

Creating success stories, one FBO at a time.

More than just a reliable fuel supplier, EPIC is a true business partner, offering industry-leading expertise, innovative customer solutions and proven quality assurance programs. Because our most important work is fueling your success.



CONTENTS



12 Growing Pains Strike As Oil Booms

North Dakota airports in the heart of the Bakken oil boom rush to meet escalating demands by putting improvement projects on the fast track

FEATURES

16 Airport Security: The Great Balancing Act

After taking strides toward a more secure future, industry pundits believe the TSA's move to stop manning exit lanes will unbalance the security system yet again

24 Industry Insider: Set the Standard

O&A with NATA President Tom Hendricks

20 Terminal Design: Project WINGSPAN Takes Flight

Greenville-Spartanburg International Airport's \$115 million terminal project

28 Display Communications: LAX Immerses Passengers in

Passengers in Digital Media

The new immersive digital experience at LAX's Tom Bradley International Terminal

DEPARTMENTS

- 4 Inside the Fence
- 6 Pub Note
- 8 Industry News
- 31 Ground Clutter
- 32 Legal Matters
- 34 Final Analysis

Airports, TSA and Airlines:

Who are the winners and losers in the federal budget proposal?

t the beginning of every month, I sit down at the table and prepare my budget. I finagle the numbers, putting money here, putting money there, until every penny is designated for something. And given that I have five kids and the dogs, bunnies, goats and horses that came with them, I know a thing or two about an unbalanced budget and what it takes to keep it balanced.

As I write this column, the U.S. House of Representatives is doing its own budget exercise and is prepared to vote on the Bipartisan Budget Act of 2013. Ultimately if the Paul Ryan-Patty Murray budget deal passes, airline tickets could get more expensive, but the TSA will continue to guard exit lanes at airports.

There are some positioning this deal as a win-lose situation. The TSA wins, but the airlines lose. Airports win, but still the airlines still lose.

I'm not sure we should view it that way.

The Congressional budget deal changes the fees from \$2.50 per leg of a connecting flight capped at \$5, to a flat \$5.60 fee each way on a trip. The federal govern - ment believes this increase will generate an estimated \$12.6 billion over the next decade.

Now the airlines are crying foul, saying a hike in fares could discourage travel. This statement seems somewhat ironic given that those same airlines charge bag fees from \$25-75, non-refundable ticket change fees up to \$150,

early bird boarding fees of \$40, and seat selection fees at \$30. Fees people—myself included—are more than willing to pay (well, I do draw the line at paying to board a plane earlier).

The reality is most of us will open our wallets wider for the convenience of air travel, which gets us from Point A to Point B in a safe and efficient manner. And doubling the TSA fees attached to a round trip ticket won't keep us on the ground any more than having to pay for an aisle seat.

Though the general public does wind up paying more, there is a price to pay for airport security—something we all want and value, especially since 9/11.

And there are some clear winners in this deal. The TSA wins because the higher fee will offset approximately 43 percent of its security costs and eliminate the aviation infrastructure security fee charged to air carriers. Airports also win because they will no longer be in a mad rush to staff exit lanes as of January 1.

From my own budgeting exercises, I know full well tough choices often come with them—and in most of these cases, no one emerges the winner But on the surface of this plan, everyone wins something—and better yet, it ends talks of yet another government shutdown.

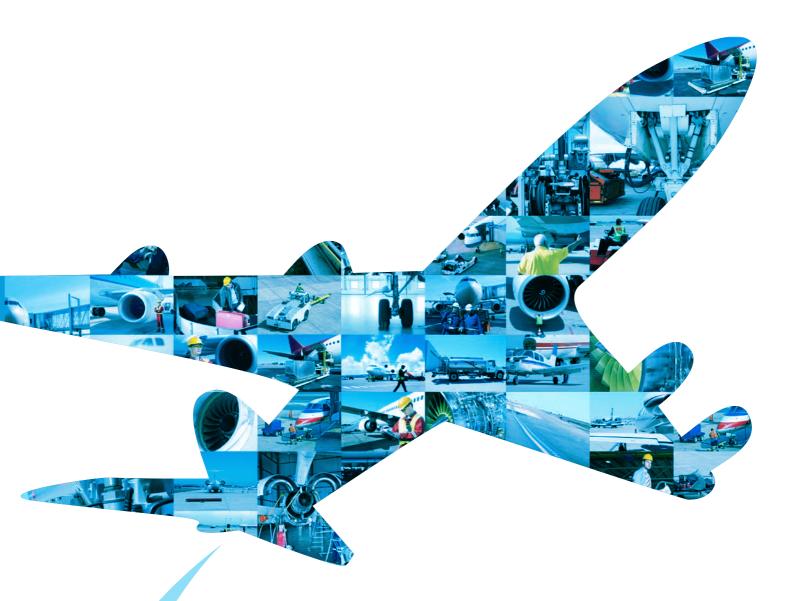




FCC TO WEIGH IN ON CELL PHONE USE ON PLANES

Which is more important? The technically possible or the socially impossible? The Federal Communications Commission (FCC) is considering allowing passengers to use their cell phones on airplanes. If approved, cell phone use would be restricted during

takeoff and landing, but the proposal would lift the FCC ban on airborne calls and cellular data use once the flight reaches 10,000 feet. It's up to the airlines whether or not they allow it if the proposal passes. It's unknown if they will because of strong objections from customers who do not want other passengers making phone calls in the close confines of an airplane.



YOU POWER AVIATION. WE POWER YOU.

Power up your business with the latest tools, technologies and resources on the ramp at the ultimate event specifically designed for aviation professionals. Improve safety, boost efficiency and develop your skills with cutting-edge solutions from hundreds of exhibitors, high-impact education sessions and invaluable networking opportunities.



MARCH 25-26 2014

The Sands Expo Convention Center Las Vegas, NV

FOR FREE REGISTRATION UNTIL JAN. 15, 2014
PLEASE VISIT:
AVIATIONPROSLIVE.COM
& ENTER PROMO CODE: APLAB2014

PUBNOTE

Karen Berg **Associate Publisher**



Max-ed Out

What happens, with consolidation, if we have half the hubs handling double the throughput?

any of the North American airports are reaching their maximum capacity for efficient passenger and flight throughput. In fact, according to a study of Orbitz passenger figures and the FAA, airports in New York, Las Vegas, Orlando, Fort Lauderdale, Chicago, Honolulu and San Diego will see pre-Thanksgiving holiday-like congestion at least two times per week by 2016. That's 30 to 46 percent more passengers than average now.

Traveling by air continues to be the norm—even though that requires getting to the airport well in advance of the flight departure to allow enough time to go through security Even with everything one goes through before buckling up in the airplane seat, it still can be more convenient than the alternatives. Air travel in North America is especially vital, where other options of transport are not as prevalent as they are in Europe or other continents. Covering great distances by car is daunting, especially during seasons where weather can have an impact.

With this increased congestion comes longer security lines, delayed flights and increased passenger frustration, if airports are not able to expand in line with the growth.

This issue shares how overloaded airports in North Dakota are prepping for the future. And these airports offer executives and communities a clear preview of what their airports could very well face in the years to come.

Airline consolidation is one of the culprits. Not only is it going to hit passengers in their wallets, it's going to hit them at the airport as well. Multiple hubs over many major carriers previously spread out passengers across North America. Now, with consolidation, we may well have half the hubs handling double the throughput.

Some legacy carriers have picked up a bit of pointto-point flying again, but the majority of their traffic is still funneled through their existing hubs; a situation that already puts a strain on those airports many times through out the year.

How many of the airports in North America are actively planning for the future capacity situation? When I think about it, I wonder how many airports could have predicted

10 years ago, the U.S. carrier consolidation that's happened over the past four years and the unfolding situation today?

Most of the airports I listed above are "hub-neutral", meaning they are not currently dominated by one specific carrier. But that may make it more difficult for them to do longer-range strategic planning. Juggling the number of gates, slots and passenger through-put with multiple carriers can make a day negotiating at the United Nations look like a walk in the park.

Which means the relationship and communications between the airport and the airlines that serve it becomes more important than ever, in order to build the long-term strategy on both sides of the equation and to monitor its momentum.

While this planning needs to happen, the government hasn't been helping the airports, either—Congress refuses to pass an increase to the PFCs for it to go above \$4.50 a segment—a level that it has been parked at for many years. Finding adequate funding to expand and modify an airport then falls on the community and local development authorities.

Last month, I wrote about airports that were recycling themselves. These airports are adding to their infrastructure, but they won't be able to alleviate the coming con gestion until airlines other than the extremely low-cost carriers start using these facilities as viable alternatives to the larger airports.

So what will happen when the larger airports run out of room? There are only so many runways you can buildsome airports already have multiple control towers, like Schiphol Airport in Amsterdam. And where do we draw the line that a terminal becomes "too big"? Will the airlines be pressured to using these alternate airports because the current airports don't have the room and/or the money to carry out the necessary expansion?

Will that mean that the logic behind the creation and utilization of the A380 will now be fully realized? It would seem so.



920-568-8338

EDITOR: Ronnie Garrett

800-547-7377 ext. 1370

Columnist: Ralph Hood

ralph@ralphhood.com

National Accounts Manager: Rick Felt Rick.Felt@AviationPros.com

920-568-8333

630-484-8040

National Accounts Manager: Steve Felt
Steve.Felt@AviationPros.com 920-568-8325

National Accounts Manager: Michelle Kohi 800-547-7377 x3344 National Automotive & Truck Manager: Tom Lutzke

International Sales Representative: Lutz Krampitz

Germany, Switzerland, Austria, Turkey, Scandinavia +49 (0) 203 456 82 66 • Fax +49 (0) 203 456 85 38 krampitz@krampitzVv.de

International Sales Representative: Stephanie Painter United Kingdom, France, Netherlands, Spain, Ireland, Italy +44 1634 829386 • Fax +44 1634 281504

Stephanie@painter-lowe.com List Rentals: Flizabeth Jackson

email: ejackson@meritdirect.com phone: 847-492-1350 ext. 18 • fax: 847-492-0085

For reprints and licensing please contact Nick lademarco at Wright's Media 877-652-5295 ext. 102 or niademarco@wrightsmedia.com

PRODUCTION

Art Director: Rhonda Cousin Media Production Rep.: Carmen Seeber

Carmen.Seeber@cygnuspub.com CIRCULATION

Group Circulation Manager: Jackie Dandoy Circulation Manager: Debbie Dumke

Cygnus Aviation

Executive Vice President: Gloria Cosby VP Marketing: Gerry Whitty





Group Publisher/

Transportation Group: Larry Greenberge

CYGNUS BUSINESS MEDIA

CEO: John French CFO: Paul Bonaiuto

VP Audience Development: Julie Nachtigal

VP Technology: Eric Kammerzelt

VP Human Resources: Ed Wood VP, Production Operations: Curt Pordes

Published and copyrighted 2013 by Cygnus Business Media, 1233 Janesville Ave., Fort Atkinson, WI 53538. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any inform storage or retrieval system, without written permission from

Subscription Policy: Individual subscriptions are available for airport operations, consulting firms, contract service providers, airport authority/commissions, FBO/aviation providers, airport authority/commissions, FBO/aviation service centers, air taxis/charter operators/fractional operators/aircraft management, corporate flight facilities and government. To subscribe go to www.aviationpros.com/subscribe, or use your company letterhead giving all the information requested. Publisher reserves the right to reject non-qualified subscribers. One-year subscriptions available for non-qualified individuals: One year subscriptions: US - \$35; Canada & Mexico - \$55; International - \$80 (payable in U.S. hadded to the property of th funds drawn on U.S. bank.) Back issues available (prepaid only \$10.00 each. Canadian GST# 131910168.

Airport Business (USPS 001-614; ISSN 1072-1797 print; ISSN April, Ray, Jun/Jul, Aug/Sep, October, November and Dec/ Jan 2014. Periodicals postage paid at Fort Aktinson, WI and additional entry offices. Change of address or subscription information: Toll Free: 877-382-9187, Local: 847-559-7598, Email: circ.airportbusiness@omeda.com. POSTMASTER: Please send address changes to Airport Business, Cygnus Business Media, PO Box 3257, Northbrook, IL 60065-3257. Printed in the USA.

Canada Post PM40612608. Return Undeliverable Canadian Addresses to: Airport Business, PO Box 25542, London, ON

Vol. 28. No. 2 December/January 2014













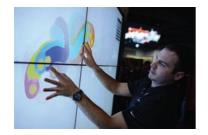


CONFERENCE: FEB 11-13, 2014 **EXHIBITION:** FEB 12-13, 2014 SANDS EXPO, LAS VEGAS



THE RIGHT INNOVATION WILL TAKE YOUR BUSINESS TO THE NEXT LEVEL

DSE is coming to The Sands Expo, Las Vegas, February 11-13 and we're bringing all of the latest innovations and solutions in digital signage and interactive technology. Come witness how this amazing technology can elevate your business and bring in record returns. It will all be on display for you to see, touch and explore.





THE EVENT

DSE is the world's largest international tradeshow dedicated to interactive display technology, digital signage and digital out-ofhome networks. It's a great way to discover technology that will draw attention to your business, and increase sales, profits and ROI.



COME SEE ROL ON DISPLAY

Register before January 17, 2014 to take advantage of early bird discounts!

Visit DSE2014.com today.

PRESENTING SPONSORS





CONFERENCE SPONSOR



ASSOCIATION SPONSOR



MEDIA SPONSORS































































The TOP 5

As airports steadily upgrade their facilities and add amenities designed to improve the passenger experience, here are some of the best airport amenities rolled out in 2013.

Automated passport kiosks. Automated passport kiosks in customs areas have significantly reduced wait times at a handful of North American airports. U.S. citizens can use these machines—for free—to scan their passports, answer customs declarations questions and shorten the time they need to spend in conver sation with a customs officer Vancouver International Airport, Chicago O'Hare International Airport, JFK International Airport, Miami International Airport, Dallas/Fort Worth International Airport, Montreal-Trudeau International Airport. and T oronto Pearson International Airport have already added the kiosks.

Expanded TSA Pre-check. At the close of 2012, the TSA's Pre-Check program was available to passengers flying on five airlines (Alaska, American, Delta, United and U.S. Airways) at just 35 air ports nationwide. At the close of 2013, the program is available at more than 100 air ports and participating airlines has been expanded to nine, adding Virgin America, JetBlue, Southwest and Hawaiian to the line-up. The TSA also launched a program offering eligible travelers five years of Pre-Check membership for \$85. Travelers can apply at one of more than 300 enrollment centers planned for the near future.



New Airport Amenities

Lounge-like checkpoints. A three-month pilot program for security checkpoints that double as lounges was added at Charlotte-Douglas International Airport and Dallas/Fort W orth International Airport. The checkpoints, a joint project between Security Point Media and Marriott's SpringHill Suites, have stylish décor, soothing wall art, colored lights and relaxing music as well as "re-composure" areas with comfortable leather couches and mirrors. Talks are currently underway to continue these installations and expand to other airports in 2014.

Airport service plazas. Facilities offering a variety of truly helpful services for passengers—and for those picking folks up—popped up this year outside two airports. Denver International Airport opened a super-sized, 253-space cell phone lot called "Final Approach" adjacent to a fueling station. This facility offers a children's play area with iPads

built into tabletops, lounge seating, indoor restrooms, free WiFi, flight display boards and four restaurants, including a Dunkin' Donuts. Indianapolis International Airport opened the Service Plaza, which offers a fueling station, automated green car wash, automobile detailing and quick lube services as well as two restau rants, a Circle K convenience store, flight display monitors and restrooms.

Great food and drink. No longer are air ports places where you're lucky to grab a hot dog or a cold sandwich on the run. Today's airports continue to ramp up their food and beverage offerings. This year's additions include the Shake Shack at JFK International Airport's Terminal 4 and the first airport IHOP at Hartsfield-Jackson Atlanta International Airport.

— Excerpts from the December 11th USA Today article, "Best New Airport Amenities in 2013," by Harriet Baskas

ACI...

And the International Air Transport Association (IATA) have signed a Memorandum of Understanding to develop Smart Security (SmartS), designed to improve the journey from curb to boarding.

AMERICAN AIRLINES...

Announces plans to acquire at least 90 new regional jets. The carrier plans to divide the order between Canadian jetmaker Bombardier and Brazilian manufacturer Embraer.

AIRMALL USA...

Partners with Greenlight Biofuels at Baltimore/ Washington International Thurgood Marshall Airport (BWI) to implement a recycling solution for waste cooking oil from tenants in the airport's concessions program.

AVFUEL...

Announces Truckee Tahoe Airport has joined the Avfuel network to offer Avfuel Contract Fuel and AVTRIP points.

AUSTIN COMMERCIAL...

Was awarded a \$500 million T ampa International Airport design-build contract for the first major phase of a master plan makeover of the airport.

CHICAGO DEPARTMENT OF AVIATION...

Reports Chicago O'Hare International Airport has opened a yoga room on the mezzanine level of the Terminal 3 rotunda, and announces plans to open a yoga room at Chicago Midway International Airport in the near future.

CLEAN ENERGY TRUST...

Has created a \$50,000 Aviation Energy Prize, with the support of United Airlines, The Boeing Company and Honeywell UOP, for developing alternatives to traditional fossil fuels for airline and airport operations. The prize will be awarded to a team of entrepre neurs from the Midwest at the 2014 Clean Energy Challenge on April 3, 2014.

EDMONTON INTERNATIONAL AIRPORT...

Announced plans to increase its Airport Improvement Fee (AIF) from \$25 to \$30 for travel that falls on or after July 1, 2014 and for plane tickets sold on or after February 1, 2014.

FLTPLAN...

Now offers up-to-date fuel price information for more than 3,300 FBOs on its website and mobile apps.

FIVE RIVERS AVIATION...

Enters a 35-year agreement with the City of Livermore to build a FBO facility on 11 acres at Livermore Municipal Airport.

HAINAN AIRLINES...

Plans to offer the first nonstop service from Boston to Beijing beginning next June.

INDIGO PARTNERS...

Purchases Frontier Airlines and cites plans to transform the Denver-based airline into

an ultra-low-cost carrier. The sale agreement had price tag of \$145 million — \$36 million in cash and the rest in assumed debt.

Varco Pruden has built a reputation for

AIRPORT INDUSTRY BUILDING SOLUTIONS









When you need a hangar, maintenance facility, FBO terminal building or cargo warehouse, Varco Pruden Buildings and their coast-to-coast network of authorized builders work as a team to provide a high quality facility, on time and on budget. Varco Pruden, a pioneer in the steel framed building industry, can offer your organization:

- Lower material and labor costs.
- Faster completion schedules.
- + Flexible designs for interior space.
- Choices of exteriors such as brick, stucco, glass, wood or steel panels.

All Varco Pruden Buildings are designed, engineered and manufactured to provide a structure that meets your specifications today while giving you quality and sustainability you can rely on in the future. See examples on our website. To find an independent authorized VP Builder near you,

visit www.VP.com today.





Find Out More. Visit www.VP.com/ad/AIRBIZ

Varco Pruden Buildings is a division of BlueScope Buildings North America, Inc.

www.aviationpros.com/10325502

Renovated FBO opens at Norfolk International Airport

Landmark Aviation recently held an open house to showcase its new facility at Norfolk International Airport (ORF). The new facility, which took more than a year to complete, features lighted parking with 103 additional parking spaces, a 25-foot canopy for loading and unloading passengers, an environmental storm water discharge vault, an elliptical lobby with large windows overlooking the corporate aircraft hangar, as well as an executive conference room and VIP lounge.



JEPPESEN...

And flynas, a leading low-cost airline and the national carrier of Saudi Arabia, reached a 5-year service agreement to include electronic flight bag (EFB), digital tailored navigation data and flight planning services.

JETBLUE...

Adds SITA's Mobile Boarding Pass API for Apple Passbook, which allows customers to check-in online and store their boarding passes automatically on their iPhone to use at the airport.

JCDECAUX...

Has been awarded a 7-year concession contract—with a 3-year extension option—to provide Terminal Media Operator services at Los Angeles International Airport.

JOMO KENYATTA INTERNATIONAL AIRPORT...

Breaks ground on a \$635 mi llion terminal designed to serve up to 20 million passengers. Construction on the new \$635 million terminal is expected to last until 2017.

KUWAIT INTERNATIONAL AIRPORT...

Adds self-service check-in kiosks in a deal with air transport IT specialist, SITA. The new kiosks are part of an eight-year contract renew al for SITA's AirportConnect Open passenger processing platform.

LIVERMORE MUNICIPAL AIRPORT...

Accepts bids on a nearly \$4 million project to construct a new administration building and a gourmet restaurant.

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY...

Adopts savings in its 2014 budget that will decrease costs to airlines at Reagan National and Dulles International Airports in 2014.

PITTSFIELD MUNICIPAL AIRPORT...

Officially opened its \$225 million extended Runway 8-26. The 790-foot runway extension included adding a taxiway turn-around area, improving runway safety areas, removing vegetative obstructions to protected airspace, and installing obstruction lighting.

RICK HUSBAND INTERNATIONAL AIRPORT...

Gets approval for a \$4.2 million consolidated rental car facility. The new facility will be located in the parking lot west of the employee parking lot.

ROSS AVIATION...

Acquires the assets and FBO known as Louisiana Aircraft at Baton Rouge Metropolitan Airport. The FBO will continue to operate as Louisiana Aircraft and Landon Petty will continue to serve as its general manager.

SALT LAKE CITY INTERNATIONAL AIRPORT...

Begins a \$1.8 billion capital improvement program that includes construction of a new terminal, concourses, parking garage, rental car facilities, improved roadways and associated infrastructure. Called the Terminal Redevelopment Program (TRP), the project is currently in the schematic design phase. Construction will begin in 2014 and extend into 2025.

SHELTAIR...

Opens a \$25 million hangar and office complex at Fort Lauderdale-Hollywood International Airport, marking the completion of the first phase of a three-part development project at the Fort Lauderdale facility that's expected to be done in 2015.

SHENZHEN BAO'AN INTERNATIONAL AIRPORT...

Opens an avant garde and eco-friendly terminal to replace three airport terminals in the city.

TED STEVENS INTERNATIONAL AIRPORT...

Released a final master plan that puts off the construction of a new runway unless there's a substantial rise in air traffic in the future. The plan calls for the airport's development to occur in phases, depending on demand from airlines.

THE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE...

Of the House of Representatives has agreed to slow down the FAA effort to start testing overweight pilots and air-traffic controllers for sleep disorders.

UNITED AIRLINES...

Adds in-flight WiFi to its fleet of Boeing 757-200s that serve transcontinental routes.

ZIPCAR INC. ...

Launches service at Chicago's O'Hare International and Midway airports, bringing the total number of airports that offer Zipcar to 26.



Shell Removes Lead From Avgas

Shell became the first major oil company to develop a lead-free replacement for Aviation Gasoline (Avgas 100 and 100LL), which will now begin a strict regulatory approvals process. Avgas is one of the last common transportation fuels to contain lead and is used by light aircraft and helicopters. Shell's lead-free formulation comes after a decade of exhaustive R&D, as well as successful initial testing, carried out by two original equipment manufacturers (OEMs).

Avgas currently includes lead in its formulation to meet fuel specifications and boost combustion performance (known as Motor Octane rating). Shelk unleaded Avgas meets all key Avgas properties and has a Motor Octane rating of over 100, an industry standard. The development of a technically and commercially-viable unleaded Avgas that meets these criteria has been seen by the aviation industry as a significant challenge, due to the tight specifications and strict flight safety standards that it has to adhere to.

To get to this stage, Shell Aviation technologists carried out an intensive internal laboratory program, including in-house altitude rig and engine test ing. Working alliances were then formed with aviation engine manufacturer Lycoming Engines and the light aircraft manufacturer Piper Aircraft Inc. The formulation was successfully evaluated in industry laboratory engine (bench) tests by Lycoming and in a flight test by Piper.

Shell will now engage the aviation industry, regulators and authorities, including the FAA, American Society for Testing and Materials (ASTM) and European Aviation Safety Agency (EASA) to achieve approvals for the unleaded Avgas. Shell expects to also work with other OEMs to continue the testing and refinement program as the approvals process progresses.

Fuel Watch

The following
fuel prices were derived
from transactions
completed with the AVCARD
credit card during May. Not
all operations sell both jet-A and
Avgas. The figures for jet fuel
prices will be more representative
than those for Avgas, due to the
higher number of transactions
recorded. Prices reflect all taxes
and discounts. Data is supplied
from AVCARD in consolidated
format; individual transactions
are not disclosed.

West Coast

Jet-A: \$5.14 Avgas: \$6.01 South Central

Jet-A: \$4.70 Avgas: \$5.91

Southeast Jet-A: \$4.83

Avgas: \$6.11

North Central

Jet-A: \$5.01 Avgas: \$6.09

Northeast

Jet-A: \$5.11 Avgas: \$6.21

Airlines Allowing Gadgets in Flight

More airlines have begun allowing personal electronic devices from gate to gate since the FAA lifted the ban in November. To allow PEDs on the plane, the airlines have had to get their planes inspected by the FAA to ensure that they can safely accommodate their use. The following airlines now allow gadget use throughout the flight:

Air Wisconsin Horizon Air

Alaska Airlines JetBlue

American Airlines Southwest Airlines

Delta Air Lines US Airways

ExpressJet United Airlines

Hawaiian Airlines Virgin America



COVERSTORY



GROWING PAINS STRIKE AS OIL BOOMS

North Dakota airports in the heart of the Bakken oil boom rush to meet escalating demands by putting improvement projects on the fast track

ort h Dakota's Bakken oil boom bears a strong likeness to t.he California Gold Rush. In both cases, the discovery of a hot commodity spurred a feverish migration of workers to a sparsely populated area.

Today as rig workers, roughnecks and roust abouts flock to North Dakota to work on its nearly 200 drilling rigs, the explosion of activity has tapped more than the oil fields themselves. And, as communities in the heart of the oil patch find themselves in a frenzy to match infrastructure to the demands of a burgeoning population, the region's airports struggle with the same.

Airports in western North Dakota rank among the fastest growing in the United States and have set passenger boarding records month after month for three straight years. As a result, many need tens of millions of dollars for infrastructure upgrades, according to Kyle W anner, aviation planner with the North Dakota Aeronautics Commission. The oil boom, he says, has delivered passenger traffic volumes that many state airports are ill-equipped to handle.

Consider Minot International Airport. This airport's 34,000-square-foot terminal, complete with two gates and small ramp, was designed to handle up to 100,000 passenger boardings per year. But today this airport sees nearly 220,000 enplanements annually.

Business is also booming at Sloulin Field International Airport, where in September the Williston-based airport saw a 247 percent jump in enplanements over September 2012; traffic this airport, located in the epicenter of the oil boom, was never meant to see, emphasizes Airport Manager Steven Kjergaard.

"Our terminal was built to handle approximately 8,000 people a year," he stresses, "and we're doing that in a month!"

Dickinson Theodore Roosevelt Regional Airport services western North Dakota, eastern Montana and northwest South Dakota, and it too doubled its traffic within two years. "We have about 50,000 passengers coming through every year; nearly three times the capacity the terminal is designed to handle," says Matthew Remynse, Dickinson airport manager. "Our terminal is designed for 36,000 passengers a year, and set up for one regional jet at a time."

The growing pains these airports are wrestling with are becoming as commonplace as the oil rigs themselves, says Wanner, who notes airports are hard hit as droves of job seekers flock to the region. Most North Dakota airports were never designed to handle the volumes of traffic they are now, he explains, and must find a way to fund sorely needed projects and put them on the fast track to completion.

"They needed these improvements yesterday," says Wanner. "Growth problems are usually a good thing to have, but you want that growth to be 3 to 5 percent a year, so you can plan for needed infrastructure changes. When your growth is 50 to 100 percent in a year, it strains the entire system."

FAST TRACK THE FUTURE

The State of North Dakota stakes a claim to 11.5 cents of every dollar the oil industry earns,

which has produced revenues of more than \$2 billion to date. The state designates a portion of these funds for infrastructure improvements that include new roads, hospitals and schools, and airport, water and sewer updates.

Recently, the state government earmarked \$60 million of this money to improve airports in western North Dakota; \$28 million of which has already been allocated to specific projects.

Minot airport emerged the big winner in this money "lottery." The airport received \$21 million to offset the costs of a \$85 million terminal revamp program, which includes a new passenger terminal building, apron and access road improvements, moving the snow removal building, and connecting Taxiway D to the apron. Airport Director Andrew Solsvig says the airport was able to quickly jump on the state funding opportunity because officials had begun work on the proposed projects long before they knew how they would pay for them. He explains when things began rocking and rolling in 2011, and airport traffic doubled, the airport assembled a stakeholder group to hasten a terminal area study

The resulting research projected growth that put Minot on pace to handle the same number of passengers as airports in Sioux Falls and Fargo; both of which have terminals between 118,000 and 175,000 square feet, four or more gates, and more than 1.000 parking spaces.

The terminal study proposed three potential options for improvements:

- Moving the entire terminal and related facilities to the opposite side of the airport, for \$350 million, with a completion date of around 2020;
- Expanding the 20-year-old terminal building

- for \$100 million, which would be finished by 2016 or later; or
- Building a new terminal nearthe current facility to take advantage of existing buildings, runways and parking lots, for an estimated \$85 million with a target completion date of Fall 2015.

Construction has already begun on Option 3, which includes a new passenger terminal building and apron, terminal access roads and a parking lot. The new terminal will boast enough counter space for up to six airlines, room for three security lines, a hold room area large enough for six gates, a restaurant and bar, a kid's play area, administrative offices and conference rooms, room for five car rental facilities, and an inline baggage system.

"All of this is possible because we completed our terminal study in four months, and started design immediately after that was finished," says Solsvig.

But though the airport accelerated the project's design, Solsvig says their work might have been futile had stakeholders been unable to convince state and FAA officials that renovations and revenue were needed. "We had to educate them about why Minot needed to become a priority," he says. "We invited them for site visits and gave them tours. We shared our statistical data and information, but still it was a challenge."

"Our terminal was built to handle approximately 8,000 people a year, and we're doing that in a month!"

A rendering of Minot International Airport's new terminal facility.

STEVEN KJERGAARD, AIRPORT MANAGER, SLOULIN FIELD INTERNATIONAL AIRPORT

AIRPORT

COVERSTORY

Their efforts paid off with the state agreeing to fund approximately half of the project, and the FAA and the City of Minot picking up the rest.

Had Minot not seen the writing on the wall when it did, this scenario might have played out

"Growth problems are ... a good thing to have, but you want that growth to be 3 to 5 percent a year, so you can plan for needed infrastructure changes."

KYLE WANNER, AVIATION PLANNER, NORTH DAKOTA AERONAUTICS COMMISSION

very differently. "The city was very forward-thinking," says Wanner, who adds the result is nothing short of impressive. "Projects like this can take up to 10 years from planning to completion," he says. "The fact that Minot started in 2011 and will finish in 2015, is definitely fast tracking the process."

Sloulin Field International Airport is also in line for terminal improvements, says Kjergaard, who has headed this airport for three years. Early on he met with city leaders about relocating and expanding the airport, and he recalls this conversation took some by surprise because enplanements had held steady for years.

Their quick thinking before the enplanement push began enabled the airport to complete site selection, start a master plan and embark on the environmental phase of the proposed project. Currently they are waiting on FAA approvals for their draft EAAs and site selection study . The FAA has recommended Williston participate in the Letter of Intent (LOI) program to fund the airport expansion and relocation, which will pay for approximately 60 percent of the estimated \$200 million project.

Dickinson's relief is at least five years away, says Remynse. The airport is in the midst of a master plan that forecasts it will have approximately 120,000 passengers a year at its peak then level off at 90,000 to 100,000 passengers when oil drilling settles into the production phase. The plan identifies needed improvements for the terminal, runway and taxiway. If the FAA approves the project, the airport terminal complex will move to a new location near the current runway. "If everything goes off without a hitch, we could start construction as early as 2017, finishing up in 2018," Remynse says.

COPING WITH CHALLENGES

With new terminals and other improvements up to five years in the future, airport directors have had to get creative as they cope. "They are doing the best they can," says W anner. "It's rough. They have to plan differently, and users of the system have to be able to adjust for the

accommodations the airports are able to provide."

Secure hold rooms at many airports were virtually bursting at the seams. Williston, for instance, had 41 chairs, which was fine when Great Lakes Airlines launched just three Embraer 120 flights a day. Today there may be three flights leaving within 15 minutes of each other. The airport addressed seating concerns by adding a Williams Scotsman double-wide trailer to the secure hold area.

Dickinson also put a 40-foot by 24-foot modular building on its hold room. When both Delta Air Lines and United Airlines announced their intentions to come to the airport, the existing hold room could only accommodate 50 people at a time. But with planes taking off within 15 minutes of each other all day long, if delays occurred, the minimum capacity required was 124. Dickinson also added a modular building for baggage, which connects to the terminal via conveyor.

Minot also found its hold room overflowing. This airport has modified its existing building twice, claiming a conference room and taking space from the lobby to increase the hold rooms size. "It's still really tight," Solsvig says. "There are situations where it's so congested in the hold room that it's standing room only."

Another key area airports had to address is parking. "Parking is crazy," says Solsvig. "For awhile people parked wherever they wanted, even in a ditch, and it was impossible to keep an accurate inventory of anything."

HOW TO FAST TRACK A PROJECT

airports may never see enplanements double, or even triple, in three short years, but managers at affected North Dakota airports offer a few tips for fast tracking a project when the need arises.

- 1. Have a plan and be ready to go. When Dickinson Theodore Roosevelt Regional Airport entered talks with both United Airlines and Delta Airlines—at the same time—Airport Manager Matthew Remynse began developing a plan. "If growth is starting to pick up, have a plan in place to prepare for that growth," he says. "Our plan included everything from where the ticket counters would go to adding a modular building, so that when growth picked up we were ready."
- 2. Be upfront about what airlines can expect. Dickinson lacked the room to store airline equipment, and had a shortage of offices and ticket counter space. "We made those things clear from Day One," Remynse says. "We told them you will not have inside storage for equipment.

You will have to share offices and other facilities with other airlines."

- 3. Get key stakeholders involved. Meet with key officials and the community to gather input, share ideas and develop a shared vision of where you want to go. "That's helped us tremendously in this process," says Minot International Airport Director Andrew Solsvig. "We included as many key people as possible from the very beginning."
- 4. Communicate, communicate, communicate. Solsvig says there has to be regular communication between engineers, architects, airport staff, the state and the FAA. Fast tracking decision-making, he says, requires everyone to have access to the same information. Minot stakeholders meet every other week for updates and timelines, keeping everyone on the same page. "Keeping our leadership informed helped speed the decision-making process along," he says. "We didn't wait for weeks on end to get information back and forth."

Minot's main lot offers 450 paved parking spots, but over the last three years maintenance workers added crushed gravel to boost parking to 550 spaces. An airside overflow lot also offers parking in a pinch. "It's just dug up grass and gravel, and not even officially a lot, but it works," Solsvig says, noting the airport averages 650 vehicles a day but can peak at 1,100 vehicles over the holidays.

Dickinson addressed its parking crunch by requiring travelers to pay for parking; a first in the airport's history. The airport offers approximately 220 parking spots and averaged 175 cars in the parking lot when parking was free. "We added paid parking and we now average 225 cars in the parking lot; people are finding other ways to get to the airport," Remynse says. "I feel blessed to have paid parking now I don't know what our parking lot would look like without it."

For now, no one has had to repair runways, but all airports are closely monitoring their pavement for signs of rapid wear and tear. Remynse says it's a continuous concern at Dickinson, where the airfield is rated for 43,000 pounds, but Delta operates regional jets rated at 53,000 pounds maximum take-off weight and United operates regional jets rated for 47,000 pounds maximum take-off weight.

"We have contracts with the airlines stating that the maximum weight of the aircraft is 53,000 pounds," he says. "But that will have long-term effects on our pavement. We're not seeing anything on the runways currently but we are seeing minor rutting on our taxiways. We're watching it very closely."

Williston rehabbed its runway in 2011 with a 2-inch overlay, and its weight restrictions hold strong at 25,000 pounds. Because Delta and United operate closer to 45,000 pounds, the City of Williston took responsibility for the pavement, and Delta and United took on responsibility for the aircraft "should an incident occur due to pavement failure," says Kjergaard.

All three airport managers say the experience has been a wild ride, but one that has been a real thrill. "When you see regional jets come into a facility that has neverhad regional jets before, it's a great feeling," says Remynse. "When numbers come in at 100 to 200 percent over the year prior and you're able to work with what you have and handle it, it gives you a tremendous sense of pride and accomplishment."



When complete, Minot's new terminal (rendering above) will be able to accommodate up to six airlines, three security lines, six gates, and five rental car facilities.

FBOS FEEL THE PINCH TOO

BISMARCK Aero is on the fringes of the oil boom's epicenter, but even so the oil boom has impacted its business.

Existing customers are doing more and have graduated to bigger, faster aircraft, notes CEO Bob Simmers. "We've also noticed a shift in volume, in addition to our existing customers doing more, we're seeing lots of new faces," he says.

While this FBO isn't transferring oil field workers, it is transporting employees from professional outside organizations with an interest in the oil fields, for instance, employees from engineering, construction and legal firms.

Until recently Bismarck Aero wasn't feeling the pinch. "Until four months ago, we had the capacity to handle the increase," Simmers explains. "But we are close to capacity now. We have waiting lists for hangar storage and our maintenance operation." The firm recently began adding staff, opened a second facility at Mandan Municipal Airport, and constructed additional hangars.

Fargo Jet Center shares a similar story. The 18-year-old firm has experienced considerable growth in recent years. "Our traffic continues to rise and we're seeing more aircraft ownership and we're 300 miles from the heart of the oil boom," says President Jim Sweeney.

In October the firm partnered with Ross Aviation of Denver, Colo., to establish an FBO business in the heart of the oil boom. "There was a need to improve and step up the service capacity on the FBO side of the airport, and we saw a nice opportunity there," says Sweeney about the reasoning behind forming the Williston Jet Center. "The joint venture between Ross, Overland and Fargo Jet brings together the resources and knowledge of three well respected aviation companies," he adds. "Plans are underway for improving existing facilities to accommodate the growth Williston has realized over the last few years."



Airport Security: The Great Balancing Act

After taking strides toward
a more secure future by
implementing risk-based
security, industry pundits
believe the TSA's move to
stop manning exit lanes
will unbalance the security
system yet again

SECURITY

he aviation industry agrees on at least one thing ... a successful airport needs to balance how it secures passengers, employees, aircraft and cargo with protecting the steady revenue stream that funds it all. Too much security or too little airport revenue results in chaos. How to reach and maintain that point of equilibrium though is a subject of endless debate and the point where sparks begin to fly.

"The heart of airport security is that it's always in competition for resources, money and manpower," says Tom Anthony, director of Aviation Safety and Security at the University of Southern California (USC). "That means an airport and its regulators must always be looking at what security measures are reasonable considering the limits of those resources."

Airport security versus economics is actually an older argument than most people realize, says Anthony who served as the F AA's manager of civil aviation security for the F AA's

Western-Pacific Region prior to coming to USC. "Security is always in a constant state of evolution," he says. "The early relationship between airport security and law enforcement, for instance, goes back to 1972 when three convicts hijacked Southern Airways Flight 49 from Birmingham, Ala., and threatened to crash it into a nuclear power plant. In those days, the screening checkpoints were only a few yards from the actual gate, so if someone had a gun, it was just a short run to the airplane." Not only did that hijacking convince people to pull the

checkpoints further back from the gate, but it also fostered the need to physically search people prior to takeoff, an effort that began in 1973. And so it began.

Because of the dynamics of airport security, Anthony says, "Every time a new FAA or ICAO security measure took hold, the bad guys would change their tactics and then we'd have to change ours."

As a result, not all threats airports face are easily detected, as the November shooting at Los Angeles International Airport (LAX) proved. But some of the potential threats the Transportation Security Administration (TSA) faces seem almost gnawingly stupid more than 12 years after 9/11. During the first week of November 2013, the TSA confiscated 29 hand guns at screening checkpoints; 27 of which were loaded. Despite the bad publicity TSA employees sometimes receive, their job will continue until people stop offering excuses like, "I forgot that .357 was in my briefcase," for trying to carry loaded guns through security

There's no question that the quality of screening for passengers, their luggage and cargo has increased exponentially since 9/11. Christopher Bidwell, the Airports Council

AIRPORTS AUTOMATE EXIT LANES

FUTURISTIC unmanned portals have replaced officers at the security exits of two small Northeast airports, adding a few seconds in a bulletproof glass pod to the end of every passenger's trip.

The rounded exits at Syracuse's Hancock International Airport in New York and Atlantic City International Airport in N.J. prevent passengers from backtracking into secure areas once they exit the plane and keep outsiders from entering through the exits.

Travelers step into the elevator-sized cylinders and wait as a door slides closed behind them. After a couple of seconds, another door opens in front with a female voice coolly instructing, "Please exit."

The technology saves airports from having to put paid security staff at the exit checkpoints. Syracuse Aviation Commissioner Christina Callahan, whose airport installed eight portals this year at a total cost of about \$750,000, says staffing each exit with a guard would cost about \$580,000 a year.

"So, when compared with the cost to install the portals, they will have paid for themselves and begin saving the airport money in little over a year," she says.

The portals are intended to remove the potential for the kind of

human error that was blamed for a 2010 breach that shut down a Newark Liberty International Airport terminal for several hours and caused worldwide flight delays after a Rutgers graduate student slipped under a rope to see his girlfriend off on her flight.

On recent evenings in both Syracuse and Atlantic City, there did not appear to be any sign of backups caused by the roughly



5-second process of entering and exiting the portals. Signs encouraged travelers to enter the pods in groups—they can accommodate up to six people at a time—rather than one by one.

The doors' manufacturer, New York City-based Eagle Security Group Inc., says it is in talks with other airports.

-Courtesy of the Associated Press

SECURITY

International's (ACI) North American vice president for security and facilitation says. "I think the number of guns confiscated each week is indicative of the TSA's effectiveness."

Still news reports show the good, the bad and the ugly in the TSA world. The move toward risk-based security quickly comes to mind among the good, stories about corrup tion and crime among TSA employees often shows up as the bad, and the ugly—at least these days—seems to be the TSA's move to stop manning exit lanes, just a couple months after an alleged breach of an exit lane at LAX cost a TSA agent his life.

RISK-BASED SECURITY

TSA Administrator John Pistole is on the right track with the agency's recent focus on riskbased screening that allows TSA to use technology to make intelligence-driven decisions at security checkpoints, according to Anthony

While some might call this profiling—and in a way it is, profiling isn't always a dirty word. Should we really spend the same amount of time and money screening U.S. Supreme Court justices, when they travel, as we do screen ing someone convicted of multiple weapons felonies?

Anthony says it's time we acknowledge, "You can't protect everyone from everything all the time. You must put your resources where they will provide the greatest protection."

This service-focused strategy is also behind the TSA's recent roll out of its TSA Pre/TM program at more than 100 airports nationwide. This program is for passengers willing to share more information upfront, once, in order to later move through the security system more freely To date, the TSA reports more than 25 million fliers have used the security program since its roll-out in 2011

And, at the beginning of this month, the



More than 25 million people have used TSA Pre-Check since its inception in 2011.

TSA gave TSA Pre✓™ another shot in the arm when it announced plans to open a registration website and sign-up centers at major airports nationwide. Three-hundred enrollment centers are planned, and Pistole reported in a recent news release that the move will further aid the TSA in focusing on high-risk passengers while reducing hassle for low-risk ones.

"TSA Preê is enabling us to move away from a one-size-fits-all approach to transpor tation security," he is quoted as saying in the press release.

Perhaps this information-rich world is begin ning to finally help airport security become bet ter organized. On the upside, Anthony says, "I think security and the level of professionalism [from TSA employees] has increased."

EXIT LANES CONTROVERSY

But just when some critics were starting to believe the TSA was getting better at the great security balancing act came word that the agency plans to return exit lane screening tasks to local airport authorities on January 1. whether or not they want it.

The TSA currently staffs exit lanes at approximately one-third of the nation's airports. Other airports either bear the respon sibility themselves or share the responsibility with the TSA. And a few including airports in New York, New Jersey, Washington and Nevada have begun installing unmanned automated exit lanes.

According to a TSA spokesperson, trans ferring that task to airports would allow the agency to train its focus on screening passengers and baggage, and would trim \$88 million from its budget.

Though the move seems to make finan cial sense as far as the TSA budget is concerned, the TSA outraged the industry when it announced the change as an amendment to the Airport Security Program, rather then through an NPRM (notice of proposed rulemaking) that would have offered users a chance to comment.

Anthony says, "When it comes to exit lanes,

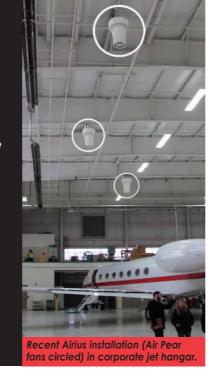
Leaky, high-bay hangars a heating headache?

The solution is simple.

The Air Pear destratification fan system from Airius quickly equalizes temperature throughout any hangar.

- Recovery time to re-heat a hangar, especially as doors are opened and closed frequently, is greatly reduced.
- Maintenance crew is more comfortable.
- Reduced HVAC run time can yield savings up to 35%.
- Fast ROI for energy-saving sustainable

Airius is the world standard for destratification systems in both civilian and military aircraft facilities.





Call Us: 303.772.2633 1.888.AIR.PEAR



www.theairpear.com • info@theairpear.com

www.aviationpros.com/10689118

that's an example of dynamic shared responsibility in aviation security. Each party has its own duties and certainly there will be areas of gray where those responsibilities overlap. But the security side cannot forget that it is only one gear in a complicated transmission of aviation and aviation security. Neither side [security or airports] can exist independent of the other. Understanding that has been one of TSA's challenges."

Part of the exit lane argument is just naming the problem. Neither the TSA nor the airport industry agrees on whether they are talking about screeners or monitors. A TSA spokes - person claims: "The exit lane monitors are not actually screeners," but monitors.

However, Bidwell says the screening function at exit lanes is clear at least to them. "With the verification of armed law enforcement officers (LEOs) conducted by TSA officers at exit lanes, TSA has been performing screening functions in these locations for some time," he says. "More recently, through the implementation of

"The TSA overstepped its authority by imposing this amendment. The exit lane proposal represents a very costly unfunded mandate."

CHRISTOPHER BIDWELL, VICE PRESIDENT OF SECURITY AND FACILITATION, AIRPORTS COUNCIL INTERNATIONAL-NORTH AMERICA

the Known Crewmember (KCM) program, TSA routinely screens pilots and flight attendants at exit lanes."

Bidwell says ACI finds screening should only be conducted by federal employees. The specifics of funding a variety of the TSA 's Aviation Security Infrastructure Fee-based functions is detailed in the February 20, 2002, Federal Register grid outlining screening personnel cost categories. There at least, exit lane personnel are listed as monitors, not screeners.

Another major stumbling block to the exit lane controversy is the cost. Though the TSAs financial impact study shows the agency is poised to save millions by the move, airports won't fare nearly as well. Bidwell predicts filling these positions will cost airports an estimated \$160 million each year, or about \$204,000 each annually. According to ACI, the cost to procure, install and operate the technology needed to monitor exit lanes alone could run from hun -dreds of thousands to as much as \$1.5 million per exit lane if a fully automated monitoring system is installed.

Interestingly, when TSA dumps the exit lane functions next month, it will continue charging the full Aviation Security Infrastructure Fee that funds its side of the work.

Many airports have filed petitions with the TSA asking the organization to reconsider its decision. Others have teamed with their Congressional representatives in an attempt to have the ruling rescinded or delayed. And on December 6, the Association of Airport Executives and ACI, joined 19 airports asking the D.C. Circuit U.S. Court of Appeals to halt the change.

Despite the short time-frame until implementation, the ACI has no plans on rolling over on exit lanes. Bidwell says that's because, "We see this issue in its totality. The TSA cost impact study was flawed because it failed to account for many costs, like some wage issues, a problem that ACI says makes the TSA's plan unrealistic. ACI and its members have written letters to Pistole, members of Congress, the chairman and ranking members of the Homeland Security committee and even U.S. Attorney General Eric Holder.

In a November 8, letter to Pistole, Senators James Inhofe (R-PA), Tim Scott (R-SC) and Robert Menendez (D-NJ) urged the administrator to withdraw the exit lane amendment to the Airport Security Program citing not only the cost to airports, but taking specific issue with the manner in which the TSA chose to implement the program, by an amendment, rather than an NPRM, which would have offered more people an opportunity to comment on the proposal.

"The TSA overstepped its authority by imposing this amendment," Bidwell says. "The exit lane proposal

represents a very costly unfunded mandate."

But the TSA says the January 2014 implementation date stands. And, some airports have begun preparing for this latest TSA push to unbalance the system—because TSA assistance or not, exit lanes need staffing to keep airports secure.

ABOUTTHEAUTHOR

Robert Mark ,CEO, CommAvia

Mark, a 35-year aviation-industry thought leader, is CEO of CommAvia, a marketing communications group that delivers leading edge media to the aviation industry, and author of the award-winning industry blog, JetWhine.com. Mark is a commercial pilot who has logged 7,000 flying hours in airliners and business jets, as well as dozens of small training aircraft. He can be reached at rmark@commavia.



www.aviationpros.com/10017532

Project WINGSPAN Takes Flight

Greenville-Spartanburg International Airport's \$115 million terminal project preserves the past while readying it for the future

efore Greenville-Spartanburg International Airport (GSP) broke ground on a \$115 million terminal expansion and improvement program, it asked the community for input. While no surprises emerged from the focus groups they held, a common theme did: Community members really liked their airport.

TERMINALDESIGN



"We heard a lot of people say that this airport is a simple airport to fly out of: Don't mess that up," says Kevin Howell, GSP vice president/COO.

Currently, GSP serves 1.8 million passengers a year out of a 226,000-square-foot terminal built 51 years ago. Though renovated and expanded in the late 1980s, the aging terminal, sporting 13 departure gates, needed freshening up in order to continue enticing passengers to fly out of it instead of its larger counterparts; Charlotte-Douglas International Airport, 85 miles to the north; and Hartsfield-Jackson International Airport, 165 miles to the south.

"We leak a lot of passengers to those air ports," Howell admits. In order to compete, he says GSP needs to sell an exceptional passenger experience. "We need to be that be-all-to-end-all airport because at the end of the day a passenger doesn't have a lot of choice as to which hubs they connect to, but they do have a choice about where they originate or end their trip," he explains.

GSP developed a blueprint for its future dubbed WINGSPAN, a \$115 million improvement program designed to propel the aviation center toward the years ahead. It is hoped that WINGSPAN, 80 percent of which is being paid for by airport funds with the rest ofthe tab being picked up by the FAA and TSA, will increase capacity, improve efficiency, incorporate state-of-the-art safety processes, integrate sustainable practices, positively impact the area's economic landscape, and make GSP the airport of choice for Upstate residents.

But you can't accomplish any of these goals with a terminal designed for another time, Howell emphasizes.

"We have a 51-year-old facility that serviced the community well," he explains. "It's time to prepare for the next 50 years."

The airport plans to execute the 48-month project in three key phases. Phase I is ongoing and has moved the rental car customer care center, is updating Concourse A and B restrooms and concessions; constructing a North Wing to temporarily relocate airline facilities, and move utility infrastructure. Crews recently began the second part of Phase I, which includes installing new baggage carousels, adding canopies over passenger loading/unloading areas, constructing a covered walkway to Garage A and B, and installing new glass on the terminal front. Once



Banks of windows within the facility will provide views of both landside and airside gardens and water features outside. Benches and tables in these areas will give travelers places to sit and enjoy a meal or just take a break from the hustle and bustle inside.

this work concludes in March, crews will begin Phase II construction, which includes adding a new food, beverage and retail concessions area in the Grand Hall; renovating the existing ticketing lobby; creating new customer service booths; adding a landside garden; installing baggage screening equipment and facilities; consolidating security areas; and renovating Concourse A and B. Later, Phase III will add administrative offices and a conference center Howell expects the project to be complete by the first quarter of 2016.

Airport officials based the entire design on the fact that GSP expects to double its traffic by 2020. They used the design criteria of 2 million enplanements annually; given that the airport is just shy of 1 million enplanements today . But Howell explains, "We're always looking on the horizon" as he points out that GSP has averaged 5 percent annual growth for the better part of 50 years.

A GREEN FUTURE

Long-term sustainability is a key part of WINGSPAN's renovations, according to Howell.

Airport officials sought to make the aging structure more efficient by today's energy standards and more sustainable for the future. "There are many things you can do to improve mechanical systems, electrical, heating and

ventilation," Howell explains. "Simply by changing out the glass, you can make a building more energy efficient."

Early on, airport officials met with the design team to discuss LEED accreditation. Though they ultimately decided not to chase after a "plaque on the wall," Howell says they did incorporate items on the LEED certification checklist. For example, today the front of the terminal is 90 percent concrete and 10 percent glass, but when crews complete renovations, the terminal will be 90 percent glass and 10 percent concrete to take advantage of natural light. The entire exterior wall will be glazed, allowing natural light to filter in, while metal louvers will diffuse the light to maintain comfortable lighting and temperatures inside.

A high-tech building automation system from Automated Logic of Kennesaw, Ga., will control ambient temperatures while lighting will be adjusted by a system from Hubble Inc., headquartered in Shelton, Conn. According to Robert Postma, vice president/project executive of Aviation, for Skanska USA Building Inc., sensors throughout the building read light levels and as soon as there is enough outdoor light coming into the interior, the system will dim circuits and zones to save energy "The system is essentially watching the environment and thinking automatically on its own," he says.

The building control system allows technicians to monitor the entire facility from wherever they are. The system even enables them to utilize "free" air conditioning whenever possible by increasing outside air intake to cool the facility.

The design also incorporates solar hot water where the sun's rays will be harnessed to heat water for hand washing in restrooms and concession areas; and rain water harvesting, where water will be collected for non-potable use.

Howell notes that everything included in the design is on the "leading edge but not the bleeding edge" and only those sustainability options with a sufficient return on investment (ROI) made it into the final product. "We wanted to incorporate things that made good business sense, not just things that made us feel good," he explains.

"We challenged our design team and engineers to crunch the numbers, give us the ROI, and help us make educated decisions," Howell continues. "There had to be a payback in the end, so that we were not just spending money without understanding what the payback was."

Not only that but the payback had to start immediately; stakeholders didn't want to add things to the design that would need replacing before there was a return.

The paybacks are there, according to Howell.

"We're adding a couple hundred feet to the facility but based on our analysis, we think utility usage will remain neutral," he says, which is good news for the airport, who committed to its six airlines that the project would not raise costs per enplanement.

ENHANCE THE EXPERIENCE

GSP strives to greatly enhance the passenger experience through these improvements. The new design incorporates a central security checkpoint and moves security services behind the check-in area. The design also connects Concourse A to B through the Grand Hall so that passengers no longer have to go through security to move between the two concourses.

Howell explains the facility was built long before today's more stringent security requirements. Consolidating the airport's two security checkpoints will improve efficiency and security. "At all times of the day, the TSA is staffing two locations," Howell explains. "It just makes sense to co-locate those so that the TSA can be more efficient."

The consolidated area will also feature four security lanes, but will be built to expand to as many as eight lanes in the future.

Exit lanes remain an unknown, but Howell says there will be two lanes and they will not be "staffed with a human being but with tech nology." All that remains is for them to decide which technology they plan to use.

The new baggage claim area will also improve the passenger experience. The finished area will offer three sloped plate baggage claim carousels, versus the two flat-plate devices cur rently. These installations are covered by a small TSA grant. "The addition of the third baggage claim area adds redundancy," says Howell, so if there is a delay with one carousel they can utilize the third. The new baggage claim area will also offer concessions, where currently there are none. In addition to new baggage service offices, a ground transportation services counter and a customer service center, there will be a Hudson retail, coffee and snacks area, which includes Dunkin Donuts and a grill franchise. Canopies over the area outside baggage claim will keep customers out of the elements as they leave the building and head to their cars.

New concessionaires and retail outlets will also move in post security; a first for this airport where the bulk of concessions appear before

HOWELL'S TIPS FOR MAINTAINING THE PASSENGER EXPERIENCE

- ▶ Hold focus groups. According to Greenville-Spartanburg International (GSP) Airport Vice President and COO Kevin Howell, do not enter a project without asking the user community what they want in their airport. What do they like? What don't they like? What would they like to see in the future?
- ► Continually look for new offerings for passengers. Keep close tabs on retail trends. Look for things to add—no matter how small—to improve the passenger experience, whether it's a shoe shine stand or more vending. "Always look for ways to treat the customer the way you would want to be treated and provide the things you would want while traveling," Howell says.
- ► Know what your signature is. The 3,500-acre tree farm along the roadway coming into GSP, and its airside gardens and water features, were important to passengers. As a result, the airport charged engineers and designers to find ways to preserve or improve upon them.
- ▶ Put the bulk of concessions post-security. Howell reminds that retail and concessions perform better post security, noting passengers often want to get to their gates before visiting those areas.

security. "It's been proven in our industry that concessions perform better for most passengers when they are post security," Howell says.

The new concessions area will inject some local flavor including Thomas Creek Grill and RJ Rockers, noted South Carolinian-microbreweries; Chick Fil-A; and Green Leafs, which features salads and sandwiches. MSE Branded Foods holds the food and beverage contract while Hudson holds the coffee-snacks and retail contracts. "It's easily a 50 percent increase in concessions offerings," says Howell.

A LONG WINDING ROAD

The tree-lined drive into the airport, which is actually a 3,500-acre working tree farm, makes one feel as if they're driving into a country club or a college campus. It's not the concrete jungle that's often synonymous with an airport entrance. Gardens in front of the terminal, a fountain and mature trees round out this unique airport experience.

When it came time to design the new facility, Howell says it was important that these things remained. "The green space, the landscape and the environment around the airport has always been our signature," says Howell. "It was important for us—

and to the community—to keep that intact.

"When we started this project, we said we didn't want to impact these things, we wanted to make it better—we wanted to bring the outdoor beauty indoors," he continues. The terminal's glass facade serves to bring the outside in so that passengers can see the landscape from the front and back of the facility The new airside food court will offer a terrace for people to enjoy a meal before getting on their flights. The landside garden will include benches around the fountain in front, and outdoor seating areas to the north end of the facility.

"These areas are designed to give passengers little breaks from the hustle and bustle of the airport," Howell says.

When the public charged GSP officials not to mess up their airport, GSP stakeholders took these words to heart. As a result, the new structure will not only maintain the airport's claim to fame, but will make it better.

"This is really a great little airport facility," says Postma. "It's been a very complex project from the perspective of the phasing require - ments, but we've been able to build temporary spaces to house operations until they're ready to move back into their final, beautifully upgraded facility."



Set the Standard

NATA President Tom Hendricks shares his thoughts on what it will take for the United States to continue to set the gold standard for aviation. Commitment, education, infrastructure improvements and funding, he says, all play a role in U.S. aviation's continued success

INDUSTRYINSIDER

Tom Hendricks remembers his first solo flight like it was yesterday. "It was in a Cherokee 140 in Hamilton, Ohio," he says. "And it was completely unexpected."

He explains he had a crusty old flight instructor who didn't shy away from pointing out his flaws, and he had convinced himself he would never please him enough to fly solo. But on that day, his instructor stepped off the plane and told him to "keep it running."

"The flight was fabulous and a huge confidence builder," he says. And, that early flight filled him with a passion for aviation that never left.

Hendricks followed his heart and made aviation his career. The retired Air Force Reserve colonel and career fighter pilot also served on active duty as a U.S. Navy officer on the USS Midway (CV-41) and as an instructor pilot at the United States Navy Fighter Weapons School. He oversaw day-to-day flight operations at Delta Air Lines as director of line operations then moved to a position as senior vice president of safety, security and operations for

Airlines for America (A4A). Today he spends his time as the president of the National Air Transportation Association (NATA), a position he's held since 2012.

He says, "I'm in a great place right now. I love what I'm doing and I'm able to really take advantage of my experience in aviation and help make it better."

But he adds, if he accomplishes anything in his current role, he hopes it is to instill a passion for aviation in young people today. "I view that as a very important responsibility of someone like myself; to make sure we reach out to young people and try to attract them to the industry," he says.

Airport Business had a chance to sit down with Hendricks at the 2013 NBAA Business Aviation Convention & Exhibition and discuss NATA's efforts to propel the aviation industry into the future.

What do you believe are the largest issues facing the industry?

Economic uncertainties continue to be the



NATA President Tom Hendricks just got a new airplane, and looks forward to flying again.

ON THE IMPORTANCE OF AVIATION TO THE ECONOMY

If you want to see what the world looks like without a vibrant aviation system go to Africa. People can't move goods and services efficiently. They don't have the means we have here in the U.S. to grow their businesses, because the infrastructure is just not there.

ON STREAMLINING CERTIFICATION METHODS FOR SMALLER GENERAL AVIATION AIRCRAFT

Technology is evolving so rapidly that we were missing opportunities to improve safety performance because our certification processes remained in a legacy mindset.

We needed to break free from that ...

ON ASSIGNING AN ARBITRARY NUMBER TO PILOT FLIGHT TIME

The FAA rule on pilot flight time causes me great concern.

I think a rule that assigns an arbitrary number of flight hours to pilot qualification is flawed.

INDUSTRYINSIDER

biggest drag on NATA's members. There is a general reluctance to make large capital invest ments until we have a better understanding of what the future looks like from the overall U.S. global and economic perspective. I think uncertainty continues to dampen large capital investments, which in turn drive business growth and job creation. People are very much in a wait-and-see mode.

As the federal government looks for ways to address its budgetary issues, there are those who predict general and business aviation will be targeted. What can be done to show decision-makers the importance of these segments of aviation?

The federal government is going through a rough period. The FAA gets about \$16 billion from the federal government. The infrastructure is aging. That includes airports, navigational

aids, runways and taxiways, and airplanes. We've got to keep reinvesting in this industry that creates so much value, not only for just aviation but for all businesses.

One of the challenges we have is educating Congress and the general public about the importance of all segments of the aviation economy. There is no place like the U.S. in terms of our ability to transport goods and services, the job creation, the freedom we have to fly ... no other place on the planet can bring these sorts of capabilities to bear. We need to continually remind Congress and the public that we have to be careful about taking aviation for granted because it's become ubiquitous.

What is NATA doing to tell the aviation story so everyone fully understands its importance?

We are very coordinated with other aviation associations including AAAE, NBAA, AOPA,

GAMA, HAI, EAA; all groups that have a slightly different constituency than us. We take advantage of every chance we have to raise the profile of aviation in any venue we're offered. It is our duty that the public and lawmakers know the importance of aviation to the economy. One example, I routinely use is from my prior life, as the director of line operations at Delta. In 2006 they decided to open up service to Africa. I was responsible for mak ing sure we could fly safely in Africa because we didn't have any experience there. I sent teams into Africa, I went there myself sev eral times, and I flew the inaugural flight out of Lagos Nigeria to Atlanta. I tell people: If you want to see what the world looks like without a vibrant aviation system go to Africa. You'll see businesses and general aviation air craft in larger cities but they are largely devoid elsewhere. It's a real economic constraint. People can't move goods and services efficiently. They don't have the means we have here in the U.S. to grow their busi nesses, because the infrastructure is just not there. I try to draw that contrast to show that what we have in America is a fully developed mature transportation system and we can't take that for granted. We've got to continue to invest in it

In November, Congress gave final approval to a bill that requires the FAA to streamline the certification methods for smaller general aviation aircraft, advancing an initiative that should reduce the cost of upgrading existing aircraft and bringing new aircraft to market. Can you discuss why this move was absolutely critical to general aviation's future?

We have the safest most comprehensive air transportation system in the world and we've all played a role in that—industry, government, labor, regulators, Congress. But technology is evolving so rapidly that we were missing opportunities to improve safety performance because our certification processes remained in a legacy mindset. We needed to break free from that ... so we don't have this very bureaucratic process preventing us from bringing new safety enhancing technologies to bear. We don't want the U.S



Hendricks recently testified before Congress about specific clauses in the FAA Modernization Reform Act of 2012.

to lose its competitive edge. We don't want to lose our position as the gold standard through out the world of aviation.

Can you talk about the importance of maintaining our infrastructure and what you feel is most needed?

We have to keep investing in airport infrastruc ture. We've got to keep investing in NAVAIDS. We've got to modernize our air traffic system. We have a very safe and stable, yet old, air traffic system. It's very complex. Our air traffic controllers do a fabulous job of managing air traffic across the U.S. It's very safe. But our legacy equipment is getting older and more expensive to maintain. We're seeing other parts of the world that never had the ability to conduct operations like we do leap-frogging over us. China, Australia and other areas of the world are embracing next generation technologies. We have got to invest [in these technologies and show there are benefits to these investments. We don't have any choice but to modernize the air traffic system in the U.S. It's an important infrastructure. There's also an airport piece to this. If we get those two right, you're going to see capital investment return in aircraft that are equipped with modern avionics to take advantage of the modernized infrastructure.

Do you have any concerns about the industry supply of qualified personnel?

Yes, I do have concerns about the supply of pilots and people in all trades of aviation from air traffic controllers and mechanics to people working on the ramp. We've got to make sure we don't lose sight of the fact that these positions enable commerce throughout the world. We've got to attract young people to this profession so that it continues to grow and prosper throughout the future.

The FAA rule on pilot flight time causes me great concern. I think a rule that assigns an arbitrary number of flight hours to pilot qualification is flawed. In my 40 years of flying, my experience has been that the quality of the training is the most important factor in whether someone is qualified to fly in a commercial environment. The FAA missed the mark on the rule by assigning an arbitrary number of hours. We should focus more, like other parts of the world are, on the

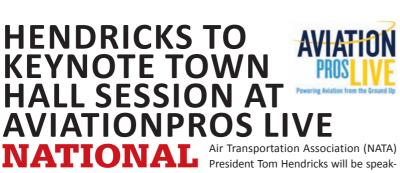
type, structure and quality of the training pilots are provided, rather than an arbitrary number.

I think we are going to have to come back and revisit that FAA rule in the future because we're going to see a big challenge to fill the flight decks of commercial aircraft. That's going to transfer down into other

segments of aviation as pilots try to work their way up. I've got concerns about other seg - ments as well. We're seeing companies have a difficult time attracting aircraft maintenance technicians. We've got to be very thought - ful when we propose legislation that drives regulation like this.

What can be done to attract people to the industry?

We've got to ensure people are attracted to the industry and that we have an environment where they can get involved in learning to fly learning to work on aircraft, learning to qualify themselves for air traffic control responsibilities, and so on. It's a solemn responsibility for those of us who've been in the industry for a long time. At the same time, we've got to continually take opportunities to push back on regulations and legislation that works against that goal.



President Tom Hendricks will be speaking at the Welcome Town Hall Session at AviationPROS Live on Tuesday, March 25. NATA is also hosting the event's two-day FBO Success Seminar, scheduled to begin the day before the show opens, on Monday, March 24.

AviationPROS Live, slated for March 25-26 at the Sands Expo Convention Center in Las Vegas, is an event designed for aviation professionals. Visitors can learn how to improve safety, boost efficiency and develop their skills through cutting-edge solutions from exhibitors, high-impact education sessions and invaluable networking opportunities.

Learn more about this can't miss event at http://aviationproslive.com/



www.aviationpros.com/10131734

ISPLAYCOMMUNICATIONS

nmerses sengers in A perspective of the new immersive digital experience at Los Angeles International Airport's Tom Bradley International Terminal

nthropologist Marc Auge once referred to an airport as a nonplace; a location people come to in order to leave. But more and more, airports are becoming places where people linger to enjoy contemporary artwork as they pass through on their journeys.

The very notion of artwork being inside the fence is a fairly new one. The aviation industry is heavily focused on process. Thus, when managing most projects in the busy airport environment, the focus tends to be on following a defined process. As a result airports wind up with digital installations where form closely follows function. However, recent trends in airport terminal digital displays have demonstrated a renewed effort to break away from the standard Flight Information Displays and move toward those designed to increase passenger engagement. Such efforts, if done right, can increase customer satisfaction and drive airport revenue.

Today's airports are now using large-format digital, interactive kiosks and mobile digital solutions to engage and connect with passengers inside the "technology cocoon" that has developed as the number of personal electronic devices travelers carry rises. When researching options for a potential new installation, I discovered a new term to describe airport digital projects-immersive.

Immersive installations encourage discovery and deepen customer engagement via large-scale interactive media systems, such as the one unveiled at Tom Bradley International Terminal (TBIT) at Los Angeles International Airport

(LAX) this summer. This Integrated Environmental Media System (IEMS) program is described in an LAX press release as "focus[ing] on the engaging passenger experience."

But don't take their word for it. Richard Lebovitz, editorial director of Digital Signage Expo for DigitalSignageConnection.com, sings its praises as well stating in an article for the Digital Signage Connection blog: "Seldom have we come across as inspiring an installation of digital content as that found at the new Tbm Bradley International Terminal at Los Angeles International Airport."

And, the Moment Factory's description of the online video portion of the TBIT install concisely describes the scale of this installation, stating, "The result is the largest immersive multimedia system of any airport in the Americas."

As a consequence of these reviews, I decided that a dig ital system described as engag ing, inspiring and immersive was worth a visit. Such a visit was possible because of fortunate timing with a conference, cooperative flight schedules that allowed an extend ed layover at LAX, and supportive local staff. And because of this visit, I am able to discuss the impact of the IEMS and how the connec tions created by these different

DISPLAYCOMMUNICATIONS

elements rightly justify the above descriptions.

MAGNIFICENT MEDIA

The \$737 million terminal at LAX is outfitted with the latest in multimedia technology. Sardi Design and MRA International designed the terminal's iconic multimedia features; Fentress Architects created the terminal and supported the media installation; Smart Monkey's Inc. conceptualized and engineered the audio-visual system; and Moment Factory produced the content.

The objective of the installation is to enhance the passenger experience and turn the terminal into a spectacular and welcoming place to pass the time.

Detailed information about the IEMS is provided by Los Angeles World Airports (LAWA) and its partners online through press releases, data sheets, and other content. Additionally, a search using Google or Bing with the terms "LAX Tom Bradley experience" can connect you directly to professionally created videos on YouTube and Vimeo covering the install and virtual tours of the terminal

The specifications on this install can be overwhelming. For example, the Time Tower alone is 6,480 square feet of digital surface created using Daktronics 6mm and 10mm video displays (the smaller the distance between the individual LED elements, the higher the resolution).

To learn more about the details of the install beyond the specifications, I connected with Raymond Jack, LAWA airport operations manager. Jack graciously provided a complete tour of TBIT, providing details on the displays as well as discussing the other ongoing development in the terminal and how it related to the experience.

What follows is my description of the installation and just how impressive and immersive it truly is.

STORY BOARD. The first full element I viewed was the "Story Board," a 120-foot array of multiple LED screens located in the center of

the Great Hall. This display provided a striking first impression as I entered through the Westfield Dining District. The Story Board is a collection of eight differently sized displays suspended above and just beyond the center shopping island. At times the Story Board provided the impression of a single wall, as with my first viewing where I was presented with the image of a wide body aircraft taking off. The skill of the content creators was evident as the elements of the display began to transition into different shots of the air craft presented on individual screens. This style allowed a wide-angle view of the content, whether it was the aircraft or the community landscape. This view could then transition into a tighter focus on individual elements in high detail. The content includes journeys through destination cities, stories of travel and transformation, and vignettes and panoramas from Los Angeles.

DESTINATION BOARD. The "Destination Board" is located directly across the Great Hall from the Story Board. It is the most functional of the pieces in the media system, serving as both a Flight Information Display and visual display of destination cities. The form of the Destination Board moves beyond what is seen in many other large-format digital Flight Information Displays, however. The Daktonics' LEDs allowed for a truly seamless display that provided flight information that is clear and easily readable from any angle or distance in the Great Hall. The presentation of content includes more than just flight information; the Destination Board also creates a connection between the data on the Board and the content displayed. For example, the destination cities creatively find their way into the graphics on either side of the "flight information" portion of the display. This creates a fluid realtime connection between the data, the destinations, and the passengers.

TIME TOWER. The centerpiece of the digital elements in the Great



DISPLAYCOMMUNICATIONS

Hall is the "Time Tower," a 72-foot-tall four-sided media feature. If the display was off, the function of the structure would be clear It is an elevator shaft serving multiple floors of the terminal. The illusions created by the displays almost completely hide the reality of this purpose. Simply stated, almost every visible surface of the tower is covered by LEDs. At the pedestrian level, the lower-resolution 10mm LEDs are behind diffused glass providing a subtle swirling visual effect that compliments the other activity on the tower The LEDs above the diffused glass are the high-resolution 6mm variety. At first glance the content on the tower appears to stand alone. Linear angles move across the surfaces of the tower as well as waves and ribbons of digital motion, all of which are calming in effect. Then it becomes apparent that some of the content appears to flow seamlessly over to the adjacent Destination Board. At the top and bottom of each hour, the connection across devices really kicks in when the Time Tower displays one of its many showcase elements. The activity every half hour is varied. For example, the first show I witnessed altered the digital ribbons onscreen to the interworking of a clock, occupied by dancers and gears. During the second show, the surface transformed into a multi-story build ing with a keystone cop-type character in chase. Each show spilled over onto the other screens in the Great Hall completing the connection across the wide open space and generating a completely immersive environment.

SALEME TO SPEAK AT DIGITAL SIGNAGE EXPO

Authority, will be presenting a roundtable discussion entitled, "Evolving Uses for Digital Signage in Airports," at the Digital Signage Expo (DSE) 2014. The conference will be held at

the Sands Expo & Convention Center in Las Vegas, February 12-13. To



register for this conference or to learn more about digital signage visit www.dse2014.com

Saleme, manager of business development at Columbus Regional Airport

WELCOME WALL / BON VOYAGE WALL.

These elements are the only ones that are complete ly removed from the Great Hall. The Welcome Wall and the Bon Voyage Wall are located in a transitional space in the terminal, and although adjacent to one another, the walls are targeted to visitors in different parts of their journey through LBIT. The Welcome Wall is a tall structure—over seven stories in height—and although it is targeted to passengers in the processing part of their journey, it also provides the closest access to the LED screens. Likewise, the Bon Voyage Wall targets passengers in transition, and like the Welcoming Wall, it is tall and narrow, directed toward passengers entering the terminal. This is one of the few points where you can see up close how the magic is made through

> the individual LED pixels. Like other displays, these are connected, so that clouds, water, balloons, and even floating people, are connected across the displays.

INTERACTIVE **PORTALS.** The final pieces of the system are the Interactive Portals located north and south of the Great Hall. Each Portal has eight columns of six high-resolution LED monitors, each mounted at an angle. These monitors allow for a level of clarity even up close, and the angles permit the columns to be viewed individually, or from the right angle at a distance, to appear as a connected a video wall. The interactive content created for these Portals ranges

from strings, to digital fluid, to spinning totems. Each column is then set in motion by the activity of passengers simply walking by Like so much else in this space, the content is developed to create a connection with the passenger and the destinations.

LBIT's new digital media displays create levels of connection not seen to date in an airport environment. The displays move well beyond simply connecting passengers to travel-related information. By connecting screens across the new terminal, the airport created an environment of seamless communication. Then, when developing content for the screens, the airport provided content related to the community as well as information passengers require, and actual passenger and aviation activity in and around the terminal. The immersive quality of the LBIT installation left me filled with confidence. There's no way anyone could describe this terminal as a "non-place," this installation makes

it a place passengers want to journey to.



AVIATION AG DOORS SHOP DOORS **BARN DOORS**

www.aviationpros.com/10017751

★SCHWEISSDOORS•COM

ABOUTTHEAUTHOR

David Saleme, A.A.E.

Saleme joined the Columbus Regional Airport Authority (CRAA) in October 1996. He was hired under the General Counsel's office, with a focus on concessions and real estate. Since then, he has been



responsible for terminal and concessions development at Port Columbus International Airport, part of which includes terminal advertising and marketing. Saleme's primarily responsible for managing the in-airport advertising program, which includes, in addition to the award-winning video wall system, more than 20 digital advertising screens throughout the terminal, and the external digital billboard program.

The Door Leader

800-746-8273



Ch-ch-ch-changes

Aviation is changing so fast that it's hard to keep up with all the predictions

he guvmint has—finally—put out a paper planning for drones (or UAVs—Unmanned Aerial Vehicles)—to be integrated into domestic airspace by 2015, as is required by a law passed in 2012. Will that actually happen? Hey, have you tried to sign up for Obamacare lately? This is another case of business being way ahead of guvmint.

In all the info on this, I have yet to read anything about what airports will have to do to get ready for thousands of UAs. It just stands to reason that it will be quite an adjustment. You reckon we'll be ready?

Change of subject: This morning I heard—on public radio—that Boeing's largest union is arguing with the company about the union contract in Washington State. I can't help but wonder if the union has forgotten that Boeing recently moved some production to the Carolinas at least partially because of union demands in Washington.

(Note: As per an email that just landed in my InBox from *Airport Business*, Boeing just received orders for \$100 billion at the Dubai show. Wow!).

Another change: 3-D "printing" is poised to change things in ways that I never imagined. Aircraft pieces and parts will—already have been, in some cases—be made by 3-D printers almost anywhere. A 3-D printer costs far less and takes up much less space than the typical manufacturing factory. Presumably, many parts can be made by small companies located close to the customer. Boeing, for example, could get parts from a nearby company and thus save on transportation costs and—dare I say it?—labor unions.

According to *Aviation Week & Space Technology* (AW&ST), 3-D printing could take us back to the cottage industries that were so popular back before the Industrial Revolution. Folks, that's one heckuva change!

3-D printing will be big in most industries, but, and this is just my opinion, might be particularly beneficial in the aviation industry because our numbers are so small. Even our largest aircraft manufacturers build only a few aircraft per year compared to the number of cars churned out by a large auto maker.

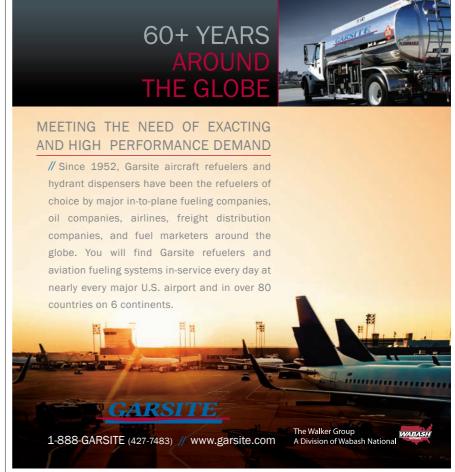
Finally, here's a story from—of all places—the circus industry A century ago—give or take a few years—the Ringling Brothers, undisputed kings of the circus world at the time, considered buying some 20 acres of land on the outskirts of every major city in the country. Why? Just so they would be assured of a place for the circus to set up and perform. They didn't do it, but what an

investment that would have been. Just think of where the outskirts of those cities would have been a century ago!

Arenas solved the Ringling Brothers' problem. But wouldn't it have been great if our industry had set aside a large area on the outskirts of every major city, just for airports of the future? I think about that every time the people of Atlanta try, and fail, to build a second airport there.

As the old songs goes, "Oh wouldn't it be wonderful!"





www.aviationpros.com/10017318

4 Steps to Managing Employees' Social Media Presence

ocial media sites are ripe with casual but potentially explosive comments by individuals discussing their glee over promotions, "fun" at the expense of someone else (you or your company), and other useful tidbits which can support your

claim of wrongdoing. The purpose of this article is to offer the reader guidance on how to manage what your employees post through their social media presence and minimize the risk that a competitor identifies harmful information through an employee's social media presence.

Aviation businesses often compete for a limited customer base. As a result, they tend to be hotspots for commercial disputes that may result in the filing of a Part 13 or Part 16 Complaint, or even a civil lawsuit in State or Federal Court. Therefore, you are probably already carefully monitoring the information that you share on your website or through your businesses' social media accounts. Do you, however, monitor what your employees post as carefully?

Most people have some social media presence whether they use LinkedIn, Facebook, Instagram, Twitter, or Pinterest. Therefore, you should assume that all of your employees have some form of social media presence and, as an employer, you should be monitoring your employee's social media presence. An employee boasting of having landed a deal for a new client or recommending your business for a new service that you are offering may be the smoking gun that your competitor is looking for to support a claim against your business.

Step One: Propose the policy: Your social

media policy should include, at a minimum, the following provisions:

- Define social media;
- Remind employees that whether or not they spe cifically list you as an employer, an employee's position with the employer may be generally known and/or publicly available;
- Advise employees they cannotshare confidential or private information about the company's business operations, products, services, employees and/or customers;
- Advise employees that they may never indicate or imply that they speak for the company or use the company's logo without express written authorization from the company;
- Advise employees they should never use their employer issued email account or password in conjunction with a personal social networking site unless specifically authorized;
- Recommend employees take advantage of the privacy settings available and limit their audience; and
- Advise employees that they are personally

and legally responsible for the content of their social media activity and the commentary they post and that they can be held liable for unlawful activities.

The following additional steps should be implemented as well to minimize the risk created by an employee's social media activity:

- (2) Publish and circulate the social media policy to your employees;
- (3) Monitor employee compliance with the social media policy; and
- (4) Discipline employees who fail to comply.

The full text of this article is available online at www.aviationpros.com.

ABOUTTHEAUTHORS Paul A. Lange

Founder/Leader
Paul A. Lange LLC

Lange founded and leads the law offices of Paul A. Lange LLC with offices in Conn. and NY. The firm practices nationwide and internationally in various aviation-related legal matters including airport development, financing, regulatory enforcement matters and disputes.







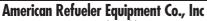
CLASSIFIEDADVERTISING

ADINDEX

Advertiser	. Page #
Airius	18
Astronics DME	27
Aviation Pros LIVE	5
Digital Signage Expo	7
Epic	2
Garsite	31
Lektro	19
Nissan NV Passenger Van	35
Phillips 66	36
Schweiss	30
VP Buildings	9







P.O. Box 9849 ● Birmingham, Alabama 35220
Telephone: (800) 488-0497 ● Email: AMREFUELER@AOL.com

Av/GAS REFUELERS JET REFUELERS 1200 Gollon 2004 Isuzu – NOR 5000 Gollon IHC 2000 - 4900 750 Gollon 1996 Ford F-350 3000 Gollon GMC 1990 w/Defuel 1000 Gollon 1996 Ford F-700 3000 Gollon IHC 2002 w/Injector 750 Gollon 1996 Ford F-700 3000 Gollon IHC 2005 – 4300 1200 Gollon 1980 Ford F-800 2000 Gollon IHC 1999 – 4700

Mo/Gas 2400 Gallon 12

2400 Gallon 1200/1200 IHC 1600 Landstar 1200 Gallon 800/400 Ford F-700 1996 \$000 Gallon IMC 2000 - 4900
\$3000 Gallon GMC 1990 w/Defuel
\$3000 Gallon GMC 1990 w/Defuel
\$3000 Gallon IMC 2002 w/Injector
\$3000 Gallon IMC 2005 - 4300
\$2000 Gallon IMC 1999 i-esel Automatic
\$2000 Gallon GMC 1992 Diesel Automatic w/
Hammond Injector System
\$2200 Gallon Ford F-700 - 1991
\$200 Gallon Ford F-700 - 1991

Warranty on tank against leaking is (1) one year. Also, a one (1) year warranty on major components, provided unit is used within limits of its design.



Emergency Life Raft \$1,370.00

(4-6 man, only 12 lbs.) TSO'd & Non TSO'd

SURVIVAL PRODUCTS INC. servicing/sales of aviation/marine life rafts, vests, slides since 1974, manufacturers newly designed emergency inflatable four to six man life raft for private aircraft/pleasure boats; WORLD'S LIGHTEST WEIGHT (only 12 lbs.); WORLD'S SMALLEST PACKAGE (only 4" x 12" x 14"); WORLD'S LEAST EXPENSIVE price (only \$1,370). 9 to 13 man, 18 pounds; valise 5" x 12" x 14"; \$1,785) NEW!!! FAA TSO Approved Life Rafts. (Type I, II). BUY/RENT. SURVIVAL PRODUCTS, INC., 5614 S.W. 25 STREET, HOLLYWOOD, FL 33023. 954-966-7329, Fax: 954-966-3584 website: www.survivalproductsinc.com email: sales@survivalproductsinc.com.

LUMACURVE

800-258-1997 www.lumacurve.com

Lumacurve LED signs feature:

- •50% more efficient than competitors'
- Robust screw-in bulb design
- Replacement lamps under \$30



lacement lamps under \$30

AIRPORT MANAGERS IS IT TIME FOR YOUR OWN FBO?

We can help.

Goodrich Aviation Development Services LLC www.GoodrichAviation.com

SMOKING SHELTERS

- " For your smokers butts"
- MANY DESIGNS AVAILABLE
- PRE-FABRICATED FOR EASY INSTALLATION



★ COMPLIES WITH THE LAW
WITHOUT A TOTAL SMOKING BAN
handi-hut inc. 1-800-603-6635

www.handi-hut.com



FINALANALYSIS



The number of airports that allow smokers to puff on e-cigarettes. The airports include Ronald Reagan Washington National Airport, Minneapolis-St.

Paul International Airport, McCarran International Airport and

Charlotte-Douglas International Airport.

5,514Noise complaints from

neighbors of Boston
Logan International
Airport in the first
nine months of 2013,
spurring the airport
to add a system to
monitor aircraft noise.



MILLER
Retires as
General Manager,
Hartsfield-Jackson

International Airport

he amount of investment that the privatization f Gary/Chicago International Airport is hoped to bring the airport over the next 40 years.

\$300 MILLION

Cost of the Southwest **Airlines terminal** makeover at Fort Lauderdale-Hollywood International Airport. **Construction will** begin in early 2014 and be complete by 2017, and will include five additional gates, a new security checkpoint and a concessions hall that connects to existing concourses.

"... airlines and our customers are already overtaxed, and we are disappointed that fees on air travel were increased, and believe those higher taxes will impact demand,

jobs and our economy."

KATIE CONNELL, A SPOKESPERSON FOR AIRLINES FOR AMERICA, IN RESPONSE TO THE BIPARTISAN BUDGET DEAL UPPING AIRLINE TICKET PRICES

36 PERCENT

The percentage of time that can be cut from the customs waiting process when airports install passport kiosks.



PRINCIPATO
New Senior AdvisorTransportation and
Infrastructure
National Strategies LLC

AAAE DEDICATES HEADQUARTERS BUILDING TO CHIP BARCLAY

The American Association of Airport
Executives (AAAE) dedicated its headquarters
building in Alexandria, Virg., to former leader
Chip Barclay, who retired as president and CEO
on December 1, 2013 after 30 years of service. A
permanent plaque was placed in the building's
fourth floor lobby that reads:

"This building is dedicated to Charles M.
Barclay, who served with distinction as
president and CEO of the American Association
of Airport Executives from 1983-2013. The
success of the organization realized during
his tenure is directly attributable to his vision,
commitment, dedication and enlightened
leadership. His legacy of excellence endures
and The Barclay Building serves as a constant
reminder of what can be achieved on behalf of
the membership of AAAE by those who work
and visit here."

"Our message to the TSA is clear—stop this plan [to stop manning exit lanes]. The federal government should be paying its fair share to the most critical airport system in the country, not further shirking its responsibility."

JOE SITT, CHAIRMAN, GLOBAL GATEWAY ALLIANCE

\$2.3 BILLION

Federal taxes and fees paid by U.S. airlines to the TSA in Fiscal Year 2013.

—Airlines for America



NV® PASSENGER

EVEN THE MIDDLE SEAT FEELS LIKE FIRST CLASS.

The NV® Passenger takes customer comfort and safety to new heights. With integrated seat belts for all twelve seats, power outlets,1 reading lamps1 and air bags2 for every row, this might just be the most comfortable part of their trip.

Seating for 12 | 324 seating configurations | Standard side air bags for all 4 rows²









LAISSEZ LES BONS TEMPS ROULER!

For good times and great prize giveaways, be sure to stop by the **Phillips 66® Aviation Booth 1228** while you're at the conference. Save the date for fun.



S&D 2014 IN NEW ORLEANS JANUARY 14-17

Phillips66Aviation.com

Phillips 66° and Phillips 66° Wings logo are trademarks of Phillips 66 Company or one of its subsidiaries
Other trademarks mentioned herein may be trademarks of their respective owners.