Development at U.S. Airports: A Summary Look at Future Trends and Opportunities

 Speakers:
 Mark Ahasic, IATA AvMP, Arup
 Matthew Sheren, AICP, Arup

 Moderator:
 Roddy Boggus, Chair, ACC Board of Directors, Suffolk

 MARCH 16, 2017

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 Roddy Boggus, Chair, ACC Board of Directors, Suffolk

 Boggus is Executive Vice President of Aviation at Suffolk Construction, where he is responsible for all aviation-related construction services. He assumed the position of chair of the 2017 ACC Board of Directors in November 2016. Roddy has three decades of experience in design, planning, implementation, and management of diverse aviation projects globally. He is familiar with issues facing the airport and airline industry in the US, Europe, Latin and South America, the Middle East, and Africa. He is a regular speaker at industry conferences on topics that range from airport planning and design, security-related technologies, partnering to alternative financing as well as the sometimes-frequent satirical aviation industry author of “Boggus Talk.”
ACC REPORT - HISTORY

- ACC Board of Directors approved funding in 2016 to commission a report on the state of the airport development industry

- Key Goals:
  - Ascertain the current and projected level of investments in airports
  - Determine the types of projects, how they will be funded, and types of services required
  - Compare airport development with other sectors

- RFP advertised in August, 2016; Arup awarded

- Report released on February 21, 2017

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**Mark Ahasic**, IATA AvMP, Arup

Mark Ahasic is an Associate and Senior Aviation Consultant at Arup. He has expertise in airline and airport operation and management, terminal and airside planning, airport capacity and capital planning, operational efficiency and analysis, and project management.

**Matthew Sheren**, AICP, Arup

Matthew Sheren is a Planner in the New York office at Arup. He has been involved in planning and transportation projects primarily throughout the New York and New Jersey region. His skills include planning research, analysis, spreadsheet models, system operations, and GIS.
INTRODUCTION

ACC engaged Arup to research & write a paper to address the following:

- What are key trends in airport development in the U.S.?
- Which projects (and what level of investment) are expected through 2021?
- Opportunities and implications for those involved in airport development:
  - Types of projects
  - Funding
  - Procurement methods
  - Required consultant services

METHODOLOGY

Arup research spanned a two month period, and included:

- Project-specific research and analysis of ~50 of the 60 Large and Medium Hubs.
  - Capital Improvements Programs (CIP) and other airport reports
  - FAA grant lists
  - Articles
- Analysis of 2017 – 2021 NPIAS investment needs for hubs, non-hubs and non-primaries.
  - Including benchmarking for $ versus enplanements and ATMs.
- State System Plan analysis of development projects for a sample of GA airports.
- Airport leader interviews.
Top 10 Headlines

1. Greatest investment will be in terminals with the primary objective being capacity enhancement.

2. Airfield pavement projects are ubiquitous but most are rehabilitative. Few new runway projects planned.

3. 2017–2021 NPIAS includes identified investment need of $32.5 billion in projects eligible for federal funding.

4. Design-Build and Construction Manager at Risk models are gaining interest by airport sponsors where available.

5. P3s for components of U.S. airports continue to increase in frequency, while airport-wide P3s continue to be rare.

6. Airports, airlines and Federal agencies are increasing the use of technology to enhance passenger facilitation.

7. CONRAC facilities are becoming more common, popular and substantial in nature.

8. Investments to enhance the passenger experience are a way for airports to increase passenger spend.

9. TNCs are noticeably evolving landside behavior, and may lead to change in facility and ground access planning.


MAJOR TRENDS

**RUNWAYS & SAFETY**
- New runways at 17/30 of the Large Hubs during the last two decades.
- Few new runways are planned.
- Runway Incursion Mitigation (RIM) is the next big initiative.

**CHANGES IN FLEET MIX**
- A380: Leveling off
- 787/A350: New markets (AUS, SAN, BOS)
- 737 MAX/A320neo: (SWF, PVD)

**PASSENGER FACILITATION**
- Using existing infrastructure more efficiently.
- Innovation lanes and screening for intent.
- New models of check-in and self-service.
- “Inside-out” terminal design – pax focus.

**TRANSPORTATION NETWORK COMPANIES**
- Drastic shifts in mode share that have changed landside volumes and characteristics.
- Airports have a need to re-examine landside operations given the paradigm change.
OVERALL NPIAS NEEDS

- $32.5 billion for FY 17 – FY 21, down from $33.5 billion for FY 15 – FY 19
- AIP Investment required for infrastructure development at NPIAS airports.

OVERALL NPIAS NEEDS

- Four main categories in 2009
OVERALL NPIAS NEEDS

- Have become two main categories in 2017:

![Bar graph showing NPIAS needs over time with labels 1 and 2]

FUNDING AND DELIVERY TRENDS

- Design-Bid-Build is losing ground to Design-Build.
- CM at Risk remains popular.
- Component P3s growing, but P3s are still not widely accepted.
LARGE AND MEDIUM HUB PROJECTS

- Useful “roadmap” of details on upcoming projects.

INVESTMENT BY PROJECT CATEGORY:
SAMPLE OF LARGE & MEDIUM HUBS (2017-2021)

INVESTMENT BY PROJECT MOTIVATOR:
SAMPLE OF LARGE & MEDIUM HUBS (2017-2021)
## SERVICES REQUIRED OF PROJECTS

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<th>Discipline</th>
<th># of Projects Requiring</th>
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<th>Percentage of Spend</th>
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<tr>
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</tr>
<tr>
<td>TOTAL</td>
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</table>

### DEVELOPMENT AT U.S. AIRPORTS: A SUMMARY LOOK AT FUTURE TRENDS AND OPPORTUNITIES

### SMALL AND NON-PRIMARY

- Strong Corporate Aviation sector sees upgrades at larger GA airports.
- Small GA airports doing state of good repair, but systemic problems.
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*A Summary Look at Future Trends and Opportunities*

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**DEVELOPMENT AT U.S. AIRPORTS**
*A SPECIAL REPORT BY ACC*

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Doubletree Hotel, Crystal City, Arlington, VA

Security Capabilities Workshop
July 18 – 20
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