolises/airport cities are those that developed in response to the market*

*To respond to existing and future demand:*

1. International gateways maintain the city and airport market position by prioritizing international commercial flights. *Forbes identifies the importance of international connectivity as an essential priority for maintaining and growing business market share.*
2. High demand destinations build on local and regional strengths to create a unique sense of place. *Aerotropolis land uses find and fill the gaps of opportunity in unique ways that tend to attract greater patronage.*
3. Strategic alliances between governments, airports and other stakeholders is required to successfully create new development demand. *This collaboration is needed to provide effective development incentives to attract new opportunities and create unique destinations.*

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## Aerotropolis / Airport City



### Identifying Suitable Developments

#### Suitability criteria:

1. *Does this new business support the mission of the airport?*
2. *Will it increase passenger and/or cargo activity at the airport?*
3. *Will it benefit the wider city economy by creating a truly new industry or significantly increasing employment opportunities?*
4. *Will this new business help reinforce the airport as a destination? .*

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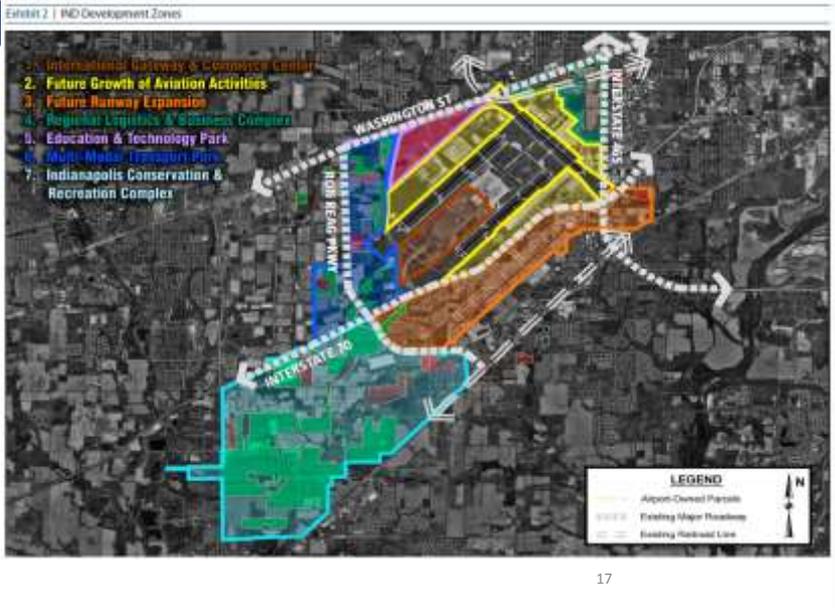


# Example of Airport Area Planning



## Development Zones

- Tie to Key Regional Transportation Corridors
- Prioritize Preserves for Long-Term Aviation Growth
- Define Development Zones



# Example of Airport Area Planning



## Evaluate Development Alternatives

- Evaluation Criteria
1. Compatibility with long-term aviation growth
  2. Financial
  3. Regional economic value
  4. Costs
  5. Environmental impact
  6. Flexibility
  7. Community acceptance
  8. Compatibility with market demand
  9. Multi-modal connectivity

Table 5 | IND Development Zone Alternative Uses

ZONE	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
1	Retail, Hospitality, Office	Retail, Hospitality, Office	Retail, Hospitality, Office
2	Air Cargo, Aviation Logistics, GA, Aviation Support	Air Cargo, Aviation Logistics, GA, Aviation Support	Air Cargo, Aviation Logistics, GA, Aviation Support
3	Hold for Runway Development	Aviation Logistics	Partial Logistics Development
4	Aviation Logistics, Industrial/Office Mixed Use, Retail	Industrial/Office Mixed Use, Retail	Aviation Logistics, Industrial/Office Mixed Use, Retail
5	Technology and Education, Aviation Support, Air Cargo	Air Cargo, Technology and Education, Aviation Support	Technology and Education, Aviation Support, Air Cargo
6	Transportation Links, Retail, Hospitality, Office, Co-generation, Industrial	Transportation Links, Retail, Hospitality, Office, Co-generation, Industrial	Transportation Links, Retail, Hospitality, Office, Co-generation, Industrial
7	Conservation, Retail, Light Industrial Build to Suit Office, Recreational	Conservation, Retail, Light Industrial Build to Suit Office, Recreational	Conservation, Retail, Light Industrial Build to Suit Office, Recreational

Note: A Rail Connection will increase Retail in Zone 4 and may add Retail demand in Zone 5

# Example of Airport Area Planning



## Refinement of Preferred Alternative

Exhibit 3 | Zone Layout



Exhibit 4 | Development Sites



Table 7 | R&D Zone 1 Development Sites Summary

Site	Site Area (Acres)	Leasable Area (Sq Ft)	Address
100	18.8	222,000	Main Av.
101	11.2	216,711	Main Av.
102	21.0	872,576	Main Av.
103	11.1	110,071	Main Av.
104	24.4	411,300	Airport
105	7.0	7,000	Airport
106	23.3	399,031	Airport
107	6.3	176,199	Main Av.
108	16.5	152,631	Main Av.
109	26.3	352,714	Main Av.
110	16.8	180,000	Main Av.
111	18.8	1,624,000	Main Av.
<b>Total</b>	<b>161.7</b>	<b>7,301,194</b>	

Notes:  
 a) Total Open Available area in the area of future parcel coverage.  
 b) Potential building footprint shown in attached Plan-Use map.

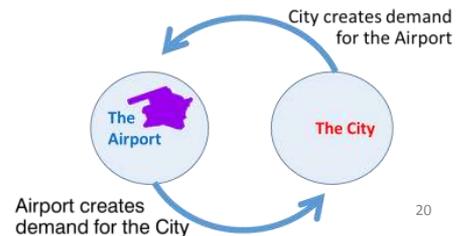
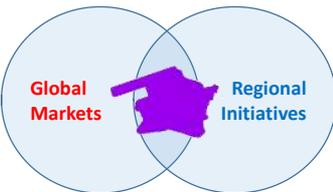
# Aerotropolis / Airport City



## Key Criteria to achieve objectives:

The **primary reason for a global city** to formally define an aerotropolis boundary and have implementation strategies is **to support the market position the City and the Airport that serves it.**

- 1. Become a destination in itself** for both local population as well as air travelers.
- 2. Increase air passengers and cargo**, in response to the aerotropolis developments.
- 3. Contribute local / regional economic benefits**, in terms of new employment opportunities in both existing and new industry sectors.

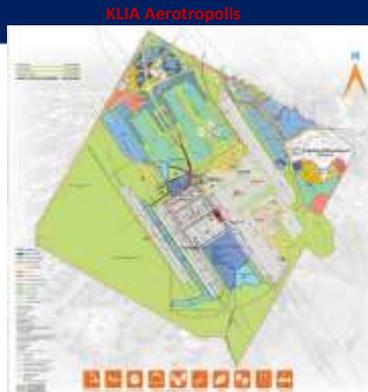


# Aerotropolis / Airport City

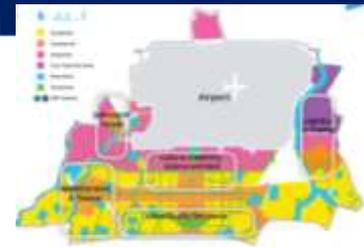
What has been Done



KZN Aerotropolis – Refined Framework

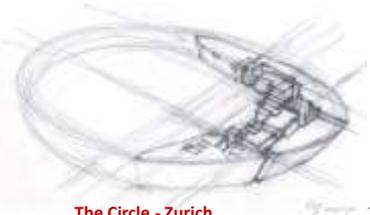
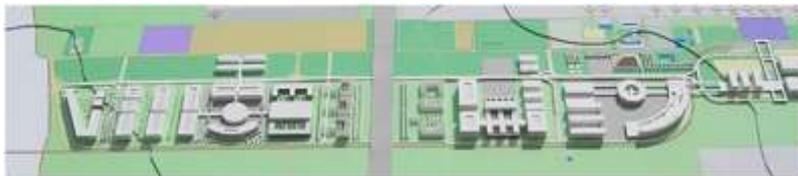


KLIA Aerotropolis



Taoyuan Aerotropolis

BIAL – Airport City



The Circle - Zurich

# Aerotropolis / Airport City

What has not been done



## No Economic Standards

- **The Hype has been created by academics and opportunists**
  - Proponents make *calculations of ultimate future build* out of large adjacent land areas under *idea market conditions*, including *all possible indirect benefits* and then selling this idea to politically appointed leaders that do not really understand airport related development.
  - They point to the examples of *cities with major airports* that have adjacent *development from spontaneous response to demand*, and proclaim that demand can be created by planning airport adjacent development.
- **Planning it does not guarantee it will happen.**

## Aerotropolis / Airport City



### Why Plan?

- ***Planning improves the outcome of development***
  - More responsive approval processes
  - More efficient use of land
  - Better ties to regional transportation access
  - Assures long-term growth areas for the airport
  - Better ROI
  - Improves region's image
- ***Planning it does not guarantee it will happen, but what does happen will be better***

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## Aerotropolis / Airport City



### ***Discussion and Questions....***

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