CASE STUDY
The New Guayaquil International Airport

Prepared for

ICAO Airport Planning Seminar for the SAM Region
Lima, Peru | 10-14 Sep. 2018

September 11, 2018
Outline

- Existing Guayaquil Airport And Its Challenges
- A New Guayaquil International Airport
- Master Planning Principles Adopted
A company like no other

- At Jacobs, we focus on building long-term client relationships.
- Leigh Fisher is a brand of Jacobs.
- One of the largest and most diverse providers of technical, professional and construction services.
- Including all aspects of architecture, engineering and construction, operations and maintenance consulting.
- We serve a broad range of companies and organizations, including industrial, commercial, and government clients across multiple markets and geographies.

We’re global. And we’re local.

- Our delivery philosophy is simple: Jacobs is located around the world where our clients are today and where they need us to be tomorrow.
- 8 offices in Central/ South America.

Our company at a glance

<table>
<thead>
<tr>
<th>1947</th>
<th>77,000+</th>
<th>$10B</th>
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</thead>
<tbody>
<tr>
<td>Founded by Joseph J. Jacobs</td>
<td>Employees</td>
<td>Billion 2017 Revenues</td>
</tr>
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<td>Headquartered in Dallas, Texas</td>
<td>400+</td>
<td>$2.72B</td>
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<td>Locations</td>
<td>Billion 2017 Client Savings</td>
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Jacobs – A global player in the aviation business

Jacobs' aviation teams help clients and their customers prepare for a smooth take-off and landing at international, regional, and municipal airports around the globe.

**Aviation infrastructure/ facilities:**
- Runways
- Taxiways
- Aprons
- Drainage
- Power & utilities, AGL
- Terminals, BHS
- Air traffic control towers
- Cargo facilities
- Aircraft hangars
- Fixed-base operations
- Roadways
- Parking facilities

**Aviation services:**
- Planning
  - Master planning
  - Terminal planning
  - Airside planning
  - Landside planning
  - Capacity assessments
  - Simulation
- Engineering design
- Architecture
- Construction support/ supervision
- Facility/ asset management
- Environmental compliance
- Project/ program management
- PPP Advice
  - Technical Due Diligence
  - Forecasting
  - CAPEX/ OPEX
  - Financial plan
Existing Guayaquil Airport And Its Challenges
The Existing Airport is “Award Winning”
Existing GUAYAQUIL INTERNATIONAL AIRPORT site is severely constrained
A New Guayaquil International Airport

The Airport Authority of Guayaquil is planning ahead

**Existing Airport constraints:**

- The terminal capacity of 5 million passengers can be expanded to 7 million passengers.
- However, the single runway would eventually limit growth and the Airport’s ability to accommodate cargo and passenger hubbing operations.
- Runway length limits destinations flown.
- Additional runways cannot reasonably be provided because the Airport is surrounded by urban development.

**Would result in . . .**

- Scarcity of seats and increased fares.
- Diminished customer service levels (e.g., aircraft operational delays, congested terminals, etc.).
- Inability to establish an airline hub network, which often acts as a catalyst for regional economic growth.

Therefore, both the Airport Authority and the Municipality of Guayaquil have concluded that the long-term needs of the community, region, and Ecuador will best be met with a new international airport located in the Daular region.
A New Guayaquil International Airport
Planning studies undertaken

- **Initial master plan**
  - Identified existing airport will not be able to accommodate forecast demand

- **NGIA master plan**
  - Identified long-term concept for new airport

- **Program definition**
  - Confirm long-term plan
  - Protect the plan
A New Guayaquil International Airport

Proposed new Guayaquil Airport
Located in the Daular area, 12 miles (20 km) outside of the city; additional access roads would be developed
Authority owns more than 5,000 acres (2,000 ha) of land in this location
Numerous studies have confirmed the aeronautical feasibility of the Daular site

Advantages of the Daular Site (planning related)

1. Excellent geography and weather conditions
   The site is relatively flat, and weather conditions would allow visual operations without restrictions
   Topography poses no OLS issues

2. Aeronautical feasibility for 3 parallel runways
   Today, the Daular site is the only site in Ecuador within a metropolitan area that can accommodate three parallel runways for simultaneous operations
   Long-term planning horizon adopted

3. Available land for an Airport City or “Aerotropolis”
   Sufficient land is available to develop ancillary commercial and industrial land uses for additional revenue generation
   Commercial needs taken into account

4. Potential for an international air cargo hub
   An international logistics/cargo operator may develop facilities for multi-modal cargo operations utilizing the site’s proximity to the Guayaquil port.
   Site responds to business plan
Master Planning Principles Adopted
Preferred Land Use Concept – Maximum Build-out
Preferred Land Use Concept – Clear Zoning

Clear zoning
- Runway-taxiway system
- Passenger terminal/ apron
- Main/ secondary landside access
- Support functions
- Commercial zones
- Future expansion
Preferred Airfield Concept – Maximum Build-out

LEGEND
- Runway
- Taxiway/taxilane
- Runway/taxiway safety area
- Elevation contours
- Terminal envelope (approximate)
Master Planning Principles Adopted – Airside

**LEGEND**
- Runway
- Taxiway/taxilane
- Runway/taxiway safety area
- Elevation contours
- Terminal envelope (approximate)

**Airside**
- Parallel runways
- Runways enable long-haul ops
- Runway separation
- Around-end taxiways
- Rapid exit taxiways (RET)
Airport Configuration PAL-1
Airport Configuration PAL-1

- Secondary runway shorter
- Pax terminal optimally located
- Expansion safeguarded
Apron Configuration PAL-1
Apron Configuration PAL-1

- Terminal apron for contact
- Remote apron in proximity
- Triple C-E-C taxilanes
- 2x TWY
- 1x TXL
- Dedicated Code F taxi route
NEW GUAYAQUIL INTERNATIONAL AIRPORT

OPENING DAY – 2024 (16 mppa)
NEW GUAYAQUIL INTERNATIONAL AIRPORT
ULTIMATE DEVELOPMENT
NEW GUAYAQUIL INTERNATIONAL AIRPORT

COMPREHENSIVE TERMINAL DEVELOPMENT
Thank you

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