

THE ACC YOUNG PROFESSIONALS PRESENT:

Follow the Money: An Introduction to Airport Finance

November 30, 2017

1:00 PM – 2:00 PM EST





THE ACC YOUNG PROFESSIONALS FORUM

The ACC Young Professionals Forum is a means to engage the young professionals in airport development and enhance their professional careers. Targeted for industry professionals that are 35 years old and younger, the Young Professionals Forum is intended to provide networking, mentoring, education and career growth opportunities.

[The ACC YP Forum](#)

If you or a colleague is interested in becoming a member of the ACC Young Professionals Forum, please email Pinar Maurice at pinarm@acconline.org or visit www.acconline.org.



TODAY'S MODERATOR:

Cody Parham, HDR

Project Manager

Cody is a project manager with HDR, specializing in aviation infrastructure and site development. He earned his civil engineering degree from the Georgia Institute of Technology and is a registered Professional Engineer. Cody's roles have ranged from FBO program management to design of LEED facilities for GA and commercial airports. His recent industry involvement includes roles with the ASCE Airfield Pavement Committee, the AAAE/ACC Airport Planning, Design and Construction Symposium, and the Florida Airports Council.



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Dafang Wu, DWU Consulting

Associate Director

Dafang Wu has more than 17 years of airport consulting experience on bond feasibility studies, capital planning, financial planning, and rates and charges, among other areas. He has provided financial forecasts for bond feasibility studies to support the issuance of more than \$8 billion of airport revenue bonds. In addition, he has provided capital and financial planning services for multi-billion-dollar capital programs at Boston, Hawaii, Miami, Orlando, Sacramento, and San Francisco. He is a Chartered Financial Analyst, and a member of ACI-NA finance committee steering group.



Lou Wolinetz, WSP USA

Aviation Finance Lead

Louis (Lou) Wolinetz has served clients on five continents on transportation infrastructure financial, economic, and strategic planning assignments. Currently, Lou leads the WSP Advisory Services aviation practice, where he integrates WSP's financial and management consulting capabilities with the firm's engineering capabilities in planning, design, and construction services. Key areas of focus include financial feasibility consulting, strategic asset management, and innovative finance including public-private partnerships (P3).

Lou's notable projects range from assessing delivery options for the LAX people mover currently in procurement, advising the winning equity consortium on the purchase of the terminal at Billy Bishop Toronto City Airport, and serving as lead financial consultant for one of the newest commercial service airports in the US (Panama City, FL).

Lou has unique multi-modal expertise including airports, toll roads, transit, and seaport projects. Prior to joining WSP, Mr. Wolinetz spent more than 10 years advising airport, transportation, and infrastructure clients on a broad range of finance, policy, and planning assignments. He is a regular speaker and writer on airport finance and performance improvement.

Lou holds a master's degree in City and Regional Planning from University of North Carolina at Chapel Hill, and a bachelor's degree in economics and government from Cornell University.



Gavin Fahnestock, CHA Consulting

Senior Airport Planner

Gavin Fahnestock has 12 years of experience in airport capital development planning and airport planning. Gavin has assisted in overseeing the \$3.35 billion Airport Improvement Program for the Federal Aviation Administration for the past 6 years including management of the national Airport Capital Improvement Program and discretionary AIP funding program. Gavin has assisted in the development of a key FAA Order which provides guidance on development of airport capital improvement programs. Gavin has also developed multiple Airport Master Plans, Airport Layout Plans, Terminal Development Plans, and environmental documents including an Environmental Assessment for the development of a new airport in Arizona.

Airport Finance and Capital Investments

Dafang Wu, DWU Consulting LLC

Associate Director



Implementing a capital program requires coordination of three activities

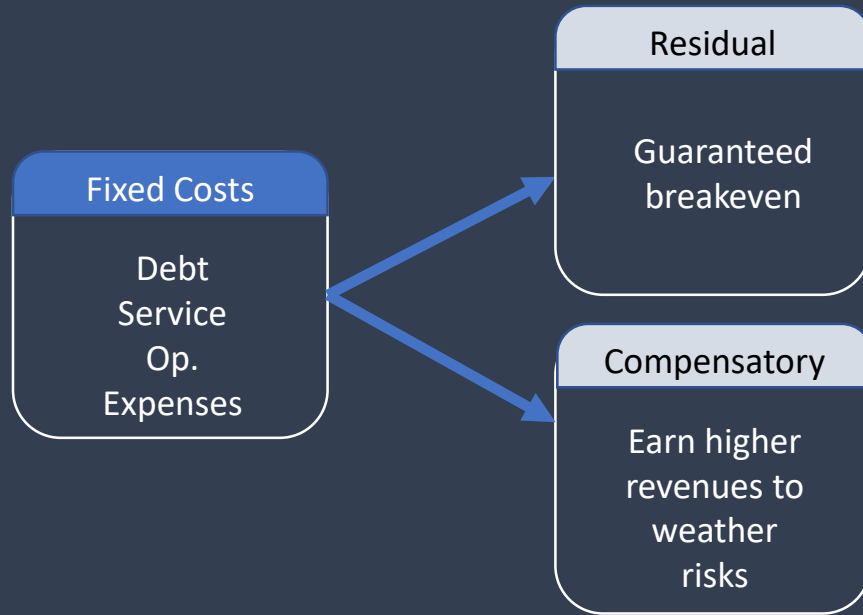


- Facility planning
 - Identify facility needs, development options, schedule, scope and cost
- Financial planning
 - Identify affordability and evaluate impact of implementing capital program on airport financial situation
- Business planning
 - Complete business arrangement with users, such as airline agreement or special facility lease agreement

Capital investment has tremendous impacts on financial planning and business planning

- Airports are capital intensive:
 - ACI-NA survey identified \$100 billion of capital needs in 2017-2021
 - Airports incur additional annual operation and maintenance expenses to take care of additional facilities
- Airports attempt to maximize external funding sources such as grants, but the remaining need is mostly funded by revenue bonds
 - Debt service needs to be paid over 30 years or more
 - Airports capability in generating higher non-aeronautical revenues (parking, rental car, etc.) is limited
 - Higher airline rates and charges are needed to repay debt, but can airports charge airlines whatever necessary to fund a capital program?

Airline rates and charges are regulated and mostly based on cost recovery



- Airports have two primary options to set airline rates:

- Residual: airlines agreeing to pay any costs of running the airport that are not allocated to other users

Residual rate methodology cannot be imposed on the airlines without bilateral agreements

- Compensatory: the airport operator assumes the major financial risk of running the airport and only charges the airlines for their fair share

Compensatory ratemaking can be set unilaterally following federal regulations

Under compensatory, airports may not be able to afford a capital program



Airfield – Full recovery from airlines

- Limited nonairline revenues
- Remaining costs payable by airlines



Terminal – Partial recovery

- Airlines only pay for their rented space
- Is concession space sized too big?

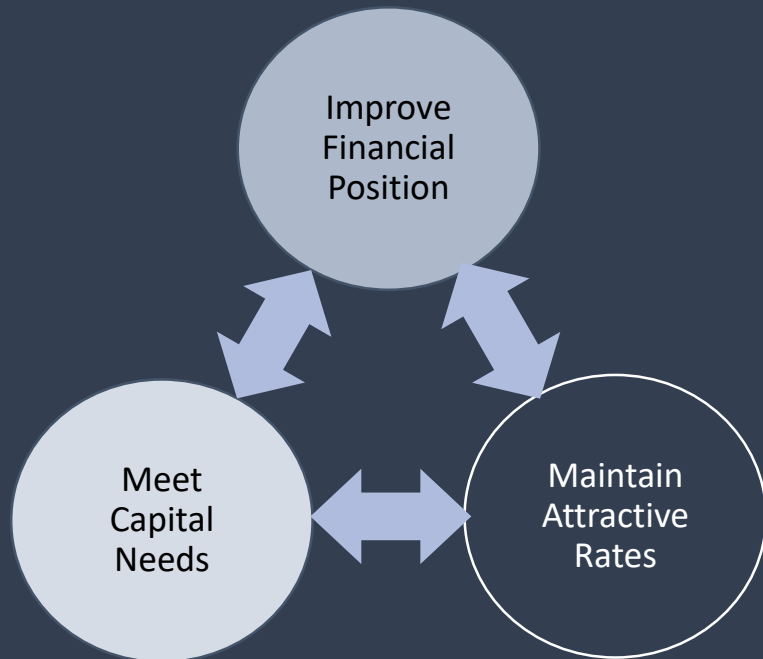


Others – No recovery from airlines

- Parking and rental car are primary revenues
- Airlines have no obligation unless residual

Airports must consider objectives other than generating revenues

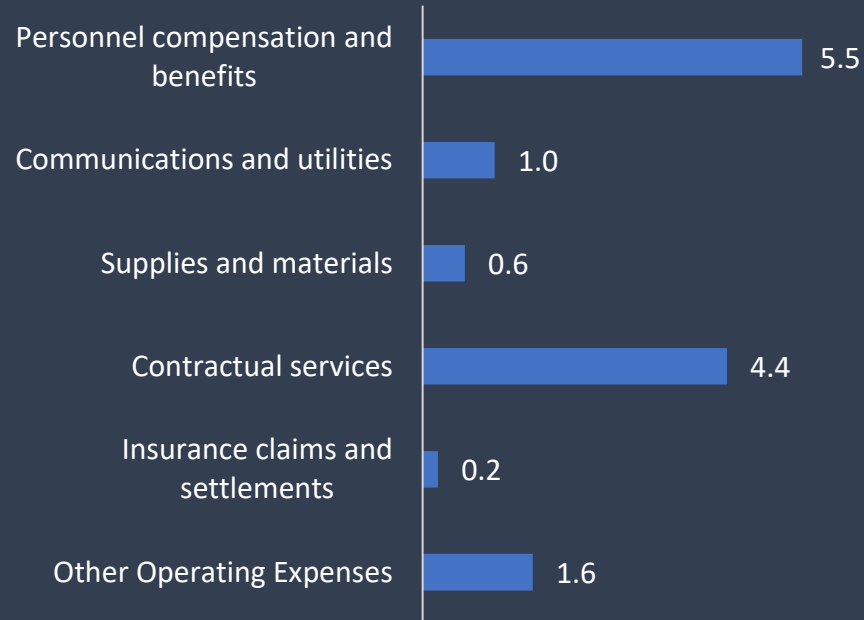
Generate Revenues for Debt Service



- If a capital program generates enough revenues but leads to undesirable level of airline rates and charges, it may not be implemented
- An airport tries to balance the following:
 - Improve financial position: have a higher safety margin, improve cash position, etc.
 - Meet capital needs: construct the facility for existing and anticipated traffic needs
 - Maintain attractive rates: keep rates low, so the airlines can generate a healthy profit and develop air service

Top priority is to generate enough revenues to pay O&M, debt service and other obligations

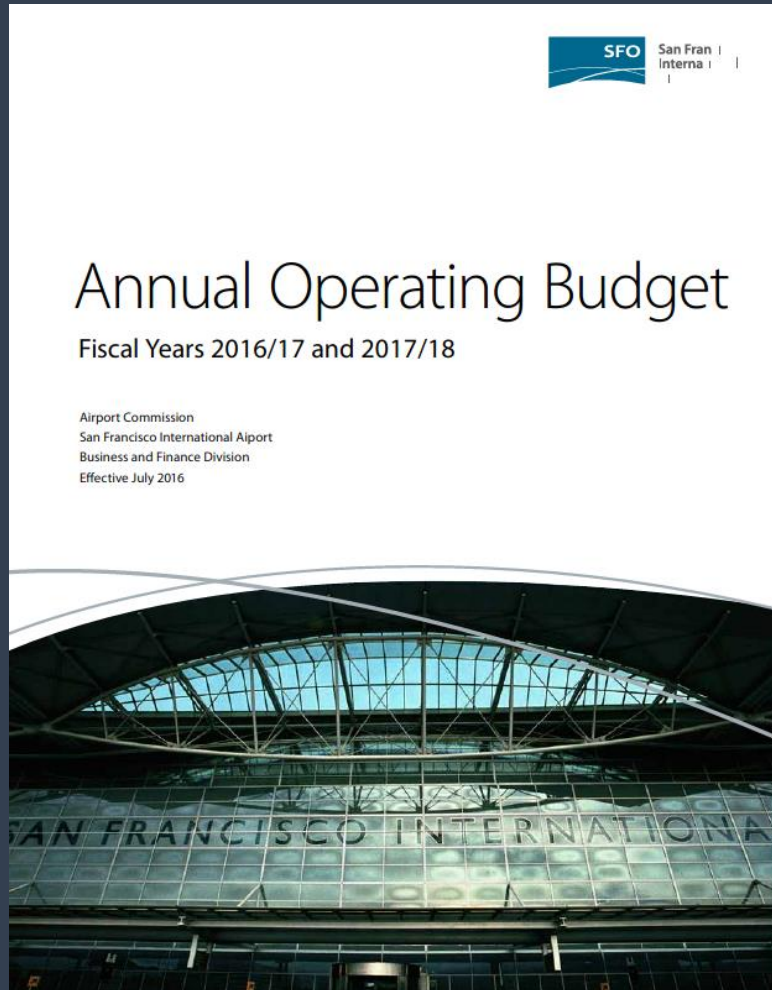
U.S. Airport 2016 Operating Expenses
(totaling \$13 billions)



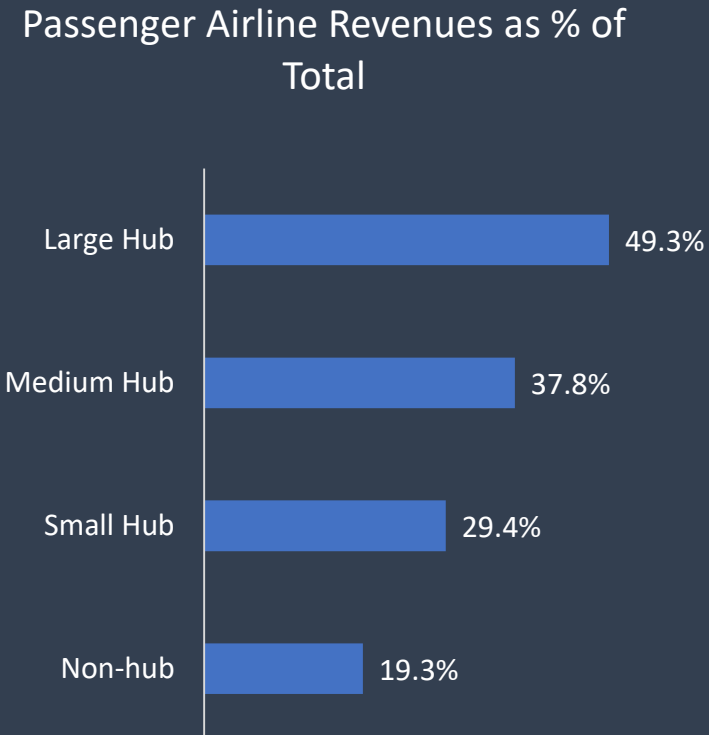
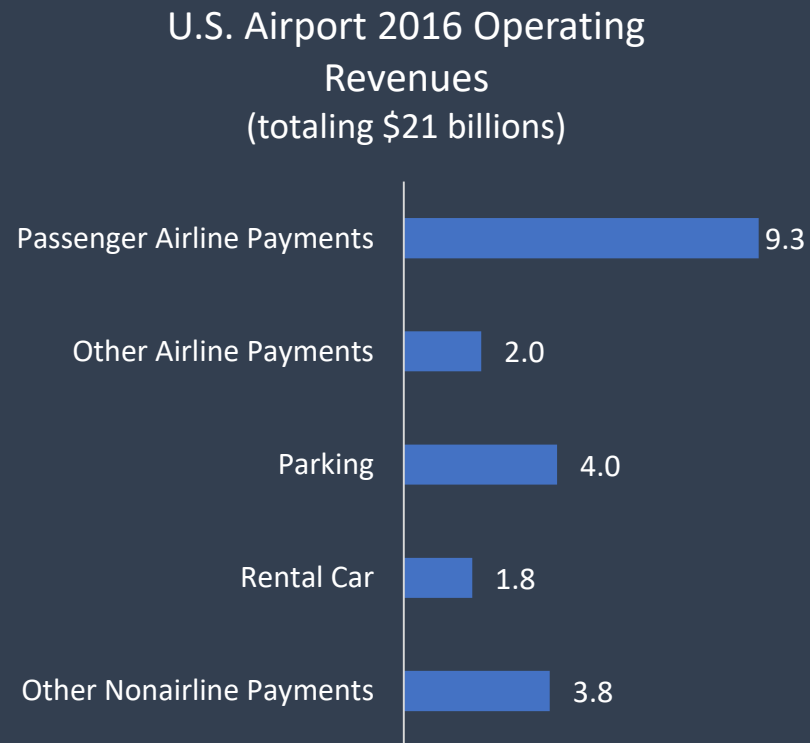
Source: Federal Aviation Administration,
Certification Activity Tracking System.

- Personnel services accounted for 40% at large-hub airports and 48% at small-hub airports. Contractual service such as consulting services accounted for 35% at large-hub airports and 23% at small-hub airports
- Both incremental budgeting and zero-based budgeting are used in the industry
 - Preliminary budget
 - Rates and charges calculation
 - Internal approval and airline consultation
 - Publish of final budget
- In addition, U.S. airports in 2016
 - Paid \$7.4B in debt service
 - Invested \$10.2B
 - Received \$2.1B in grants and \$3.2B in Passenger Facility Charge revenues
 - Borrowed \$7.5 billion in bonds

Operating expenses and rate calculation may be presented separately as budget and rate book



Passenger airline payment is the largest revenue source at many airports



Source: Federal Aviation Administration, Certification Activity Tracking System.

Capital investment achieving all objectives are highly welcomed

- A properly sized parking garage may meet facility needs, improve revenues, and reduce airline costs under a residual ratemaking. This type of project is on the top of implementation list.
- Most projects may come at sacrifice of other objectives
 - Impact to financial results is typically measured by debt service coverage, days cash on hand or debt per e.p.
 - Impact to airline rates is typically measured by cost per enplaned passenger (CPE), calculated as passenger airline payments divided by the number of enplaned passengers.
 - Can the impact be mitigated through higher non-aeronautical revenues, airline operating efficiency or delay reduction?

Capital investment can provide opportunities or disrupt airport-airline relationship

- Capital investment is time-consuming and cyclical
 - Airports want capacity to accommodate existing and future needs
 - Airlines want capacity just-in-time
- Building additional capacity implies that airlines would pay higher airport fees
 - Airlines have higher bond borrowing cost and higher cost of equity
 - Airlines prefer to defer any payment that could be deferred
- Proceeding without airline support is possible, but at the high cost of airline relationship

Takeaway

- Capital funding capacity is limited:
 - At residual airports, it depends on airlines willingness to pay
 - At compensatory airports, there may be a hard limit, and cost center is a key consideration
- Impact on financial positions and airline rates are key considerations when implementing a capital program
- Additional materials:
 - Airport Finance 101: <https://dwuconsulting.com/Finance101.pdf>
 - Large hub airline rate: <https://www.dwuconsulting.com/airport-finance/large-hub/airline-rates>
 - Budget: <https://www.dwuconsulting.com/airport-finance/large-hub/annual-budget>

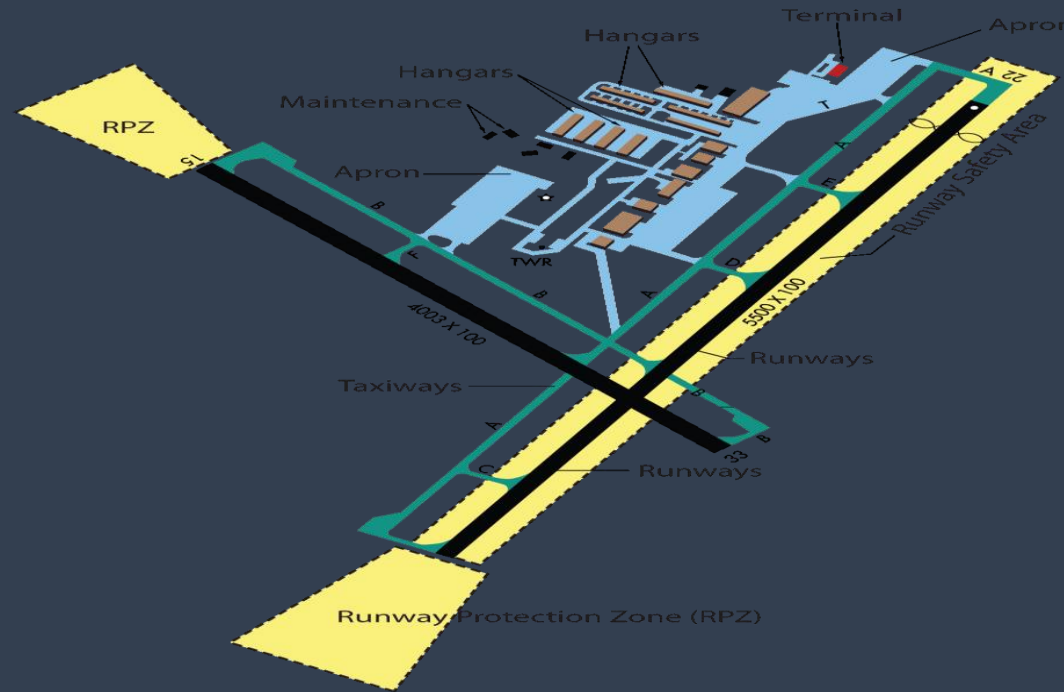
Airport Capital Improvement

Lou Wolinetz, WSP USA

Aviation finance Lead

Airport Capital Improvement

- CapEx Planning
- Sources of funds
- Project Delivery Mechanisms
- Ongoing Operation

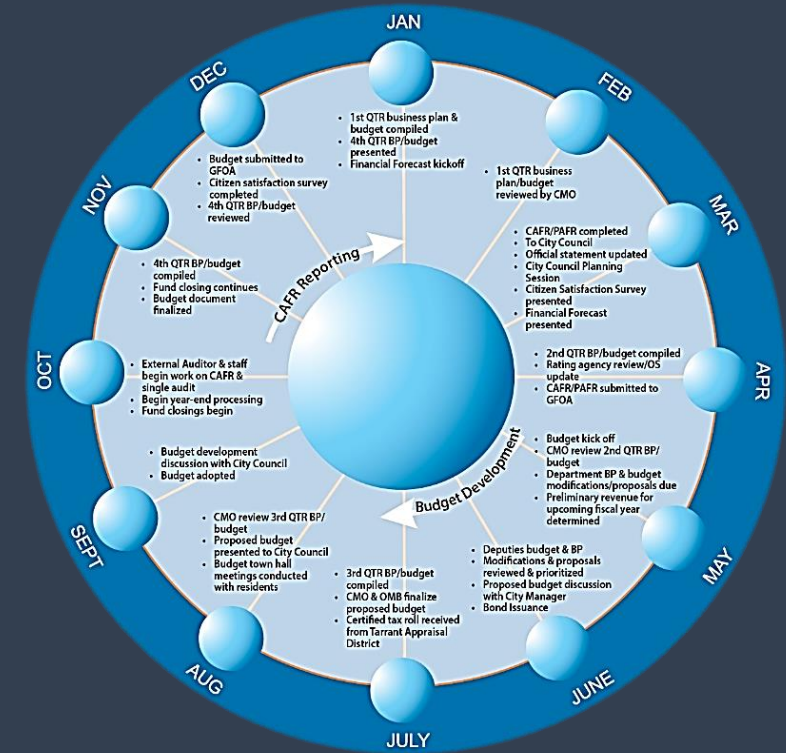


CapEx Planning: Who owns what?

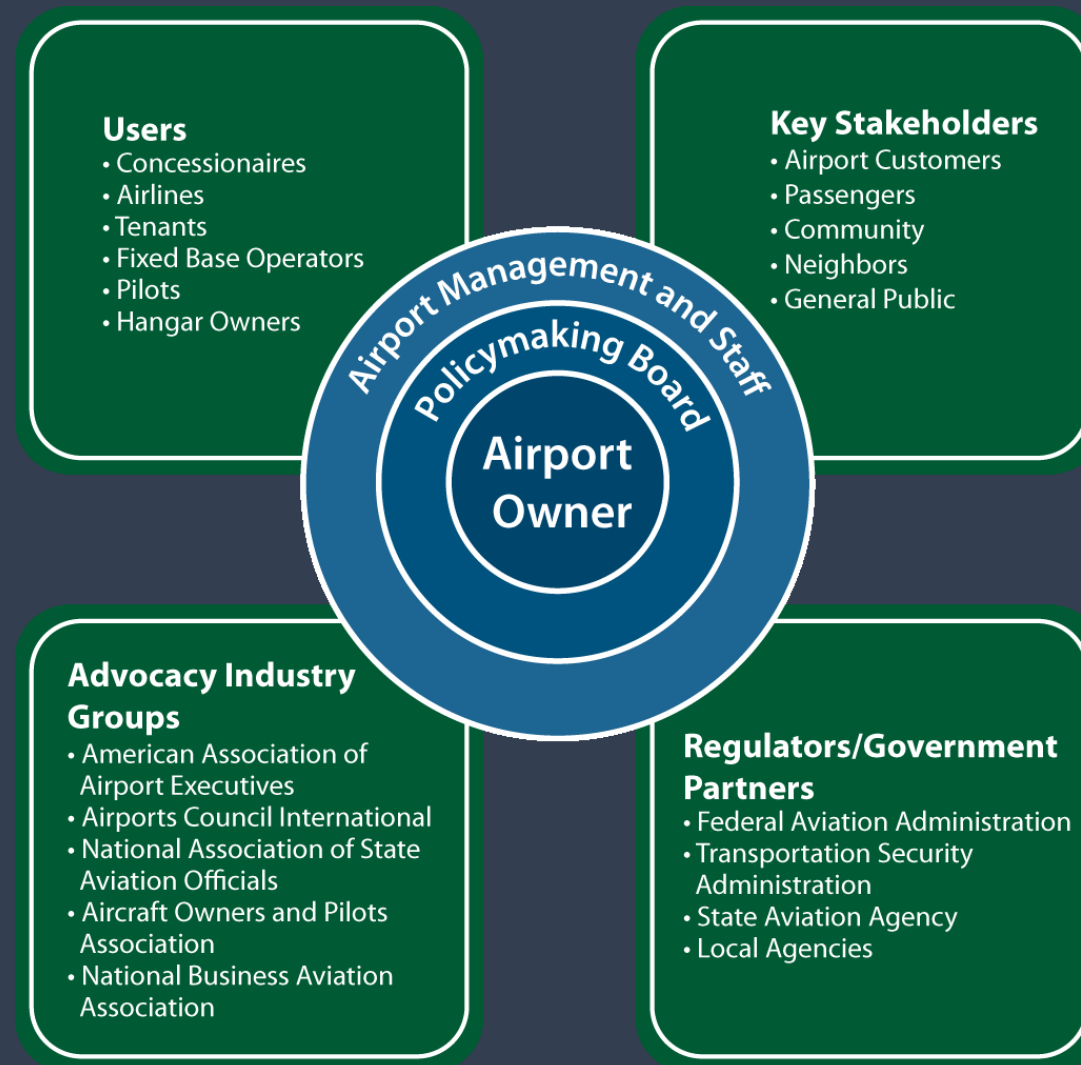
- Airports are landlords enabling private companies to operate
 - Airfield (almost always)
 - Terminals (usually)
 - Passenger throughput (gates, concourses, people mover, baggage, ticketing, etc.)
 - Concessions (but not internal finishes)
 - Security/Customs & Border Control/FAA
 - Customer service (IT, utilities)
 - Other aviation facilities (rarely)
 - Cargo, GA, ATC
 - Ground transport (varies)
 - Parking (but compete)
 - Rental car (sometimes)
 - Access roads (to the property line)
 - Rail – no, but might help to operate
 - Private companies
 - Airlines, cargo, GA, rental cars, concessionaires, etc.

Capital Planning

- Timeframes
 - Long term (master plan and ALP)
 - Medium term (CIP)
 - Current (budget)
- Priorities
 - Legal/regulatory (making sure we can operate)
 - Safety/security
 - Functional (moving people and aircraft)
 - Customer service
 - Amenities (art/play areas)
- Types of capital planning
 - Expansion vs. maintenance/renewal
- Process
 - Role of staff, board, consultants, others



Everyone has an opinion



Capital Planning Challenges

INCREASING



- Aging assets
- Focus on accountability and transparency
- Regulations and oversight (e.g., FAA, TSA)
- Airlines in flux = capital needs uncertainty
- Need to do more with less (AIP, PFC not rising)
- Shifting Demand
- Complex trade-offs

Traditional Funding Mechanisms

Funding Source	Capital	Operating	Can Be Leveraged
Passenger Facility Charges	✓		✓
Customer Facility Charges	✓	✓	✓
Airport Revenue	✓	✓	✓
Grants (AIP, State/Local)	✓		

Innovative Funding/Financing Mechanisms

- Funding:
 - Multimodal sources
 - Value capture
 - Airport access fees
 - Congestion pricing
 - Leverage Big Data
- Financing:
 - Availability payment
 - P3
 - Infrastructure Banks

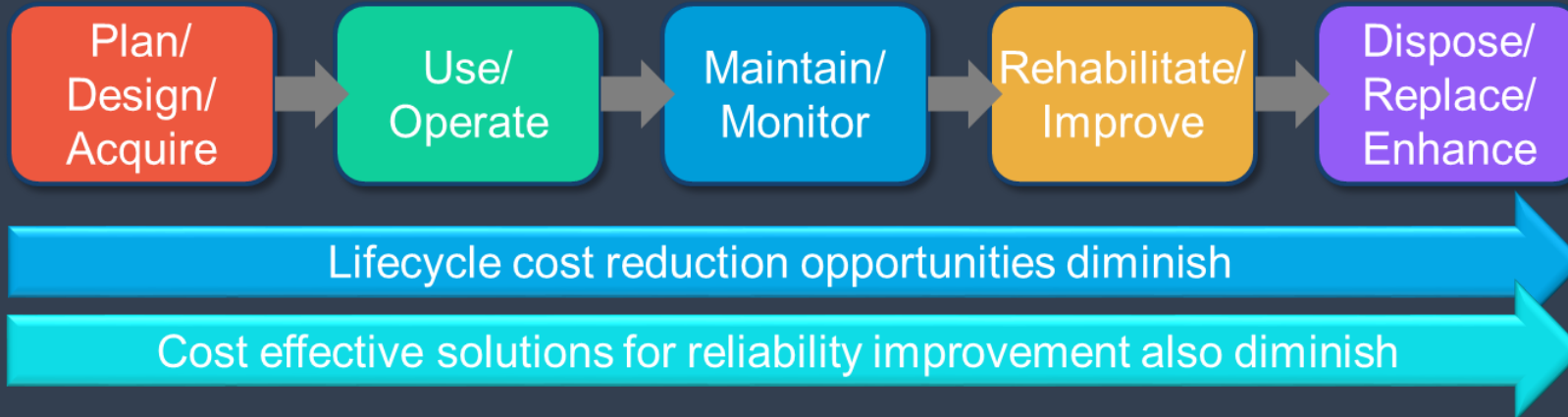


Project Delivery Mechanisms

Delivery Option	Design	Construction	Operations	Maintenance	Financing	Revenue	Collection
Design Bid Build	○	○	○	○	○	○	○
Design Build	●	●	○	○	○	○	○
Design Build Operate/Maintain	●	●	●	●	○	○	○
Design Build Finance Operate/ Maintain (Availability Payment)	●	●	●	●	●	○	○
Design Build Finance Operate/ Maintain (Real User Fee)	●	●	●	●	●	●	●

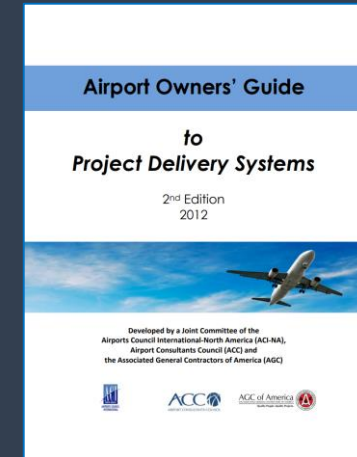
A Word About Asset Management

- 65 to 85% of all lifecycle costs are “locked in” at the design and procure stage
- Don’t forget operating costs



Some Capital Planning Resources

- ACC (and other industry associations)
 - Project Delivery Handbook
<https://www.acconline.org/documents/Resources/Airport%20Owners'%20Guide%20to%20Project%20Delivery%20Systems%20-%202nd%20Edition%202012.pdf>
 - Reports and conference materials online
- ACRP
 - Reports and conference materials online
 - Report 49 Collaborative Capital Planning: <http://www.trb.org/Publications/Blurbs/165584.aspx>
 - Synthesis 1 Innovative Finance and Alternative Revenue <https://www.nap.edu/catalog/14041/innovative-finance-and-alternative-sources-of-revenue-for-airports>
- Airports
 - Board meetings/minutes
 - Plans available online
- People want to help!



Airport Improvement Program Overview

Gavin Fahnestock, CHA Consulting

Senior Airport Planner

Summary

- What is the Airport Improvement Program (AIP)
- What does the AIP do?
- How is the AIP Managed?
- How much funding is available?
- What are the obligations for accepting AIP funds?
- How are airports classified?
- What are Passenger Facility Charges (PFCs)



Denver International Airport, CO:
6th Runway Construction

What is the Airport Improvement Program (AIP)?

- The Airport Improvement Program (AIP) provides grants to public agencies — and, in some cases, to private owners and entities -- for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS).
 - The NPIAS identifies existing and proposed airports that are important to national air transportation, and also provides a forward-looking estimate of the type and cost of Airport Improvement Program (AIP)-eligible development needed to meet the needs of civil aviation.
- Evolution of the FAA's Airport development and planning grant program:
 - 1946 – Federal-Aid Airport Program (FAAP)
 - 1970 – Planning Grant Program (PGP) & Airport Development Aid Program (ADAP)
 - Airport and Airway Development Act of 1970 established the Airport and Airway Trust Fund
 - 1982 – Airport Improvement Program (AIP)

What does the AIP do?

- The AIP provides Federal grants for various types of development and planning projects.
- What types of projects are eligible?
 - Eligibility and other program information is contained in the AIP Handbook (FAA Order 5100.38D) which is available publically on the FAA website.

Eligible Projects	Ineligible Projects
Runway construction/rehabilitation	Maintenance equipment and vehicles
Taxiway construction/rehabilitation	Office and office equipment
Apron construction/rehabilitation	Fuel farms*
Airfield lighting and Signage	Landscaping
Airfield drainage	Artworks
Land acquisition	Aircraft hangars*
Weather observation stations (AWOS)	Industrial park development
NAVAIDs such as REILs and PAPIs	Marketing plans
Planning studies	Training
Environmental studies	Improvements for commercial enterprises
Safety area improvements	Maintenance or repairs of buildings
Airport layout plans (ALPs)	

*Eligible under certain circumstances



MidAmerica St. Louis Airport, MO:
Surveillance Radar



Sioux County Regional Airport, IA:
New Runway Paving



Reno/Tahoe Int'l Airport, NV:
Terminal Apron Reconstruction



Carroll Municipal Airport, IA:
Snow Removal Equipment



San Jose Int'l Airport, CA:
Hold Position Marking

How is the AIP Managed?

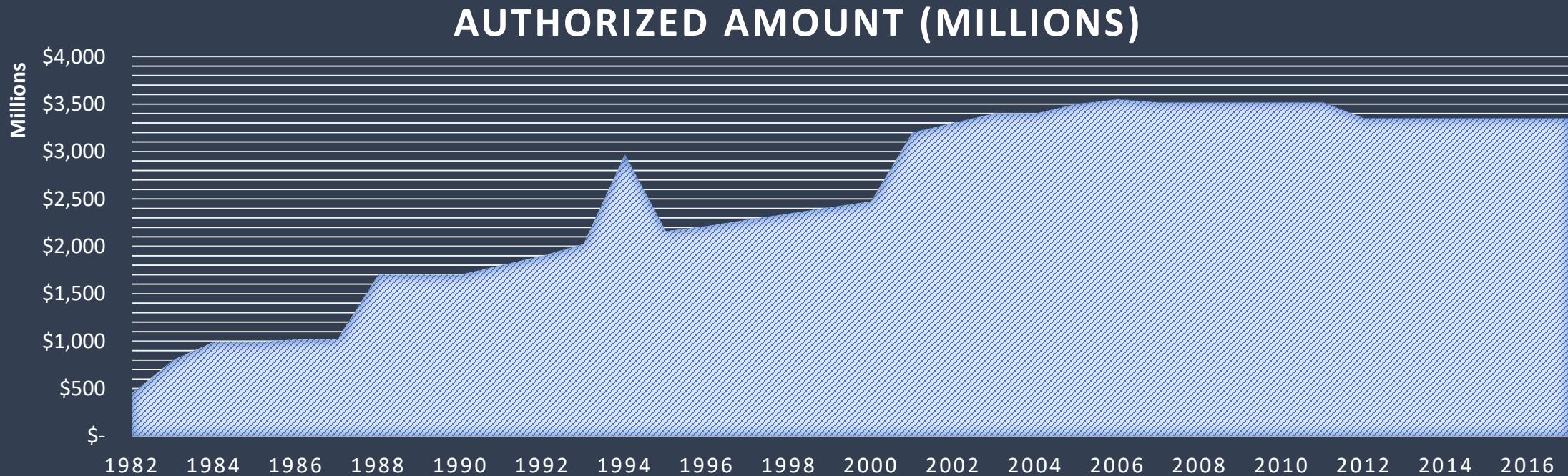
- AIP Branch is part of the Office of Airports Planning and Programming Division, Financial Assistance Division
 - Other divisions include Airport Planning, Airport Safety & Standards, Airport Engineering, Airport Compliance & Management Analysis
- AIP is managed by a small staff in HQ and by multiple field offices.
 - RO/ADO Interface directly with Airport owner (sponsor) on all project planning and grant activity while HQ provides national oversight of program/grant activities and manages national distribution of funds
- Projects are prioritized through the National Priority System (NPS) equation.
- Highest priorities are Capacity, Safety, Security, and Noise.
- Support public use airports, develop nationwide system to meet the needs of civil aviation National Airspace System (NAS)
- Interface with airport owners, States, public, aviation industry

How is the AIP Managed?

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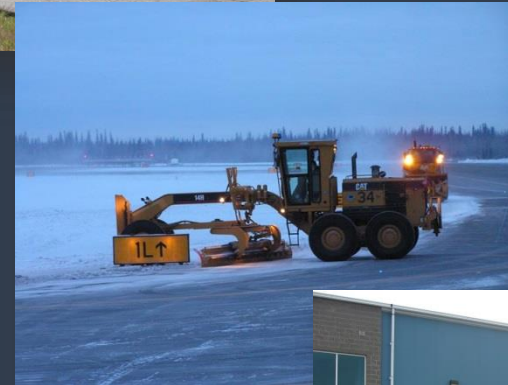
How much funding is available?

- AIP funding has exceeded \$3 billion annually since 2001
- FAA funds up to 75% of the eligible project cost at major airports and up to 90% at small airports (Some exceptions)
- Other funding sources for commercial service airports include:
 - Passenger Facility Charges (PFC), bonds, aeronautical fees, & airport operating revenue.





Fuel Taxes



CHARGES

Air Transportation Charges

Base Fare

Taxes, Fees and Charges

United States - Transportation Tax (US)	\$16.81 USD
United States - Flight Segment Tax (ZP)	\$8.00 USD
United States - September 11th Security Fee(Passenger	\$11.20 USD
Civil Aviation Security Service Fee) (AY)	
United States - Passenger Facility Charge (XF)	\$9.00 USD

TICKET AMOUNT

\$269.20 USD

Air

Trust Fund

Ticket Taxes

AIP Grants

- Airport Improvement Program (AIP)
 - \$3.35B grant program / Airport infrastructure / 3,345 existing airports
 - Approx. 2,000 grants per year / Typical recipient: City, county or authority airport owner
- Two Basic AIP Fund Types
 - **Entitlement** – Formula amount that must be made available to specific airports or states based upon a metric for any eligible work
 - **Discretionary** – Allocated based on FAA decisions re national priority
 - Subject to specific set-asides: noise, reliever and Military Airport Program
 - Capacity/Safety/Security/Noise – definition specific use
 - “Pure” discretionary – Any eligible use
- Special Set Aside Programs
 - Military Airport Program (MAP)
 - Noise Mitigation/Voluntary Airport Low Emission (VALE)
 - Soundproofing/Gate Electrification

What are the obligations for Accepting AIP funds

- Sponsors agree to obligations when accepting Federal grant funds or Federal property transfers for airport purposes
 - Grant Assurances
 - 16. Conformity to Plans and Specifications
 - 17. Construction Inspection and Approval
 - 25. Airport Revenues
 - Surplus property conveyances
 - Non-surplus property conveyances
- Duration of obligations vary
 - 20 years
 - Perpetuity
 - As long as airport used as an airport
- FAA enforces obligations through Airport Compliance Program (Office of Airport Compliance and field offices)

What is the Passenger Facility Charge (PFC) Program

- The Passenger Facility Charge (PFC) Program allows the collection of PFC fees up to \$4.50 for every enplaned passenger at commercial airports controlled by public agencies. PFCs are capped at \$4.50 per flight segment with a maximum of two PFCs charged on a one-way trip or four PFCs on a round trip, for a maximum of \$18 total. Airports use these fees to fund FAA-approved projects that enhance safety, security, or capacity; reduce noise; or increase air carrier competition.
- Available to Commercial Service Airports
 - 356 Locations Collecting
 - 96 of top 100 airports enplaning passengers currently collect a PFC

PFC Program Details

- Broader eligibility than AIP funds
 - PFC can fund all projects which are AIP eligible, however, PFC can also fund projects such as gates and related areas at larger airport which are not AIP eligible.
- PFC collections are exceeding \$2 billion annually
 - \$3.164 billion in collections in CY 2016
- PFC projects must:
 - (1) preserve or enhance safety, security, or capacity of the national air transportation system;
 - (2) reduce noise or mitigate noise impacts resulting from an airport; or
 - (3) furnish opportunities for enhanced competition between or among air carriers.

THE ACC YOUNG PROFESSIONALS

THANK YOU

Please feel free to submit any remaining questions for our panelists to the Organizer.



THE ACC YOUNG PROFESSIONALS

CALL TO ACTION

The ACC Young Professionals Forum is looking for volunteers for next year's webinar coordinators!

Please email Pinar Maurice at pinarm@acconline.org if interested.





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