# AIRPORT INNOVATIONS AND

INNOVATORS 1

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## Airport Innovations and Innovators

#### Abstract

Airports are facing challenges from increased capacity, funding airport infrastructure projects, finding new sources of revenue, to developing new talent. With all of these challenges, airport leadership seek alternative solutions and innovate personnel to produce customer-centric airport designs. New methods of funding are providing high-cost renovations to large airports such as LaGuardia (Plotnick, 2017, Oct. 5). Other airport leadership has developed commissions such as the Economic Development Commission of Florida's Space Coast to lure significant aerospace companies to their community (The Editorial Board, Florida Today, 2017, Oct. 27). Airport leaders are also active in bringing large flight schools and redeveloping their airport to increase economic growth to their community (Ditzler, 2017). The development of future airport leaders is in the forefront of Fort Lauderdale Executive Airport's mission to cultivate the aviation community (personal communication, November 1<sup>st</sup>, 2017). Innovations and innovators are bringing solutions to the challenges facing the airport communities.

#### Introduction

The increase in passenger travel causing airport congestion is leading to innovative airport capital financing, design, and leaders. Airport leadership is figuring out innovative methods to manage airport congestion with technology at the forefront (AAAE, press release, 2017, July 13). The investments needed to meet the demands of expanding capacity requires new methods of revenue generation to airlines blocking further development limiting competition (Jankovec, 2017, Oct. 9). To reduce processing time through many airport activities, the application of technology is used to change passengers' behavior and allows more operations over a given period (Young & Wells, 2011). The second annual Airport Innovation Award winner selected by the American Association of Airport Executives was Phoenix Sky Harbor International Airport (AAAE, press release, 2017, July 13). Phoenix Sky Harbor used cutting-edge technologies to redesign Terminal 3 to a customer-centric terminal and is now setting a standard for airport projects around the United States (AAAE, press release, 2017, July 13). Unique funding methods have been developed to provide capital for the airport improvements needed. One example is the private-public joint venture funding that is allowing large airport projects such as LaGuardia Airport Central Terminal B to finish on-time and on budget (Plotnick, Oct. 5). Other airports are awaiting public funding through the constituent's approval such as Kansas City Airport (Turque & Vockrodt, 2017 Nov. 2). The Kansas City Airport sought financing through the airlines with no success to replace the current horseshoe terminal (Turque & Vockrodt, 2017 Nov. 2). Orlando-Melbourne International Airport has come back from the loss of the NASA Space Shuttle program to a corporate home base to multiple aerospace companies revitalizing their economic growth (The Editorial Board, Florida Today,

2017, Oct. 27). Innovative leaders such as Zachary Bass, Oregon's Airport manager of the year are transforming his cities economic opportunities through luring Hillsboro Aero Academy and redeveloping Redmond airport's infrastructure (Ditzler, 2017). Fort Lauderdale Executive Airport is working hard to cultivate future airport leadership through educating local schools and inviting the community to the airport (personal communication, November 1<sup>st</sup>, 2017).

### Technology Managing Airport Capacity

Airports around the world face short-term and long-term planning decisions to handle expansion and demands created by the stakeholders. The number of travelers increases along with their expectations of service from departure to arrival. Various theories on solutions and the implementation are applied worldwide. Solutions include the addition of runways to utilizing new technology. The Accelerator Airport Partner Program is leading the way with airport leaders creating technology-based innovations to curtail over capacity delays (AAAE, press release, 2017, July 13).

Oliver Jankovec (2017) discusses in his editorial Europe's 20% of global air traffic growth compared to the United States 12%. He explains that the growth has not reached its maturity and is expected to be sustained through the low-cost air carrier revolution, more efficient aircraft technology, and new dynamics in the travel & leisure markets, and the millennials, and the expanding middle class. Jankovec states:

These pressures are likely to expand from terminals to runways and other airside facilities. Indeed, while airlines have so far accommodated the rise in demand predominately through a combination of higher load factors, more compact seating

arrangements and the use of larger aircraft, we will soon reach the limits of that. In particular, with load factors already at a record high, we can expect aircraft movements to increase at a faster pace (Jankovec, 2017, Oct. 9).

Jankovec (2017) further explains that the expanding capacity will mean investing and require higher revenues that will lead to higher user charges. Another aspect will be airlines blocking competition through opposing airport investment preventing higher capacity and limiting new entrants. This tactic typically reinforces the airlines market share and higher yields. Consumers experience less connectivity, higher fares, and capacity constraints at the airport. The SEO Amsterdam Economics & Cranfield University have estimated European passengers are currently paying 2.1 billion Euros and estimate 6.3 billion Euros in higher fares by 2035 due to airport congestion. In Jankovec's concluding thoughts:

All this shows that managing growth is multifaceted and that wrong decision can have far-reaching implications. What matters is to keep the focus on outcomes that truly benefit end-users – the businesses and citizens that have come to rely on ever-expanding air connectivity (Jankovec, 2017, Oct. 9).

Young & Wells (2011) explain approaches to reducing delays fall into two categories increasing airport capacity and managing system demand. To increase airport capacity through additional infrastructure by adding runways, terminal facilities, and ground access roads.

Another approach would be to apply technologies and policies to make existing infrastructures operate more efficiently. They use the example of reducing the processing time required at any given facility to allow more operations over a given period. Changing system user's behavior will lead to better use of existing system capacity and manage demand.

The American Association of Airport Executives (AAAE) (press release, 2017, July 13) selected Phoenix Sky Harbor International Airport as the second annual Airport Innovation Award winner. The AAAE sited the airport's creative work to improve the passenger experience and deploy cutting-edge technologies. Todd Hauptli, CEO, and President of AAAE said at the award ceremony:

Airports are embracing innovation and deploying creative solutions like never before, and Phoenix Sky Harbor International Airport under the leadership of Director of Aviation Services Jim Bennett is a clear leader in the field. The work that Jim and his team have done to enhance the passenger experience and streamline airport operations at PHX is remarkable, and AAE and the Airport Innovation Accelerator are happy to recognize and celebrate their innovative approaches as a model for airports in the U.S. and around the globe (AAAE, press release, 2017, July 13).



Phoenix Sky Harbor International Airport: PSHIA Terminal 3 Rendering Phoenix 1. [Image]. In kpff.com. Retrieved from: <a href="https://www.kpff.com/portfoliov2-files/pshia-t3/pshiaterminal3">https://www.kpff.com/portfoliov2-files/pshia-t3/pshiaterminal3</a> rendering phoenix 1.jpg

According to the AAAE (AAAE, press release, 2017, July, 13), Phoenix Sky Harbor implemented creative innovations that enhance their passenger experiences and to make airport operations more efficient. Some of the changes included the redesign of Terminal 3 that provides for cutting-edge technology to facilitate efficient passenger processing, a program for children with autism, deployment of numerous technologies to improve security, and the consolidation of all business intelligence operations to improve operating efficiency. The airport's commitment to innovation is demonstrated through their recent membership into the Accelerator Airport Partner Program. Leading airports influence and drive innovation for the airport community through their partnership with this program.

Through innovation and investment airports will develop plans to face the challenges of serving the increasing number of global travelers. Some airports will be able to add runways, terminals, and other infrastructure improvements. Major hub airports have increased their footprint to the maximum allowed and need to find other methods of handling increased capacity. They will turn to technology to change the travelers' behavior to reduce the operational time for the typical tasks associated with departing and arriving passengers such as outlined in the AAAE press release. Airport leaders such as Phoenix Sky Harbor International show examples of the various applications of technology for possible solutions to elevate airport congestion (AAAE, press release, 2017, July 13).

#### Airport Capital Improvement Funding

Airports are finding unique methods of funding to renovate and expand airport capabilities. Typical methods are finding roadblocks to and voter support to providing financing for high-cost new terminals and much-needed renovations. Private-public joint venture funding

is showing a new path to fund large projects such as Los Angeles International Airport Midfield Satellite Concourse, and LaGuardia Airport addition of Central Terminal B. Creative airport structures to bypass the typical political circus is another creative option airport is developing to fund improvement.



LaGuardia Airport: Terminal B Renderings. [Image]. In laguardiaairport.com. Retrieved from: <a href="http://laguardiaairport.com/redevelopment/renderings/">http://laguardiaairport.com/redevelopment/renderings/</a>

Plotnick (2017) discusses the partnership between the public and private financing for capital improvements at our United States Commercial Airports. The effort is noted as (P3) a

model leading the way to promote terminal reconstruction. This is an innovate method to finance ambitious terminal projects to provide improved passenger satisfaction. An example is the \$1.6 billion Midfield Satellite Concourse at the Los Angeles International Airport. Design features include an open floor space, circulation patterns for passengers, and let in natural light. Robert Chicas, Director of Aviation + Transportation in HOK's New York shop, states:

Customer satisfaction has bubbled to the top as one of the highest priorities at every airport in the country. All airlines see the terminals they operate in as an extension of their brand. They know the strength and perception of that brand is key to their commercial success (Plotnick, Oct. 5).



*LAX Midfield Satellite Concourse.* [Image]. In geodesgninc.com. Retrieved from: https://geodesigninc.com/portfolio/lax-midfield-satellite-concourse/

The \$4 billion renovation of LaGuardia Airport is another example given by Plotnick (2017). Replacement of the 1964 building will become a 1.3 million square foot Central Terminal B. This is the first major United States aviation project using the new (P3) model. Leading the project is a design-build joint venture of Skanska and Walsh Construction, and WSP USA and HOK are the design partners. The tight site and aggressive schedule would be extremely difficult as described by Dwight Pullen, Director of Skanska's Construction. Pullen explains "our design and phasing solution worked a lot more seamlessly under a P3 arrangement" (Plotnick, 2017, Oct. 5).

This customer-centric approach is outlined by Wilson Ray field, AIA, NCARB, LEED AP, Executive Vice President of Aviation with Gresham, Smith and Partners, explains, "airlines and airports are working to put more control into passenger's hands to streamline the process for experienced travelers" (Plotnick, 2017, Oct. 5). Rayfield's firm is working with Southwest Airlines to integrate self-tagging kiosks in multiple locations across the airline's network. Stuart Garrett, Project Manage in the Aviation and Federal Group at Burns & McDonnell, agrees and feels that the passengers want to be more in control of their journey to lessen their stress and will ultimately spend more money.

Plotnick (2017) points out airports funding opportunities are limited. The Airports Council International-North America describes airports able to generate about half the financing required to meet the estimated \$100 billion infrastructure investment required. This financing will be needed through 2021. Another issue is the aging population needing additional time to pass through security and board flights. This is estimated to be a fifteen-minute ordeal per person. This will impact gate and impact on aircraft utilization. Plans are in development to find

multiple solutions for this significant impact for operational congestion. Another factor is customer habits such as the reduced connection times. Many opportunities for the grab-and-go concessions and interactive spaces for passengers to re-charge grab a bite near their terminal are in development.

According to Turque & Vockrodt (2017), Kansas City Airport faces an ominous vote on November 7<sup>th</sup>, 2017. This vote determines if public funding will be used to replace the current horseshoe style terminal with a new one. Some opinions such as Councilman Lee Barnes said:

Voters would respond to a cleaner, more transparent procurement process. We know something has to be done to improve the experience for the travelers. In April or a year or so we could go back to the votes with another ask. This time is a little more transparent about what's going on. Make sure we don't have any River Club meetings. Give the impression we don't have some backdoor under the table deals going on (Turque & Vockrodt, 2017, Nov. 2).

In an earlier attempt, the City Manager Troy Schulte tried to secure approval of a \$1 billion nobid contract with Burns & McDonnell (Turque & Vockrodt, 2017, Nov. 2).

Turque & Vockrodt (2017) further discuss if the vote does not pass this measure it might take another 19 months or so to gather political will, business community buy-in, and airline industry support necessary to support another campaign. Southwest and other airlines were approached to finance the improvements, and they are unwilling to finance a renovation of the horseshoe terminal. The airlines could revisit financing the renovation at a later date. Another possible solution to a "no" vote would be restructuring to a new governance structure to reduce the involvement of politicians. The other alternative is the airport possibly moving to Johnson

County. This would be a devastating loss to Kansas City. Hopefully, the other solutions will provide a financing route for the much-needed improvements.

Airports face pressure to provide capital improvements but struggle to find funding the high cost. Innovate solutions from private-public funding to campaigns for public funding are making strides in meeting passenger air travel demands. Each airport management finds "out of the box" thinking a method to maintain, increase capacity, and create new infrastructure to meet growing community requirements. Private-public joint ventures are a way to quickly meet deadlines without the typical red tape. LaGuardia and Los Angeles International airport projects will lead a new generation of financing large capital improvements with customers' needs in the forefront.

### Orlando-Melbourne International Airport Expansion

Brevard County experienced a significant change in 2011 when NASA ended the Space Shuttle program (The Editorial Board, FLORIDA TODAY, 2017, October 27). Through different funding methods, Brevard rallied the community to attract new aeronautical ventures to bring jobs and economic growth to their community. A few articles highlight the efforts by the community and Florida leaders to bring a new chapter to the aeronautical historically rich county.

In an article written by Space Coast Daily (2017) discussed a historic \$18.1 million grant to the Orlando-Melbourne International Airport by the Federal Aviation Administration (FAA). The airport currently serves the community with a 200,00 square foot terminal and a 40,000 square foot customs facility, and three runways. Close to 500,000 passengers utilize the current

services with Delta Air Lines, Elite Airways, Porter Airlines, and American Airlines serving the Melbourne area. Jack L. Ryals, chairman of the Melbourne Airport Authority, sought out support from the Florida congressional delegation to ask the Federal Aviation Administration for the \$18,132,588 grant. Ryals explains that the FAA is funding 90% of the runway 9R/27L project which will include construction of the mill and overlay and runway lights. Florida Department of Transportation (FDOT) and the airport itself will be contributing funds \$956,666 and \$1,055,067 respectively. Ryals gave special thanks to Congressman Posey, Senator Nelson, and Senator Rubio for their advocacy on this critical infrastructure. Orlando-Melbourne International Airport is home to the world headquarters of Harris Corporation, Northrop Grumman, Rockwell Collins, L3, General Dynamics, Thales, and Embraer Executive Jets.



Orlando-Melbourne International Airport. [Image]. In mlbair.com. Retrieved from: <a href="http://www.mlbair.com/Portals/0/images/Photos%20Added%20August%202015/Fixed/1%20Aerial.jpg">http://www.mlbair.com/Portals/0/images/Photos%20Added%20August%202015/Fixed/1%20Aerial.jpg</a>

An editorial article written by The Editorial Board, Florida Today (2017) discusses the impact of the Economic Development Commission of Florida's Space Coast (EDC). The EDC has pushed for companies such as Northrop Grumman, Embraer, Space X, Blue Origin, OnWeb, and Lockheed Martin. They note since 2010, 8,700 jobs have been announced, and 70% have been filled. The economic impact from these major corporations is estimated at \$1.6 billion to Brevard County. Many companies find the location's strengths to include tax breaks, utility costs, and the quality of the schools. The EDC budget of \$1.4 million to sell Brevard County as an ideal location. This budget is being questioned if it is a good use of taxpayers' dollars. Some argue after the NASA's Shuttle program ending in 2011, this attracted large companies and brought a low 3.6 percent down from 11.8 percent in 2010.

The Editorial Board, FLORIDA TODAY (2017) writes that one of the main critics

County Commissioner John Tobia wants to defund the Economic Development Commission of

Florida's Space Coast (EDC). He argues that companies flock to the area for the beaches and

other attractive features of Brevard County. The County would sell to the companies versus a

\$1.4 million annual cost to run the EDC. The critics call for the EDC to be more transparent in

sharing with the public how they are spending the funds. The EDC agreed to disclose how it

spends the public funding on advertising, travel, lobbying, events, and salaries of top executives.

Private funding received by the EDC does not require public disclosure.

The successes are outlined in the editorial by the Editorial Board, FLORIDA TODAY (2017):

Lobbying Brazilian jet maker Embraer to base its first North American
 engineering and design center at Orlando Melbourne International Airport. EDC

CEO Lynda Weatherman said she began talking to company officials at trade shows long before it settled on the Space Coast in 2012. Incentives also played a big role: \$30 million mostly from the state and also from the county, the city of Melbourne and the airport (The Editorial Board, FLORIDA TODAY, 2017, October 27).

- Helping convince Northrop Grumman to bring a new program dubbed "Project Magellan" to Brevard. Announced in 2015, when fully built out, it promises to more than double the size of Grumman's local workforce by adding 1,500 high-paying jobs and a potential \$500 million investment at Orlando Melbourne International Airport under its contract to build the nation's newest stealth bomber (The Editorial Board, FLORIDA TODAY, 2017, October 27).
- Lobbying Harris to stay in Brevard County when the company considered relocating its headquarters to Virginia, where it had recently acquired Exelis and where other major defense contractors are located. Virginia also is closer to Washington, D.C., where decisions on federal spending are made. U.S. Sen. Bill Nelson also was among others who pushed Harris to stay (The Editorial Board, FLORIDA TODAY, 2017, October 27).
- Partnering with Eastern Florida State College to train workers for manufacturing jobs. The EDC works to find grants, scholarships, and sponsors so these students can attend classes at the college. A shortage of such workers in Brevard and across the country has prompted the EDC to launch an upcoming marketing

- campaign to encourage more people to get trained for these jobs (The Editorial Board, FLORIDA TODAY, 2017, October 27).
- Outperforming bigger economic development agencies in the state. The Economic
  Development Commission of Florida's Space Coast ranks second in terms of jobs
  announced per 1,000 residents, behind Hillsborough County and ahead of MiamiDade, Duval, and Orange, according to Enterprise Florida, the state's economic
  development agency (The Editorial Board, FLORIDA TODAY, 2017, October
  27).

According to The Editorial Board, FLORIDA TODAY (2017), BlueWare is a company lured to Brevard County by the EDC and has made a negative impact on the program. BlueWare allegedly paid a bribe to former Clerk of Courts Mitch Needelman's office to secure a contract. This case is on trial, and the EDC argues they could never have predicted BlueWare's actions to secure a possible contract. The EDC will remain vigilant on how they spend the public's funding and the Editorial Board of Florida Today will argue on their behalf for all the successful economic impact they have brought to the county.

The growth experienced at Orlando-Melbourne International Airport has been felt through the economic impact. New companies are bringing much-needed jobs to a community experiencing a financial disaster after the end of the Shuttle Era. Through government, public, and private funding the airport community has expanded to lure large aeronautical entities to a new corporate home. The innovative methods to bring jobs and economic growth has started a new chapter in the Brevard County community.

## Journey to 2017 Oregon Airport Manager of the Year

Announced by Redmond Municipal Airport (2017) Zachary Bass has been named Oregon's Airport Manager of the Year. The Oregon Airport Management Association (OAMA) nominees contribute "to the field of airport/aviation management through a high level of service to the aviation community and traveling public, and for improving the safety of the Oregon aviation environment" (Redmond Municipal Airport, 2017). The path to lead an airport through significant airport projects to benefit the Redmond aviation community takes a leader who can bring together multiple stakeholders together.

In an article by KTVZ.com news sources (2016) they discussed his background and how his previous experience gives him strengths that are demonstrated in his skillset as a leader.

Redmond City Manager, Keith Witcosky stated:

Mrs. Bass leadership skills and management background provide him with the tools he needs to oversee this critical part of the Redmond organization. During his time with us, he has demonstrated the right combination of strategic decision-making, team-building, and passion for the aviation industry, making him the right choice for the Redmond Municipal Airport (KTVZ.COM news sources, 2016).

KTVZ.COM news sources (2016) describes Bass's experience in his nine years of service in the United States Air Force. Bass's many roles in the Air Force included "training Air Force officers, direct oversight of 100-plus active duty personnel and six operations, administrative overview of 400+ Air Force Reserve personnel and assistant professorship of aerospace studies, serving as a business operations manager, as well as a deployment in Iraq" (KTVZ.COM news sources, 2016). Other significant background information includes; his

experience as a supervisor at Hexcel Advanced Composites, private business owner, and he has a Bachelors from the University of Portland and a Masters from Penn State University.

Redmond Airport has been named the new location for Hillsboro Aero Academy according to an article by Ditzler (2017). Through the work of Zachary Bass and his team, Hillsboro Aero Academy is going to move from Prineville Airport to Redmond in the next few months. Hillsboro trains mainly Chinese flight students with a total student body of approximately one hundred and fifty. They plan to move the flight campuses that are currently in Hillsboro and Troutdale to larger spaces. Prineville Airport is an uncontrolled field, and Redmond has a controller two with two runways. The flight operations will double the number of takeoff and landings to approximately 96,000 per year. Redmond city officials are excited about the economic and international presence that the flight school will bring to the community. Prineville Airport will experience a loss in fuel sales, office lease, and hangar rental. This will bring a significant economic impact to Redmond Airport and the city along with the employees and students of the flight school. The flight school has contracts with Air China and China Eastern Airlines to train their pilots in fourteen months.



Redmond Municipal Airport: Terminal. [Image]. In feinknopf.photoshelter.com. Retrieved from: http://feinknopf.photoshelter.com/image/I0000pNxQWqH\_XjY

In Redmond Airport's press release (2017) Zachary Bass has worked managing a \$18-million-dollar reconstruction of Redmond Airport's main runway reconstruction. The main runway was closed for three weeks during the reconstruction along with taxiway Bravo. A new USFS Central Interagency Dispatch Center during the past year. With all of these improvements along with customer service initiatives, a new direct flight to Phoenix was added plus five daily flights to existing destinations.

Zachary Bass's past leadership in the Air Force and previous roles in aviation organizations has given him the necessary skills to lead Redmond through multiple initiatives (KTVZ.COM news sources, 2016). A large flight school that trains Chinese pilots for fourteen

months will move to Redmond through his project leadership (Ditzler, 2017). Airport improvements and increased flight activity through an \$18 million project have brought Bass's leadership to nominate him to Oregon's Airport Manager of the year (Redmond Municipal Airport, press release, 2017).

## Fort Lauderdale Executive Airport Management Interview

The Fort Lauderdale Executive Airport, according to flyfxe.com (n.d.), began its 70-year journey as West Prospect Satellite Field. The airfield was a training facility for World War II pilots such as former President George H.W. Bush. Now is one of the top ten busiest general aviation airports. The South Florida airport is home to over 1,000 based aircraft has more than 163,000 take-off and landings each year. The airport includes a United States Customs and Border Protection facility, 24-hour FAA Air Traffic Control Tower, four fixed base operators, aviation repair stations, charter companies, flight school, and non-aviation related businesses.

On November 1<sup>st</sup>, 2017, I visited with Fort Lauderdale Executive Airport (personal communication, November 1<sup>st</sup>, 2017). The appointment was much easier to schedule than I thought it would be. Through flyfxe.gov submitted an email to their general mailbox and received a response from the Mr. Spencer Thornton, Assistant Airport Manager. Thornton immediately offered appointment times the next week. Later that day, Rufus James, the Airport Manager, sent an email to offer various appointments the following week too! Wow! The team overwhelmed me a positive response and willingness to assist with this assignment.

My expectation for the meeting was meeting with Mr. Thornton for about fifteen to twenty minutes. To my surprise both Assistant Managers, Spencer Thornton and Carlton Harrison were present and then the Rufus James, Airport Manager, entered the meeting. Again,

overwhelmed with the response and interest in meeting with me to discuss the airport management career finished two and one-half hours later. Mr. James explained to me that their mission is to:

To attract businesses to the area, help tenants prosper and benefit the community (Fort Lauderdale Executive Airport Business Plan, 2016).

They are reaching out to the community to educate the public on the opportunities and career paths available in airport operations.



Fort Lauderdale Executive Airport: Tower. [Image]. In flmag.com. Retrieved from: <a href="http://flmag.com/features/executive-decisions">http://flmag.com/features/executive-decisions</a>

Spencer Thornton, Assistant Airport Manager, began the meeting (personal communication, November 1<sup>st</sup>, 2017) discussing the lack of technical knowledge of applicants and their overall lack of passion for their chosen profession. Many candidates would not prepare for the interview by researching the position, requirements, airport specific information, or have any general knowledge about general aviation. Thornton was eager to work with students on

possible projects to introduce them to the technical side of airports included the regulations, construction projects, safety concerns, and airport design. He discussed the entry-level position for Airport Operations with a \$40,000 annual salary. The job tasks include tasks from multiple disciplinarians and will groom the candidate for a supervisor management position within two years.

Carlton Harrison (personal communication, November 1<sup>st</sup>, 2017) discussed the need for candidates to possess problem-solving skills and to learn from the ground up. Harrison suggested working a line service job at an FBO such as Banyan Air Services to learn all the general aviation nuances. On the job learning experiences will teach the individual about a variety of airplanes, aviation businesses, customer needs, technical aspects, and gain much needed general aviation knowledge. Harrison also discussed how working as an intern or an entry-level position for the airport pays dividends in the contacts to broaden the candidate's career horizon. Rufus James echoed Carlton's comments and brought to the table how aviation is a really a small community and how everyone knows someone. A person's reputation follows them which can be a positive or tremendously detrimental. James expressed great interest in fostering aviation education from higher education institutions to K-12 and spread the passion for aviation.

I truly enjoyed meeting all three managers and learning about their backgrounds at various airports. There is a great appreciation for aviation and the work that it takes to rise through the ranks. We exchanged possible ideas and how to continue the networking between FXE and Lynn University. I learned in the meeting new technical issues and their perspective on running an airport. They communicated the necessity for individuals to prepare and research

before the interview. Most important, the opportunities that are out there for anyone willing to show initiative to learn about general aviation.

Opportunities are created for airports through "out of the box" creative solutions and leadership. Airport leaders are working on utilizing technology and new methods of funding to solve complex capacity issues. Through design and unique financing opportunities such as the private-public joint venture funding for the \$4 billion renovations of LaGuardia Airport 1.3 million square foot Central Terminal B (Plotnick, 2017, Oct. 5). It is estimated by the Airports Council International-North America that airports will only be able to generate half of the revenue needed to fund the \$100 billion infrastructure needed (Plotnick, 2017, Oct. 5). Airports are seeking solutions from technology to luring corporations and large flight schools to assist their community's economic opportunities. Airport leaders are leading these teams to develop all possible solutions and future leaders to serve their communities now and the future.

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