



# AVIATION BUSINESS JOURNAL

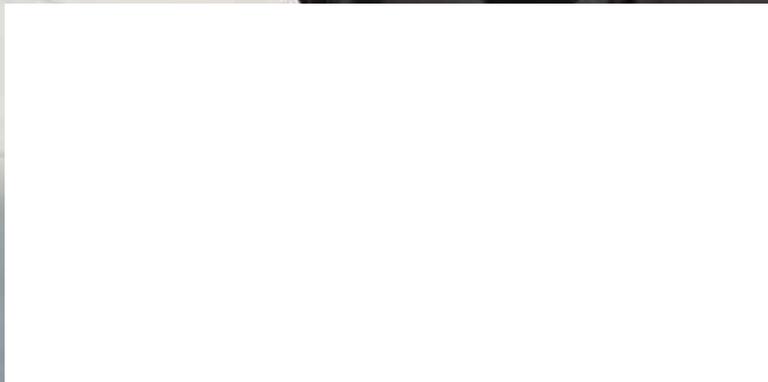
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## Editorial Director

Bill Deere

## Contributing Editors

Maryanne Arthur  
www.justwritesolutions.com

Amy Hornaday

Jake Legere  
Karissa Uko

## Art Direction/Design

Laurel Prucha Moran  
Blue Room Design  
www.blueroomstudio.com

## Advertising Sales

Shannon Chambers  
schambers@nata.aero



818 Connecticut Avenue, NW, Suite 900  
Washington, DC 20006  
800/808-6282 • Fax 202/452-0837  
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## In It Together

By Martin H. Hiller



**A**s a fellow aviation business owner, like you, I understand our industry is a vast and interrelated eco-system. It's critical that we not limit our relationships solely to our customers but also to cultivate a wider range of relationships that includes the airport, local government and the community as a whole. First and foremost, the success of our businesses relies on a prosperous and healthy airport. So we are using this edition of *Aviation Business Journal* to highlight the importance of the relationship between our businesses, our airports and the communities they serve.

Since taking the helm of NATA last fall, I have had the opportunity to interact with the leadership of the nation's aviation associations. Two of the relationships I have come to value and enjoy most are with the heads of the leading organizations that represent airports, Kevin Burke, President of Airports Council International-North America and Todd Hauptli, President of the American Association of Airport Executives.

All three of us recognize that while tenants and landlords will always be involved in business negotiations, more issues unite us than divide us. By sharing perspectives on issues confronting our firms and airports, we can strengthen the overall airport-tenant relationship and identify matters we can address together. I am delighted that Kevin and Todd feel so strongly about their relationship with NATA that they agreed to share their perspectives in this edition of *ABJ*. As you will see in Todd's column, NATA partnered with AAAP to create an airport-tenant working group to foster this important communication process.

In the current political and economic climate, our airport partners have challenges. If left unaddressed, these problems will directly impact our businesses. Of course, the

biggest is funding. Federal airport funding remains flat, and though larger airports have the ability to secure additional money through Passenger Facility Charges (PFCs), those dollars now equate to half the spending power since last adjusted in 2007.

The latest survey of capital needs from Kevin's organization indicates airport needs over the next five years are three times the amount airports can currently expect to receive from Airport Improvement Program grants and PFC revenues. This capital challenge is real at many of the general aviation and non-primary airports at which we operate, where airports are limited to \$150,000 in entitlement funding per year. Solutions include more than just a commitment to increasing funding, but a review of FAA regulations that can increase the costs of airport projects and extend the timelines for completion.

On the opposite side of the coin, airports are seeing the evolution in our businesses. As leases come up for renewal, many communities are seeking greater levels of investment in order to create high-end gateway facilities to their communities. The increasing efficiency of aircraft also impacts our business models. An FBO's primary competitor may no longer be a competing operation on the same airport, but rather another airport nearby, or the airport where the plane came from or at its final destination. The retreat of the airlines from many communities, 50 alone in the past couple of years, has created opportunities for our Part 135 and Part 91k members to restore important connectivity for these areas to the rest of our nation. Other changes in our industry that airports carefully monitor include the changing nature of the piston-powered community, FBO consolidation,

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## President's Message

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nascent customer networks and the increasing number of airport-operated FBOs.

I hope you have the opportunity to review our feature story this issue, highlighting the work of the Aeroplex/Aerolease Group, which creates success through an emphasis on collaboration with other tenants, the airport and the community for the benefit of all.

After all, we're in it together. **A**



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## Devil in the Details

By Bill Deere



**T**he challenge of writing political columns for quarterly journals like ours is the risk they will be overtaken by events before the ink is even dry. That should certainly be the case with a new Administration and Congress; but as we approach the 50-day mark, to date, there has been a lot of heat but not a lot of light. Let's look at a few of the issues confronting the new Administration and Congress that pose potential risks and rewards for the aviation business community. The common theme in all of them—the devil is in the details.

**Tax Reform**—The United States has the highest corporate tax rate in the developed world. As a result, tax reform holds tremendous potential for our membership, particularly its central tenants, lowering the overall corporate tax rate and allowing companies to immediately deduct the cost of new investments. A tax reform bill would also serve as the vehicle for finally putting to rest the 2012 IRS Chief Counsel opinion applying the federal excise tax to aircraft management services. The trick is crafting comprehensive tax reform in a way that creates economic stimulus without exploding the size of the national debt. A centerpiece of the House proposal is offsetting some of the costs of tax reform through a “border adjustment tax,” a proposal requiring companies to pay income taxes to the U.S. on the value of their imports. Conversely, under the proposal, companies would no longer be required to pay income taxes to the U.S. on their income from exports. The adjustment tax potentially impacts our nation's aviation industry and any move in this direction will need to be carefully crafted to ensure one of the jewels of American exports is maintained.

**Infrastructure Funding**—One of the Trump Administration's campaign promises was to leverage public-private partnerships and private investments through tax incentives, to spur \$1 trillion in infrastructure investment over ten years. As you read in Marty's column, the airport sector alone has tremendous infrastructure needs if they are to keep pace with projected passenger growth and groundside needs created by the efficiencies resulting from the Federal

Aviation Administration's (FAA) NextGen modernization program. The President has returned to the need for infrastructure investment several times since his inauguration, mentioning it most recently at his appearance before a joint session of Congress. But we continue to lack the details of his plan. At a February White House meeting with airline and airport leaders, President Trump did not signal his support for increasing the Airport Passenger Facility Charge—indicating he opposed tax increases, while telling airport executives they would nonetheless love his plan. Even the recently released “budget blueprint” contains no more detail, though it states the President has tapped a group of “infrastructure experts” to evaluate investment options.

Similar to tax reform, there are fundamental questions associated with this campaign proposal. While tax incentives are good, private investment requires a return on investment. Would there be support for a seemingly massive increase in the number of the nation's toll roads and bridges? Of particular importance to our members is the difficulty in securing a return on infrastructure investment in rural areas. It will be challenging and begs the question as to whether infrastructure improvements from such a proposal will be spread evenly throughout the country.

**Air Traffic Control Reform**—Proponents of separating the nation's air traffic control operation from its safety function no longer use terms like ATC “privatization,” or “corporatization,” but rather “modernization.” As if disguising the intention somehow makes it more palatable to general aviation and rural America, the big losers under such a proposal. In a February meeting with leaders in the airport and airline industry, the President asked why modernization had been allowed to proceed to its current state. One airline CEO unintentionally let slip the real airline agenda replying, “We're not in control.” Lately, the airlines have added that allowing the FAA's safety and air traffic operations to communicate is akin

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## Inside Washington

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to mingling “church and state.” That sounds disturbing, unless of course you realize that important, constant communication between the safety offices and ATC operations has resulted in the world’s safest, busiest, and most complex system.

Consequently, we were disturbed when the President included language in his March 16<sup>th</sup> budget blueprint suggesting a “multi-year reauthorization proposal to shift the air traffic control function of the Federal Aviation Administration to an independent, non-governmental organization.”

Like others in general aviation, NATA wants to work with the new Administration and Congress toward a more efficient FAA. The contract tower program demonstrates improvements can occur within the agency’s current structure. Separating air traffic control from the FAA simply poses too many leaps of faith for aviation business. The risks include: losing the momentum resulting from the current deployment of NextGen technology; building walls between the FAA’s safety functions and air traffic potentially undermining the system’s safety integrity; and, allowing airlines to establish the costs to operate in the system for aviation businesses like our air charter community, potentially forcing general aviation out of the important airports and airways that our customers need.

We hope in the coming days the Administration will move away from confrontation with general aviation and instead

pursue the path of national dialogue and consensus that Transportation Secretary Chao called for during her confirmation hearing.

Finally, recall a President’s budget proposal is just that—a proposal. Or as Senator Bill Nelson (D-FL) observed, “The President proposes, the Congress disposes.” Fortunately, joining Senator Nelson are other important voices in this debate. The bipartisan leadership of the Senate Appropriations Committee wrote the Senate Commerce Committee opposing the development of legislation separating air traffic control from the FAA. These senior senators praised the results of NextGen initiatives noting that “the progress already being made to synchronize investment from government and industry related to safety, equipment, training operational changes and overall integration would be lost.” Senate Appropriators also disputed the notion (advanced by airlines) that the current budget process cannot keep up with air traffic control funding needs—pointing out that, since 2008, Congress has funded air traffic functions at 99% of the requested amount.

The debate is no longer academic. There will be a heated policy battle in Congress over this proposal so we ask you to stand ready. Your voice at critical points in the upcoming debate may very well be the key to future of general aviation in this country. **A**



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## NATA's Path Forward: Value, Unity and Growth

By Timothy Obitts

**W**e, at NATA, have been running hard and fast. The energy has been intense, to say the least, and the opportunities the association sees for helping its members are growing. Having represented trade associations and other nonprofits in private legal practice for over 18 years, it is exciting for me to see this transformation occur and be part of it. NATA is taking full advantage of this opportunity to provide its members with products and services to contribute to their success, including effective representation of aviation businesses at the local, state, and federal levels.

The fruits of these efforts are paying dividends. Last year, NATA membership grew by more than 10 percent. This is an important accomplishment in an era when overall membership in trade associations has been in decline. When NATA asked new members why they joined, responses included: approval of the direction NATA is taking under the leadership of Marty Hiller; support of the association's advocacy efforts; participation in Safety 1<sup>st</sup> training and seminars; meeting NATA staff at various events; signing up for the new NATA Workers Compensation Insurance Program with Allianz; and, being recruited by a current member.

The overarching theme in all these responses is that NATA members find value in being a member and feel like they are being heard. It is exciting to see this trend continue in 2017. As of March 1, 2017, I am pleased to report NATA membership has grown an additional six percent. This trend in membership growth is especially meaningful to the NATA staff as it represents a validation of our efforts and a vote of confidence in our work.

We would like to continue to see current members referring new members to the association. In a recent *CEO Update* article, a publication for trade associations, executives of several large associations discussed the importance of growing membership through members. In line with this rationale, in the coming months NATA will reach out to its membership to assist those who desire to help the association grow its membership base. As Bill notes in his column, general aviation businesses are in for a real political fight in 2017 with the airlines once again pushing forward their agenda of controlling the air traffic control system. This is the time for general aviation businesses to unite. An increase in membership helps NATA in its advocacy efforts on behalf of general aviation businesses. Together we are stronger.



If the opportunity arises, we hope that you will recruit others to join NATA as it advocates for all of you.

Recently, NATA unveiled several new products in consultation with the NATA Air Charter Committee, including:

- *NATA Part 135/91 Training Center*: standardized, easy-to-use and economical online training for charter, corporate, and fractional operators (see Safety and Training Update column on page 73)
- *NATA-Med, powered by AirDocs*: a 24/7 emergency inflight support program, providing assistance and training pre, during, and post flight
- *NATA Loss of Medical License Disability Insurance Program*: providing benefits to Part 135, Part 125, Part 91k, and Part 91 operators and their pilots
- *LifeLine Response Platform*: a global safety platform for aircraft operators and their pilots and passengers
- *NATA Safety 1<sup>st</sup> Digital Emergency Response System* that enhances and makes viable an operator's Emergency Response Plan.

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## Perspectives

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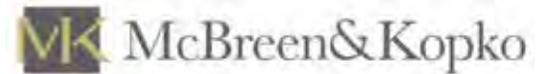
Additional details on each product can be found at [www.NATA.aero/Products-and-Services.aspx](http://www.NATA.aero/Products-and-Services.aspx).

NATA will continue to work with our committees to develop and offer new products that provide value. We hope that you take the time to consider these new offerings and the NATA Workers Compensation Insurance Program, as all these products and programs are designed to save you money and improve your business. As always, we are here to serve you. If you ever have any questions or concerns, please contact me directly at (202) 774-1504 or at [TObitts@NATA.aero](mailto:TObitts@NATA.aero). **A**



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## Mutual Success: The Art and Science of Balancing Relationships



*By Kevin M. Burke, President and CEO,  
Airports Council International – North America*

**A**irports are complex enterprises with lots of moving parts. But even with their powerful ability to drive more than \$1.1 trillion in annual economic activity around the United States each year, just one disruption to the daily sequence of necessary events and relationships can bring an airport's operation to a standstill. To further complicate matters, a single disruption at one airport can send a wave of consequence throughout our entire aviation system.

That's why I always hear such varied responses when I ask airport directors, "What keeps you up at night?" Just consider all the internal and external pressures an airport faces each day. Whether it is the challenge of managing limited financial resources, revitalizing aging infrastructure, addressing ever-present security threats, dealing with burdensome regulations, or the uncertain economy—running a modern and competitive airport is no easy task.

Perhaps the most challenging aspect of an airport director's job is balancing the myriad relationships that must come together to ensure a successful and efficient airport. Continuous change in those well-established relationships makes this task even more difficult.

Simply look to the unique relationship airports share with their fixed base operators. For many of our airports, a healthy general aviation business is an important part of a vibrant enterprise. The valuable relationships airports share with their fixed based operators and supporting businesses enable airport goals to be an economic driver for local communities.

At the same time, each commercial service airport is unique and circumstances vary from airport to airport. As such, airport-tenant relationships vary from airport to airport. As I have quickly learned, a "one-size-fits-all" approach does not work.

To develop a fruitful relationship with your airport operator, it is important to stay focused on the airport's overall mission, which is always rooted in three core principles. First, every airport exists to provide for the safe and secure movement of passengers and goods. Second, an airport is an engine of economic growth for the community it serves. Finally, each airport prides itself on its ability to provide the most efficient and enjoyable customer experience possible.

Much of an airport's ability to meet these essential goals and overcome challenges depends on building consensus with essential business partners and tenants. Cooperative and productive relationships with all stakeholders—including fixed base operators, airlines, general aviation users, government agencies, and concessionaires—contribute to the success of the entire airport operation. In fact, an airport's success and the success of their business partners and tenants are inextricably linked.

Airports are keenly aware that each partner and tenant operating at an airport has its own business priorities. They also understand that all the activities of a thriving airport contribute to the economic vitality of its local community. That's why airports strive to serve their customers, tenants, and passengers through mutual respect and collaborative dialogue. **A**



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## Partnership and Collaboration

*Todd Hauptli, President and CEO,  
American Association of Airport Executives*



**W**ith all of the noise and disruption in Washington and across the country on the political front and, with various factions within the aviation industry and on Capitol Hill at odds on key policy questions—from air traffic control modernization to airport infrastructure financing—partnership and collaboration are two words that don't receive a great deal of attention these days.

Rather than lament the state of politics in the nation's capital or make a pitch for more flexibility to build infrastructure through an updated airport user fee, I want to utilize this space to celebrate some of the progress that airports and Fixed Base Operators (FBOs) and American Association of Airport Executives (AAAE) and NATA have made in recent years to

better understand each other's business perspectives and to become better partners and collaborators in the pursuit of our shared objective to serve our communities and customers. In the end, the success of both airports and FBOs are uniquely intertwined, and it is partially the responsibility of the industries' associations to help facilitate that collaboration.

Almost two years ago, AAAE and NATA embarked on a new path of enhanced communication and collaboration. Recognizing the need to quell fables of pervasively tumultuous relationships between airports and FBOs and to highlight the vast majority of cases where strong and symbiotic partnerships have existed for years, the associations formed the NATA/AAAE Airport/FBO Working Group. This group has five members from each association and has met several times to work on opportunities for collaboration and industry innovation.

Among other things, the Working Group has tackled issues associated with municipal FBOs, minimum standards, and illegal charters and flight sharing. Some of the most enlightening revelations came after each association sent out a survey to their respective memberships regarding relationships between airports and FBOs. Two questions that struck us concerned minimum standards. Both the airports and the FBOs were asked if they had minimum standards in place; and both were asked about the level of involvement from both sides in the development process. Surprisingly, the responses were drastically different among airports and FBOs.

While the vast majority of airports indicated that they did include FBOs in the minimum standards process, most of the FBO respondents claimed that they were not included in such discussions. Upon analysis of the survey results by the Working Group, they realized that the discrepancy was



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## Partnership and Collaboration

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most likely caused by turnover in FBO management and infrequently-updated standards by airports.

The experience on this issue highlighted the clear need for better communication and collaboration on both sides. Potentially negative sentiment was squashed by an analysis of the facts and an open discussion between airports and FBOs. In response, the Working Group has taken on the task of providing guidance on how often minimum standards documents should be updated and to what extent airport tenants should be involved in the process. The Group certainly has much work to do in the coming months and years, but I am encouraged by the progress that has been made in working together to address some of the critical issues for the industry.

Both AAEE and NATA have made significant efforts to collaborate in other key areas as well. Over the past two years,

we have regularly attended each other's meetings and conferences, discussed training partnerships and have closely coordinated on major policy initiatives. Marty Hiller has been a great and open partner in his time as President; and we certainly enjoy our great relationship with NATA Executive Vice Presidents Bill Deere (who has been a friend of mine for a quarter of a century) and Tim Obitts, along with other NATA staff and the broad membership of what is a great organization.

While we have made good progress over the past few years through partnership and collaboration, I believe we are poised to make even greater strides as we look ahead. As Henry Ford once said, "Coming together is a beginning, staying together is progress, and working together is success." AAEE is convinced that we are on the right path toward success. **A**

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# ADVOCACY: NATA's Member-Driven Committees

**N**ATA's Air Charter Committee, Aircraft Maintenance and Systems Technology Committee, Airport Business Committee, and Safety Committee provide critical industry insights and policy prescriptions utilized by the association staff in their work with policymakers at the federal, state, and local levels. For an in-depth look at the work the Safety Committee has been doing, please turn to page 25 to read *On the Horizon for Safety 1<sup>st</sup>*. Give back to the industry by lending your expertise on aviation business issues by joining a NATA committee. Please contact Megan Eisenstein at [MEisenstein@nata.aero](mailto:MEisenstein@nata.aero) if you are interested.

## AIR CHARTER COMMITTEE

NATA staff and Air Charter Committee members are continuing efforts to address illegal operations. Members met with key FAA personnel and provided concrete recommendations for guidance, specifically targeting the proliferation of sham leasing schemes. The FAA adopted all NATA recommendations in its recent Truth in Leasing Advisory Circular (AC 91-37B) which aims to identify sham leasing schemes and to educate owners and lessees of their obligations related to operational control.

Several committee members are active participants on the FAA's Air Carrier & Contract Training Working Group (AC & CT WG), providing industry expertise and volunteering their time to improve pilot training and checking. The committee is also instrumental in the development of the association's legislative priorities, recommending actions that would improve the operational and regulatory environment for Part 135 operators.

NATA's advocacy led to revised guidance and program improvements for the Flight Standards Inspector Resource Program (Notice 8900.385). As a result, operators who must rely upon FAA inspectors for pilot checks should see improvement in communications and timeliness of scheduling national resources.

NATA quickly intervened on behalf of air charter operators conducting operations in European Aviation Safety Agency (EASA) territories to resolve confusion about Safety Management System (SMS) program requirements. Many operators with EASA Third Country Operator (TCO) approval were incorrectly informed that, beginning in November 2016, participation in the FAA's Voluntary SMS Program was required. Working with

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## Advocacy: NATA's Member-Driven Committees

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partners in EASA and the FAA, NATA was successful in ensuring that operators were not unnecessarily pushed to participate in the FAA's Voluntary SMS Program.

The EASA SMS issue is one example of a compliance concern raised by a committee member leading to action by NATA that had a positive impact throughout the industry. Members frequently contact the association with their regulatory compliance questions, and that assistance is a key member benefit. Questions reflect both the diversity of air charter operations in the membership and the volume of regulations to which they are subject. The Air Charter Committee and NATA staff help members understand, for example, the rates and proper application of Federal Excise Taxes, how the FAA interprets and applies pilot flight, duty and rest rules, drug and alcohol program requirements, and myriad other topics throughout the year.

### AIRCRAFT MAINTENANCE AND SYSTEMS TECHNOLOGY COMMITTEE

In addition to its work with the Consistency of Regulatory Interpretation Aviation Rulemaking Committee (CRI ARC), the committee also continues to support the FAA and industry by reviewing proposed regulations, draft advisory circulars, and other FAA policy. The Maintenance Committee worked with the FAA on an issue they submitted to the agency regarding whether the Type Data Certificate Sheets (TCDS) were regulatory and included as part of the Type Design. In their response, the FAA stated that in accordance with 14 CFR 21.41, the TCDS is part of the Type Certificate (TC). To promote the standardization regarding the TCDS and its notes, the FAA published Order 8110.121, Type Certificate Data Sheet (TCDS) Notes on October 15, 2015.

NATA committee members assisted the FAA in developing the proposed Advisory Circular on Approved Aircraft Inspection Programs (AIPs) (AC) 91-AIPRO. NATA members worked with the FAA to develop this AC providing guidance material to aircraft owners to have the flexibility to develop an inspection program that is customized for the operation of the aircraft. The AC provides

the information necessary to help aircraft owners and operators operate and maintain their aircraft safely.

Additionally, NATA submitted comments prepared by the committee to the FAA on AC 20-ICA and the latest revision to the FAA Order 8110.54B. NATA was very pleased to see the FAA codify legal interpretations and policy letters into these documents. The definition and availability of Instructions for Continued Airworthiness (ICA) have plagued our members for a long time. This is a first step by the FAA to clarify and correct the long-standing practice of commercial restrictions to ICAs by manufacturers.

### AIRPORT BUSINESS COMMITTEE

NATA staff and committee members are working on multiple initiatives to provide new products and services, events, and information for the general aviation community and fixed base operators (FBOs). Committee members have been invaluable in the association's effort to improve airport-tenant relations.

For 2017, NATA is hosting regional events throughout the country. The committee created their first FBO Regional Town Hall for April in Denver, CO and have a second event planned in the Pacific Northwest this summer. We anticipate hosting more Town Halls in the fall and winter.

Additionally, the committee is working to create a Certified FBO Professional Program that covers how to successfully manage an FBO. Members are conducting research on what is currently offered to aviation professionals and what professionals want to learn through such a program. The course topics and program format are currently being developed.

NATA's Regulatory Affairs staff is here to offer assistance, advocate on your behalf, and provide input on any policy issues that may arise related to your aviation business. As always, please do not hesitate to reach out if you need assistance with any issue related to your business, whether it is help getting in touch with key personnel at a local, state, or federal agencies, or obtaining clarification on issues impacting your business. **A**



# WHO IS REALLY IN CONTROL?

A Quick Refresher on Operational Control, Part 91 Owner Flights, Flight Department Companies, and the Occasional Inadvertent Straying into the Realm of “Part 134 1/2”

BY DAVID T. NORTON

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**W**hen asked what had been keeping him busy recently, an attorney in the Federal Aviation Administration’s (FAA) regional counsel’s office replied: ‘inappropriate cost sharing for flights.’ He noted that they would occasionally see—especially during times of economic stress—an increase in operators trying to mitigate their ownership and operating costs by cost sharing on flights in a way that ran afoul of the FAA’s rules governing commercial operations—that is, operators conducting flights under 14 C.F.R. Part 91 (Part 91) when they should have been conducted under 14 C.F.R. Part 135 (Part 135). This article provides a quick refresher—primarily from an FAA rules perspective,

but also with some Internal Revenue Service (IRS) rules observations thrown in—on when an operator can fly under Part 91 or when that operator needs to conduct (or have conducted) its flights under Part 135, so no one has to give painful answers to FAA questions regarding those flights.

## Some Basic Definitions: When do “Persons” Become “Commercial Operators?”

The FAA defines the “operator” of an aircraft to be a person (meaning either an individual natural person or some kind of business entity) who uses or authorizes the use of an aircraft. And, for any given flight, the person who is the “operator” of the flight is the person who is exerting

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“operational control” over that flight. The FAA further defines a “commercial operator” as “a person who, for compensation or hire, engages in the carriage by aircraft and air commerce of persons or property.... Where it is doubtful that an operation is for ‘compensation or hire,’ the test applies whether the carriage by air is merely incidental to the person’s other business or is, in itself, a major enterprise for profit.” Stated another way: If the person who is exerting operational control over a flight is an “operator” carrying “persons or property” for “compensation or hire,” then that person is acting as a “commercial operator.” But what does that really mean?

When looking at who, exactly, the FAA considers to be the operator of a flight, the starting presumption is the registered owner of the aircraft. If it is not the registered owner, then it should be a person (again, be it a company or an individual) who has taken over possession and use of the aircraft from that registered owner through some form of lease or operating agreement (which must be in writing if you are dealing with what the FAA defines as a “large aircraft”). At least three misunderstandings commonly attach to the FAA’s definitions regarding aircraft operators.

First, note that you can have multiple legal operators on any aircraft. This does not mean that you can have more than one operator conducting a particular flight. What it does mean is that different operators can have access to a specific aircraft on different days or for different flight segments on any given day. Examples of this range from the pool

of aircraft that are owned by flight schools and rented for the purpose of individual flight instruction all the way up to complex business aircraft held in leasing companies that are then “dry leased,” i.e., leased without crewmembers, to different operators on different days.

Second, pilots are generally not operators in a business aviation setting. A pilot can be an operator if that pilot owns or leases the aircraft for his or her own purposes. But, when the pilot is hired solely as a professional to serve as the pilot-in-command for someone else, or when an aircraft manager is engaged solely to provide those individual pilots for someone else, that does not mean—even though the pilot is responsible for insuring the flight is conducted safely—that the pilot or the manager is the legal “operator” of the aircraft (i.e., the person who gets to say where that airplane is going on a given day). That right still rests with the registered owner or a dry lessee.

Finally, there is a very big difference between the FAA’s rules and the IRS’s rules regarding the status of aircraft operators. While the IRS recognizes the concept of “disregarded” or “pass through” entities in certain limited circumstances dealing with income tax reporting, the FAA does not. Under the FAA’s rules (and in most, if not all, other areas of the law), just because a person (referred to here as “Ms. A” for the purpose of illustration) owns a disregarded-entity limited liability company (referred to as “AirplaneCo, LLC” or simply “AirplaneCo”); and AirplaneCo in turn owns an airplane, that does

*not* mean that Ms. A owns an airplane—she owns AirplaneCo, and AirplaneCo owns the airplane, and those are very bright and solid lines of separation under the FAA’s rules.

Once you have identified who the operator of the aircraft is on a particular flight, the next question is whether or not that operator is carrying “persons or property.” Here the person that the FAA is talking about is basically any individual person other than a required crew member (and in a similar vein, the property component is anything of value other than something belonging to that crewmember) that is being moved from point to point with the aircraft. And, just like the concept of individuals who are owners or members of companies that in turn own airplanes, if Ms. A gets on board the aircraft owned by AirplaneCo as a passenger, then Ms. A is no different than any other passenger and this separate “person” element of the commercial operator definition has been met.

Finally, the last element of this “commercial operator” definition is the “compensation or hire” element. One of the big problems in this area is that most people commonly think of the “or hire” element—where someone is holding out to the public and making the aircraft available to anyone who wants to pay for the flight—as the only commercial operator circumstance. While that is clearly one kind of commercial operation, what many people miss is that the definition is not “compensation *and* hire,” it is “compensation *or* hire,” and that simply paying some amount of compensation to the operator—in

any form, and in any amount (a profit motive is not required!)—can also constitute, in and of itself, a commercial operation of the aircraft.

### Common Problem—“Flight Department Companies”

These definitions lead to what is, arguably, one of the most common regulatory violations in the realm of charter and business/personal-use aircraft operations—the use of what the FAA calls “flight department companies” to act as Part 91 non-commercial aircraft operators. To understand the problems created by the use of flight department companies, it is important to first know when a person can legally operate solely under Part 91 in general. Keeping in mind the basic rule that a “commercial operator” is defined as an operator carrying persons or property for compensation or hire, where an operator is an individual person who is paying 100% of the flight costs out of his or her own pocket (whether or not passengers are on board), that operator is *not* a commercial operator because he or she is not receiving any compensation. Likewise, if the operator is a company that is a business generating enough money to fly the airplane incidental to its business activity without having to get money from someplace else to cover flight expenses (again whether or not passengers are on board), then it is still *not* a commercial operator because that company is not receiving any compensation. In this second case, let’s call, for example, such an operator a “WidgetCo,” referring to a company whose primary business (and therefore cash flow)



comes from widget manufacturing and that is using the aircraft incidental to and within the scope of its widget manufacturing activities.

Conversely, where that natural person operator is splitting costs with passengers (setting aside the separate issue of private pilots being able to split fuel costs in limited circumstances without having to get a commercial pilot certificate), or where a WidgetCo operator is getting funds from someplace else—either from other companies or even from its own underlying owners, employees, or guests—to help cover its flight costs, that operator has now become a commercial operator.

Now consider the example introduced above where Ms. A creates AirplaneCo to buy an airplane. If Ms. A does not cause AirplaneCo,

whose sole business activity is to hold title to an airplane, to then lease that airplane to some other person (which could be to Ms. A herself, or perhaps to a certificated charter operator that will then fly the aircraft under Part 135), but instead treats AirplaneCo as the person who is the actual operator of the aircraft and she simply makes either capital contributions or payments to AirplaneCo to cover the flight costs, then AirplaneCo has become a commercial operator. AirplaneCo is the separate “person” who is the “operator;” and, as the operator, it is carrying other persons (even if it’s only Ms. A) for “compensation” (in the form of the capital contributions or cost reimbursements) for the flight. Another common variant of this is a company that has been set up as a Part 91 management

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company to provide pilot and management services, either to its underlying owners or to separate aircraft owners, as its main or sole source of business activity, and that assumes operational control of the aircraft for the benefit of those owners or customers. In either event, these types of companies—mere holding or mere management companies whose sole purpose is to fly passengers around and be reimbursed by other persons or companies to do it—are called flight department companies by the FAA, and the FAA considers them to be *per se* commercial operators.

In summary, if you are an individual or a company that operates and pays for your own flights out of your own pocket, then you are a non-commercial operator. Conversely, if you are a person or a company that receives any amount of compensation, in any form or fashion, to help cover the costs of a passenger-carrying flight, then you are a commercial operator.

### So You Are a Commercial Operator—Now What?

Now that you have a grasp of what the FAA considers to be a commercial operator, you can start the analysis of which operational rules you can fly under—just Part 91, or does the flight need to be operated under Part 135 instead? Keep in mind that this analysis needs to be conducted on a flight-by-flight basis, and, again, starts with the simple test: Who is the “operator” of the flight, and is that operator carrying “persons or property” for “compensation or hire?” If you are a person or a company,

such as the WidgetCo, using the aircraft for your own personal or business use and paying all of the flight costs out your own pocket, then the answer to the question is ‘No,’ you are not a commercial operator and can fly under Part 91.

If the answer is that you are usually a non-commercial operator, but you would like to do a little cost sharing on occasion, then the next question is whether or not you can fit into one of the exemptions crafted by the FAA to allow for some limited reimbursement arising from the use of the aircraft when you are not doing so as a way to indirectly hold out to the general public. These exemptions are primarily found at 14 C.F.R. Section 91.501, and include concepts such as time sharing agreements, demonstration flights, joint-registered ownership agreements, and interchange agreements. All of these exemptions are actually quite narrow and can be very tricky to do properly (and a further discussion of them is well beyond the scope of this article); but the main point here is that these exemptions cannot, on their face, be used by operators that are certificated charter companies or that are flight department companies. In both of those instances, the FAA has made it very clear for some 40 years that such operators are *per se* commercial in nature and must have Part 135 certification—and operate each flight under Part 135—in order to conduct passenger flights.

Stated another way, if you are a flight department company and you want to carry passengers and get reimbursed for it, then you must

obtain your own Part 135 certificate. If you don’t want to do that, then your only option becomes leasing or transferring operational control of the aircraft to some person who is a legal Part 91 operator as set out above, or to someone else who holds a Part 135 air carrier certificate. And, if you are a company whose primary business is holding such an air carrier certificate to get paid to carry passengers around, then you can only *operate* (i.e., assume and exercise operational control over) such passenger flights under Part 135—a key to the next common problem facing charter operators.

### Other Common Problems for Charter Operators—“Part 91 Owner Flights” and Part 91 Authorizations

Many charter operators lease aircraft from registered owners on a non-exclusive basis, with the understanding that when the charter operator is conducting third-party charter flights, those flights will be conducted under Part 135, and when the charter operator has the aircraft owners, members, employees or their guests on board, those flights will be conducted as non-commercial operations under Part 91—commonly referred to as “Part 91 owner flights.” What is really going on here is that when the flights have charter passengers on board, then the lease acts to transfer operational control of the aircraft to the charter operator, who then has the certification to act as the commercial operator of those flights and be paid to do so. Conversely, when the aircraft owner wants to

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conduct its own flights under Part 91, then the owner retains operational control of the aircraft and the charter company becomes a “mere Part 91 management company” that is no longer exerting operational control over the aircraft but instead is simply assisting the aircraft owner in its own operation of the aircraft (keeping in mind that a certificated air carrier can basically never retain operational control of an aircraft and carry passengers under Part 91).

This concept works great where the registered owner of the aircraft is a legal Part 91 operator as described above, e.g., a natural person operating the aircraft for his own purposes and at his own expense, or a WidgetCo using the airplane incidental to its widget manufacturing. But big problems arise when such an aircraft owner is a flight department company. As noted above, flight department companies cannot conduct their own Part 91 flights because the FAA considers them to be per se commercial operators. What does this all mean? It means that if the charter operator views itself as the “operator” and is carrying passengers around on those flights—regardless of how those individuals are related to the flight department company that is the lessor of the aircraft—then those flights must be conducted under Part 135, not Part 91. Conversely, if the charter operator does understand that operational control rests with the flight department company instead of it during such flights, then this means that the flight department company is now acting as an

**These rules can admittedly be very confusing, and noncompliance is rampant, but the fact that noncompliance is common won't save you if you are the operator that has come to the FAA's attention.**

uncertificated, and therefore illegal, commercial operator. In short, when an aircraft owner and lessor ask a certificate holder to assist in conducting Part 91 flights for that lessor's benefit, it really behooves the certificate holder to make absolutely sure that the lessor is not a flight department company, but instead is a legal Part 91 operator in its own right.

Another problem that commonly arises with respect to Part 91 owner flights deals with the various Part 91 letters of authorization (LOAs) that are required for those flights. It is entirely possible and permitted under the FAA's rules for there to be multiple permitted operators for a given aircraft for different flights. It is critical to understand that Part 91 LOAs are just that — specific authorizations that are issued to specific Part 91 operators for the conduct of certain specific types of operations by those operators.

Using Reduced Vertical Separation Minima (RVSM) operations as an example, the rules are very clear

that *each individual operator* of an aircraft must have its own authorization to conduct operations in RVSM airspace. That authorization for Part 135 air carriers comes in the form of Part 135 operations specifications or OpSpecs. Just because the Part 135 operator has its own RVSM OpSpecs authorization does not mean that a different Part 91 operator of that aircraft can use the charter operator's authorization. A Part 91 flight conducted by a different operator—maybe WidgetCo or another lessee of the aircraft—*cannot* simply use the charter operator's RVSM OpSpecs authorization, but each must instead obtain its own authorization in the form of separate RVSM LOAs. And this same concept applies to any other special authorization that is issued in the name of the operator.

### Ramifications?

So what are the possible results that arise from all of these confusing issues? In short, if the proposed operator is a flight department

company, then that company may become subject to significant civil penalties for conducting its per se commercial flights under Part 91. If a certificated air carrier is conducting operations for that flight department company and agrees to fly the aircraft under Part 91, then it may be subject to an FAA action against its own certificate. If operators are conducting flights that require special authorizations they don't individually hold, then that can lead to civil penalties as well. And all of these issues don't touch on separate certificate actions the FAA could take against the pilots individually, as well as significant denial-of-coverage issues that could arise with respect to the operator's insurance. Finally, it is also important to note: if you are conducting, what the FAA considers to be, a commercial operation (even when you don't realize it), then you very likely may be conducting an operation the IRS considers to be commercial in nature as well, and therefore could be subject to federal excise taxes for that flight—but that is an issue for another article on a different day.

## Conclusion

These rules can admittedly be very confusing, and noncompliance is rampant, but the fact that noncompliance is common won't save you if you are the operator that has come to the FAA's attention. So what is someone to do? The short answer is that for each, separate flight of an aircraft, the parties need to go through the following analysis:

**First, identify who is the operator of the aircraft. Is it the registered owner, or is it a party such as an individual or an air carrier that has assumed operational control of the aircraft under a dry lease?**

**Second, ask if that operator is receiving any form of reimbursement compensation or value in exchange for conducting the flight.**

**If the answer is no—the operator is an individual covering the costs herself, or is a company using the airplane incidental to its underlying business with no reimbursements being sought or paid in either case—then go forth and fly under Part 91.**

**If the answer is yes and the operator is the certificate holder who is being paid to carry passengers under Part 135, then that analysis is easy—go conduct the flight as permitted under its Part 135 certificate. If it is a company that is using the aircraft incidental for its business use, then further analyze the situation to see if any of the 91.501 exemptions apply. If they don't, then either don't accept any reimbursements or find a way to have the flight conducted under Part 135. And finally, if the proposed operator is a flight department company—don't do it! Don't become an operator under "Part 134 1/2". Either have the flight conducted under Part 135 by the air carrier or look at some other option, such as dry leasing the aircraft to parties that can act as their own Part 91 operators. **A****

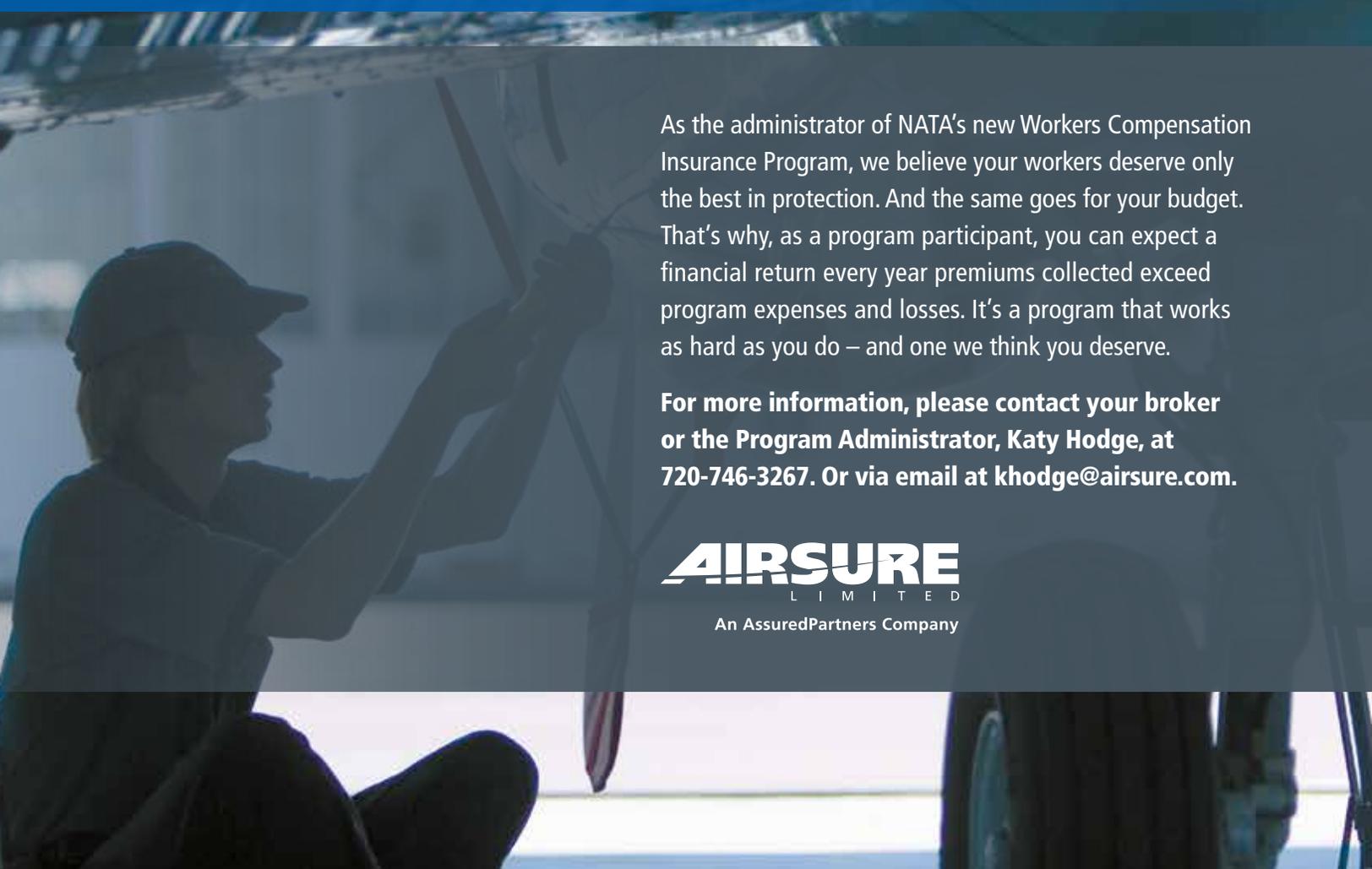


David T. Norton is a partner and head of the aviation practice at the law firm of Shackelford, Bowen, McKinley & Norton,

LLP, in Dallas, Texas. He holds a B.S. from the USAF Academy, an M.B.A. from the Louisiana Tech University, and a J.D. from the Southern Methodist University Law School. He has an internationally recognized practice that focuses exclusively on business aviation industry regulatory, transactional, tax, dispute resolution and risk management issues. He is very active in many business aviation industry-related committees and groups, such as serving as Industry Co-Chair of the joint FAA/Industry RVSM LOA Process Enhancement Team of the Performance based Advisory Rule Marketing Committee. He was a regular commissioned officer in the U.S. Air Force from 1984 to 1993, serving primarily as a KC-10A pilot and aircraft commander, and currently holds FAA certification as an airline transport pilot (multi-engine land) with a DC-10 type rating, a commercial pilot (single-engine land), and as certified flight instructor, instrument and multi-engine, and advanced ground and instrument instructor. Please feel free to call him directly at (214) 780-1407, or E-mail him at [dnorton@shackelfordlaw.net](mailto:dnorton@shackelfordlaw.net), if you have any questions concerning the article.



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# On the Horizon for Safety 1<sup>st</sup>

## NATA is rolling out big improvements to its signature education outreach and training product in 2018

BY COLIN BANE

**R**andy Bisgard, Senior Vice President at Airport Business Solutions and NATA Safety Committee member, first began developing the professional line training program now known as Safety 1<sup>st</sup> way back in the early 1970s, when he worked as Training Director for the Combs Gates FBO at Denver's Stapleton International Airport. For its original iteration, Bisgard put together a Kodak Ektagraphic slideshow of the internal safety training presentation he had created, combining photos and an audio track, to use at Stapleton and the two other Combs Gates Aviation locations he oversaw.

"There was no formal, industry-wide training at all at that time," Bisgard said. "We used it internally for a few years before someone in the organization suggested we try selling it to the rest of the industry. We made some significant revisions to it and, around 1980, partnered with Phillips 66 to start selling the slideshow program to FBOs around the country. A few years later, we converted the whole thing to a

video tape presentation and, as you know, around 2000, sold it to NATA and began moving towards the online version that is its current iteration. I like to think of it as my baby. I'm really proud of what it's become and thankful that NATA has let me be a continuing part of its ongoing development."

A lot has changed in those intervening years. The old Stapleton International Airport, where Bisgard started his career in general aviation, is now a residential infill neighborhood with a new bar and restaurant going in where the old control tower still stands. And Safety 1<sup>st</sup> is now the industry standard for safety training in general aviation: a fully online, interactive, and comprehensive suite of digital products covering Professional Line Service Training (PLST), Supervisor Training, Deicing, and a Customer Service, Safety & Security training package—all aligned with OSHA standards, Federal Aviation Administration Regulations, and the International Standard for Business Aircraft Handling (IS-BAH).

It's used across the country and, increasingly, around the world.

This year, the Safety 1<sup>st</sup> online training is in the process of transitioning to a new subscription model that NATA members have been clamoring for; and the NATA Safety Committee is hard at work developing the fifth iteration of the program based on member feedback. Safety 1<sup>st</sup> is now the national gold standard in safety training for ground handlers, and is well on its way to becoming the international standard. Among other changes currently in progress, the training content is being updated to comply with the most recent IS-BAH standards.

"The Safety 1<sup>st</sup> program has been really successful and people are really happy with it, but there is a lot of opportunity for us to improve it, break into smaller modules so that training programs can be more customizable, and expand it to serve the needs of a larger and more international customer base," Bisgard said. "It's evolving and it always will be, which is why it's still

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## On the Horizon for Safety 1<sup>st</sup>

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the best program out there and still the industry standard. I think it always will be, because there are a lot of good people committed to constantly improving and updating it.”

Bob Schick, Director of Safety & Risk Management for TAC Air and NATA Safety Committee Chairman, noted the future of Safety 1<sup>st</sup> is about simplifying the content, adding new modules to meet specific niche needs, and restructuring certification programs to accommodate task specific ratings to help shape career paths and growth opportunities for employees on the line. Schick is leading the team that will overhaul the Safety 1<sup>st</sup> training in the coming year.

“We’re updating the content, making it more interactive, engaging and accessible, simplifying things where we can, and breaking everything up into more manageable chunks so that you’ll have more a la carte courses that are 10 to 15 minutes instead of hours,” Schick said. “And they’re all going to be geared towards building a career path. It used to be that you received your PSLT certificate, and that was as high as it goes: you’d either completed it or you hadn’t. With the new approach—we liken it to a merit badge approach—we’ll start by getting you your basic journeyman safety rating and whatever specific safety training you need for your specific job. For a guy who is going to be doing nothing other than fueling airplanes, we’ll get him accredited for that. Then, if he’s interested in learning more and moving around to different responsibilities, we’ll help him work through other modules that will certify him for other jobs and ultimately bring him up to

an overall mastery level as he earns different ratings, similar to the way a pilot earns different ratings on the way to full mastery and licensure.”

Schick thinks the planned changes will help FBOs of all sizes train and retain employees, and could also create an opportunity for employers to develop pay-for-skills programs aligned with the accreditation levels being built into Safety 1<sup>st</sup>.

“If we can keep our employees engaged and show them a training path for advancement within the company, with more pay for increased skills and responsibilities backed up by additional training and safety ratings, maybe we can keep them for five years instead of two,” Schick said. “Maybe we can keep them indefinitely. We’ve got to cultivate those folks.”

NATA members are already beginning to enjoy some of the benefits of the planned updates to Safety 1<sup>st</sup>, with the roll-out of the new subscription model already underway, replacing the previous person, license-based sales model.

“The biggest problem with the previous sales model was you’d pay for training an employee, have that person get through some or all of the training, then leave the company before you could realize the full benefit of those costs, and then you’d have to go and buy another seat for the next guy and all of a sudden your training budget numbers are thrown off,” Schick explained. “The new subscription model is already allowing us to decide how many training seats we need for the year, pay for that amount at a fixed subscription rate we can budget and plan

for, and get unlimited access to all the content so we can really tailor the training appropriately. If we lose an employee, we’ll just slot the next guy into that same training seat we’ve already paid for under our subscription. And then, if an employee has been through the relevant training program and keeps having issues, we can go back and re-train using the necessary modules without having to do the whole training again. Or if they’re ready to move on to other content modules, then we don’t have to make a budget call to see if we can afford it because they’re already included in the subscription.”

The new subscription model was soft-launched in November 2016, and many NATA members have already made the switch or plan to do so in the new fiscal year. Michael France, NATA’s Managing Director of Safety & Training, hopes the new sales model will encourage users to take full advantage of additional Safety 1<sup>st</sup> training modules beyond the PLST, like the OSHA, Hazardous Materials and Regulated Garbage training packages that were previously sold as optional add-ons.

“Candidly, under the previous sales model we realized a lot of people were steering clear of some of those additional training packages, that the license-based sales model was actually providing a disincentive to doing additional training,” France stated. “The new model allows companies to accurately budget their training costs and gain unlimited access to everything Safety 1<sup>st</sup> offers.”

France is similarly excited about modernizing every aspect of the program.



“Our industry has evolved significantly since the early days of Safety 1<sup>st</sup>, and one thing we’d started to hear most frequently was that some of the training was starting to show a bit of age,” France admitted, with a laugh. “We transitioned from the old VHS tapes and their mid-1990s glory to the online version in 2008, but even that’s coming up on 10 years now. There are some videos interspersed throughout the current program where you’ll see an airport ramp and it looks like something out of Nick at Nite, something from an old television show. Like, ‘Oh, hey, you don’t see many JetStars and Lear 24s on the ramp anymore!’ So, for starters we’re updating the look and feel of the program; and, in the process, we’ll also be making more substantial updates.”

Among other improvements, the new version will be friendlier to cross-platform devices, meaning it will be

as accessible by phone or tablet as by computer. France said it should also be intuitive to users accustomed to using modern mobile apps.

“With the new training model and learning management system we’re developing, we’ll break up the training into functional, task-based pieces and you’ll add a rating as you complete each module,” France added. “So you can earn your rating in towing, or aircraft marshaling, whatever is needed at the moment. As an employee accumulates additional ratings, they can earn higher certification levels and, if they get enough ratings, they can ‘level up’ to new responsibilities and maybe a new pay grade. We’re building in notifications, the ability to track different training goals and accomplishments, and new ways to approach recurrent training, add online webinars, and otherwise make use of some big advancements in technology. It will

“SO YOU CAN EARN YOUR RATING IN TOWING, OR AIRCRAFT MARSHALING, WHATEVER IS NEEDED AT THE MOMENT.”

Mike France,  
Managing Director of  
Safety & Training, NATA

incentivize people to keep training up, and allow the trainer flexibility to instruct each person on what they need right now, and then for that person to receive some kind of recognition—in the form of a rating or certification—that they’ve completed that section. The overall effect is that it becomes a living, breathing training record that shows where each employee is in the training process.”

Another overarching goal of the project, to update and overhaul Safety 1<sup>st</sup>, is the quest to globalize the content. France hopes to make the Safety 1<sup>st</sup> product more appealing and applicable to a global audience, starting with NATA members who already have an international presence. That will include making sure the new Safety 1<sup>st</sup> modules align with the new IS-BAH standards and audit checklists, offering the training modules in multiple language formats and streamlining the translation process to add other languages in the future, and working with international aviation groups, government regulators, and airport authorities to make sure the program meets all requirements.

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## On the Horizon for Safety 1<sup>st</sup>

Continued from page 27

“We’re heading toward a much more flexible, comprehensive and feature-rich solution for our members that is going to allow each business to utilize the training in the way that works best for their users,” France said. “As always, advancing safety throughout the industry is the end goal.”

“I JUST CAN’T STRESS ENOUGH HOW IMPORTANT IT IS TO REALIZE THAT IT IS NOT THE U.S. FBO MARKET WHEN YOU GET OUTSIDE THESE BORDERS AND YOU WANT TO BE RECOGNIZED AS A RELIABLE AND QUALITY SOURCE FOR TRAINING BY THE AIRPORT AUTHORITIES, THE CIVIL AVIATION AUTHORITIES, AND THE VARIOUS NATIONAL GOVERNMENTS. YOU HAVE TO DEAL WITH THEM A LOT MORE, IN A REGULATORY SENSE, THAN YOU EVER DO IN THE U.S. IT’S REALLY A DIFFERENT WORLD OUT THERE.”

Vic Gregg,  
Director of Safety  
Standards & Audit,  
Universal Weather  
& Aviation, Inc.

Vic Gregg, Director of Safety Standards & Audit at Universal Weather & Aviation, Inc. (and NATA Safety Committee Vice Chairman), said he believes tweaking Safety 1<sup>st</sup> to better meet international needs will result in a stronger domestic product in the bargain.

“At Universal, we’re now using Safety 1<sup>st</sup> training in over 20 countries, including regions in Latin America, the Caribbean, Europe, the Middle East, Africa, Asia and the Asia-Pacific,” Gregg said. “We think, obviously, that the Safety 1<sup>st</sup> training products are in the best place we’ve ever seen them and certainly the best product on the market. It’s really an extraordinary program, and it allows small, large, or mid-size operators to take someone from the street to supervised work on the line to unsupervised roles in about six months. It’s really that good! It’s fantastic! With that being said, there are some major differences in the ground handling world between the U.S. and Canada and the rest of the world. Some of it is terminology and semantics that are easy to fix, some of it is language and translation barriers that can also be easily fixed, with the right people and resources, and some of it is that there really are some significant differences in rules and regulations around the world, and even in what an FBO is and isn’t allowed to do in different countries. As one example, the NATA Safety 1<sup>st</sup> PLST is heavy on fueling, fueling equipment, fuel quality control, fuel farms... and in most cases, internationally, fueling is something that the FBO is absolutely not allowed to do, at all. Mexico and Ireland are the only two

of our international locations where we even have a fuel truck, because outside of the U.S.—almost without exception—you’re at the mercy of the fueler that has the blessed authority on the airport. So having a training package that is broken up into smaller modules, where you can decide to skip some or all of that portion of the training when it isn’t applicable, becomes absolutely key in the international world. What we want, and what other international customers will want, is to be able to draw clear lines in our training records to the matching items on the IS-BAH checklists, and on the external auditor’s checklists, to be able to say, with authority, ‘Yep, we’ve got everything covered.’ Smaller domestic FBOs want the same thing, by the way: if you can meet the IS-BAH standards and stand up to their auditors, you’re going to be above and beyond anything else that is ever being asked of you here in the U.S.”

Gregg said it’s a lesson Universal learned the hard way, when it began expanding into international markets.

“Twenty years ago, we thought it would get easier once we got outside of the U.S. and away from all the regulations here, but it hasn’t gotten easier: it’s gotten more complicated, with more layers of regulation than we ever would think possible here in the U.S.,” Gregg said. “I just can’t stress enough how important it is to realize that it is not the U.S. FBO market when you get outside these borders and you want to be recognized as a reliable and quality source for training by the airport authorities, the civil aviation authorities, and the various national governments.



You have to deal with them a lot more, in a regulatory sense, than you ever do in the U.S. It's really a different world out there."

Seeing the Safety 1<sup>st</sup> program translated into other languages by experts in the field is one of Gregg's top priorities.

"I desperately need it, in at least three or four languages for starters, and it's going to be the first thing any potential international customer is going to ask," Gregg explained. "For one thing, to be completely honest, I can't afford to have bilingual ramp people at our international locations. If you're bilingual, we've got other jobs for you, but you're not working on the ramp. So we have to have the safety training available for these employees in the language they speak and fully understand because this is safety we're talking about, the absolute most important thing. And for another thing, in most of these countries we're in, it is required by law. France is a good

example: if you're going to give your employees in France safety training, they expect it to be in French. It has to be in French. NATA did a first-round French translation of the program, and I think they learned a lot from it. Let's just say we've learned that there can be a lot lost in translation! If you're going to have a technical program translated, you're going to have to have a technical person from the field translate it appropriately. And then, of course, having the training available in other languages opens up new hiring opportunities domestically, as well."

In 2016, NATA celebrated its 75<sup>th</sup> anniversary as the *Voice of Aviation Business*, providing ample opportunity to reflect on both the history and future of the general aviation industry. Michael France said the discussions around that legacy have informed some of the direction of where the Safety 1<sup>st</sup> program is headed.

"WE HAVE TO HAVE THE SAFETY TRAINING AVAILABLE FOR THESE EMPLOYEES IN THE LANGUAGE THEY SPEAK AND FULLY UNDERSTAND BECAUSE THIS IS SAFETY WE'RE TALKING ABOUT, THE ABSOLUTE MOST IMPORTANT THING."

Vic Gregg,  
Director of Safety  
Standards & Audit,  
Universal Weather  
& Aviation, Inc.

"We have around 2,300 members now, our association is stronger than it's ever been, and the level and quality of safety and service across our industry is as high as it's ever been," France said. "Some of those achievements are really a testament to the work of our board and the NATA Safety Committee, and to the commitment of our members to get it right in an industry where getting it wrong can be absolutely catastrophic. Safety 1<sup>st</sup> is one of those areas where we know we've really been getting it right. It's also one of those areas, as we look to the future, we also know that there is always going to be room for great improvement. So we're always striving, always asking, 'How can we make this even better?' The future of our industry truly depends on it." **A**



**W**hen the Aeroplex/Aerolease Group celebrates its 40<sup>th</sup> anniversary this year, not many may recall that the company got its start because Milton Wideltz, a pilot and well-known Los Angeles-based construction entrepreneur, needed a hangar for his private aircraft. He went on to found what is now a prominent Southern California aviation property development, management and consulting firm.

In 1977, Wideltz founded the company as Aerolease Associates as a sole proprietorship at Van Nuys Airport (VNY), with the purchase of a building originally used by the Ted Smith Aircraft Company as a manufacturing

facility for the Piper Aerostar, as Curt Castagna, President and CEO of Aeroplex/Aerolease Group, explained. The leasehold was situated on the original site where VNY was founded in 1928 and included nine acres of ramp space, of which three were redeveloped by Wideltz to house 35 T-hangars for tenant aircraft.

From there, the business expanded with the addition of another 180,000 square feet of corporate aircraft storage hangars, and more T-hangars, on 10 acres situated on the west side of VNY, which Wideltz had acquired from the Los Angeles Department of Airports (later renamed Los Angeles World Airports). That project,

which commenced in 1978 and was completed in 1982, was carried out under the auspices of Aerolease West, a newly-formed partnership between Wideltz and Los Angeles area businessman George Arkin.

But the partners were already looking beyond Van Nuys. “They saw an opportunity at Long Beach Airport (LGB) on a 14-acre site which had been vacated by the California Air National Guard,” Castagna noted. Wideltz and Arkin were awarded a lease for the property in 1983 and established a new entity—Aerolease Long Beach—to develop it, initially as a luxury FBO for the original Dupont family-owned Atlantic Aviation chain.

## The Aeroplex/Aerolease Group

# Success through Collaborative Consensus

BY PAUL SEIDENMAN & DAVID J. SPANOVICH

When Atlantic Aviation decided to close the LGB location in 1991, Aerolease Long Beach immediately stepped in to continue the FBO under the Aeroplex Aviation name. That company would retain the FBO business until 1996, when neighboring FBO Million Air closed its LGB location and moved its operation into the Aeroplex facility.

“At that time, there were three FBOs on the field—AirFlite, Million Air, and Aeroplex—all competing for a dwindling client base,” Castagna pointed out. “We saw that it would be in the best interest of a healthier airport if we consolidated our operations with Million Air at LGB, where

there just wasn’t enough demand to successfully sustain three FBOs.”

Under new ownership, the FBO, doing business as Million Air at Aeroplex, continued to provide based tenant, airline and itinerant fueling services. Then, in 2006, the Million Air operator sold its interest at LGB to Signature Flight Support, which still operates that location.

“The Signature network is vital to both the airport and our tenants, and the fact that we can combine our development and leasing experience to support its operations maximizes our mutual interest. It’s a truly synergistic, win-win-win situation for Aerolease, Signature

and the Long Beach and Van Nuys Airports,” said Castagna.

Sadly, both Widelitz and Arkin are deceased; but the organization, which sprang from a small operation at VNY 40 years ago, flourishes and its original foundations continue to support Aerolease’s strategic vision. Today, what is now known as the Aeroplex/Aerolease Group is headquartered at LGB and is comprised of six entities. They include Aerolease Associates LLC, Aerolease West LLC, Aerolease Long Beach dba Aeroplex Aviation a general partnership, Aerolease Bonseph LLC, Aeroplex Group

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Partners LLC (the group's consulting arm), and Widark Corporation.

Still a major presence at LGB, Aerolease Long Beach currently manages more than 50,000 square feet of office space and 25 hangars, encompassing 151,000 square feet for corporate and privately owned aircraft. At VNY, where the company developed and manages over 267,000 square feet of aviation-related facilities, a new project in the form of a \$7.5 million, 50,000 square-foot clear-span hangar, office, shop and terminal facility is slated for completion in April 2017. The development, noted Castagna, is a project of the Aerolease Bonseph joint venture.

Interestingly, the new hangar is being constructed on the original T-hangar site which Widelitz established in 1977. "Prior to demolishing the site to make room for the new facility, we relocated all of the existing T-hangars to other VNY propeller aircraft facilities to make

room for the design and construction of new accommodations for larger Gulfstream, Bombardier and other new business jets," Castagna said.

Castagna, who served as General Manager of the former Atlantic Aviation LGB FBO, has been with the Aerolease/Aeroplex Group since 1991. He pointed out that Widelitz built the business through strict adherence to a model that could have been unique for the time, at least in an airport business context.

"Milton's philosophy was that if you have a business on an airport, you don't manage it in a vacuum," said Castagna. "Working collaboratively with the airport authority and other tenants provides the foundation for a healthy business environment. As a result, the Aeroplex/Aerolease Group has become very engaged in providing leadership to the airport business community."

Along this line, in 1982, Widelitz and Clay Lacy, a prominent pilot and

private jet operator at VNY, founded the Van Nuys Airport Association (VNAA), which Castagna termed "the model for collaborative operations and relationships at airports." He currently serves as president of the association, which represents over 100 businesses, employing 5,291 at the airport. "Although many airport businesses compete with each other, by partnering on a collaborative basis, they are able to find common ground on issues, and work with each other and government to achieve mutual goals," explained Castagna. The Long Beach Airport Association (LBAA), for which he also serves as president, has been pursuing an identical mission since 1947. Today, it is the voice of 200 businesses, employing 18,000.

Collaborative efforts, Castagna stressed, are essential, considering some of the challenges confronting airports today, such as obtaining federal financing for capital improvements.



“That has been especially challenging, mainly over the last five to ten years as airports seek shrinking Airport Improvement Program funds

and confront the ever-challenging FAA reauthorization budget process” he said. “Today, it is critical for airport businesses to work with

airport authorities, in private/public partnerships, in order to best assure and preserve the longevity and sustainability of the airport within the national air transportation system. That includes searching out and finding new revenue sources and relationships at a time when so many entities are competing for a limited number of dollars.”

Castagna also feels that there is a need for airport operators and businesses to work with the various local, state and federal regulatory agencies to “maintain consistency with regulatory application.” That, he stated, is a “very important public policy issue” right now. It is equally important to establish ongoing dialogue with elected officials, especially when there are changes in leadership, so that they have guidance to make decisions impacting airport operations and businesses.

Strong and ongoing collaboration between airport stakeholders has proven successful in addressing critical tenant issues. In that regard, Castagna cited the work of the VNAA, which brings together airport management, aviation and non-aviation businesses, as well as educational, economic development, and community organizations.

“Airport tenants, airport users, elected officials, airport officials and area businesses have come together to make VNY the main economic driver in the San Fernando Valley,” he said. “It really tells a success story about how tenants working together—even though we compete with one another—can create positive change



Continued on page 35

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**Congratulations to NATA for 75 years of service to aviation.**

## The Aeroplex/Aerolease Group

Continued from page 33

and cultivate an airport environment that supports economic growth in partnership with the community.”

In addition to securing VNY’s position as a positive economic force in Southern California, airport stakeholders spearheaded efforts to save the airport’s leading airframe and powerplant school from closure by successfully negotiating an annual one dollar per year lease rate. They also negotiated a plan to rehabilitate the main runway with minimal impact to operations and, under the federal user-fee airport program, returned U.S. Customs and Border Protection clearance services to the airport through a public-private partnership.

The LBAA, with a membership representing private flight schools, two FBOs, commercial airline terminals, industrial facilities and aviation-related manufacturing centers such as Gulfstream, has a strong record of accomplishment through collaboration

with airport stakeholders, including the formation of a committee composed of airlines, aircraft operators and owners, as well as the FBO representatives to address community noise concerns. Another achievement was the “selection of a preferred alternative” in an airport-funded study to permanently close two under-utilized runways, in order to enhance airport operations and safety.

“The association,” Castagna said, “also ensures consistent application and enforcement of minimum operational standards in order for existing and new tenants to compete on a level playing field.”

Another example of collaboration among airport businesses involves security at VNY. “We are aligning the security protocol of all of the businesses at Van Nuys Airport to come up with a standard program, which has been very successful,” he noted. “We are now working to implement a similar program at

Long Beach Airport. It all comes down to self-assessing and addressing potential security weaknesses and working together to correct them, without looking for an outside regulatory authority to do so.”

But, as Castagna warns, any collaborative efforts must include outreach to—and involvement of—those outside the airport’s perimeter fence.

“There is no question that the success of any airport starts by linking the economic benefits of the airport with the community,” he stated. “Chambers of Commerce, convention and visitor bureaus, educational institutions and other civic groups are vital players that must understand the airport’s value, and must assist in demonstrating those values to residents and elected officials. Our success over the last decade would not have been possible without the supporting role and vision

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## The Aeroplex/Aerolease Group

Continued from page 35

of those off-airport businesses. They quickly realized how the airport can be a valuable asset to support economic development opportunities in the region and community.”

At the same time, airport operators are listening to community members and working with airport staff to help address their concerns with practical solutions. “To be successful, airport staff, tenants and elected officials must embrace a culture of collaboration and work together to identify balanced solutions and not just problems,” he said. “Collaboration is never-ending, since every airport faces multiple challenges in terms of the needs of that community, as well as maintaining steady revenue, marketing, capital improvements and environmental priorities—all of which must be managed together.”

Collaborative approaches to issues confronting airport businesses have also become more evident at NATA, according to Castagna, who serves on the association’s board.

“Over the last couple of years, NATA has evolved with the establishment of a very diverse, yet unified, board which speaks with one voice,” he said. “The appointment of Marty Hiller as president has made a significant impact since he brings a wealth of industry and business experience. We are definitely speaking from the top with a consistent message addressing our members’ concerns—specifically about the value of the collaborative airport business relationship.” **A**

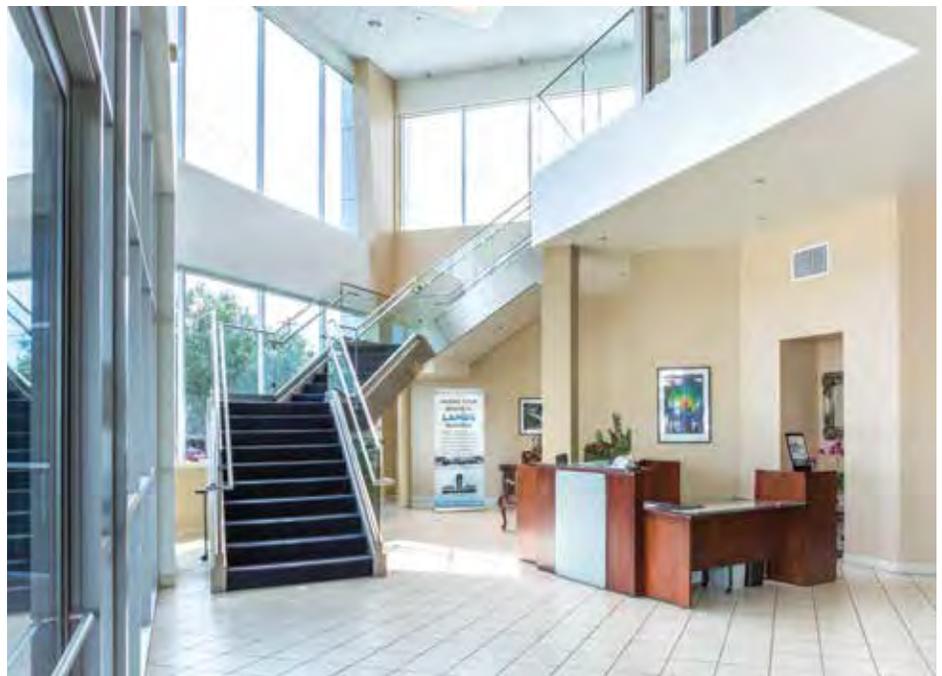


Photo By: Bob Beresh

**“To be successful, airport staff, tenants and elected officials must embrace a culture of collaboration and work together to identify balanced solutions and not just problems.”**

Curt Castagna  
President and CEO, Aeroplex/Aerolease Group

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# Safety Management Systems at Airports

BY DR. BENJAMIN GOODHEART

**A**s an industry, we've known that Safety Management Systems (SMS) requirements are expected for airports sometime soon. Despite the relatively long fuse leading up to rulemaking, many airports, and the businesses that operate in the airport environment, are unprepared for the regulatory requirements for SMS. A decade ago, the Federal Aviation Administration (FAA) started work on both internal and external initiatives for implementation of SMS, and it released the first Advisory Circular introducing SMS for Airport Operators in February of 2007. The first Notice of Proposed Rulemaking (NPRM) for Part 139 was released in 2010 as an effort to harmonize FAA regulations with International Civil Aviation Organization (ICAO) Annex 14 Standards and Recommended Practices at airports. Incorporating comments from industry on the original document, the NPRM was subsequently revised, and a

supplemental version (known as SNPRM) was published in 2016.

Although comments were lodged by a variety of stakeholders, airports and airport industry groups generally focused on scoping the proposed rule to include fewer airports. Also highlighted by the many comments to the FAA were the proposed implementation period and training requirements. In the original NPRM, the FAA proposed training on SMS for all employees and tenants with access to the movement (runways and taxiways) and non-movement (ramp and bag handling) areas of the airport—a tall order for most airports to meet. At the time of this article's writing, the SNPRM proposes SMS requirements for the following:

- Airports classified as a small, medium, or large hub airport in the National Plan of Integrated Airport Systems (NPIAS)
- International airports
- Airports with more than 100,000 total annual operation

Training, rather than being broadly required for all employees and tenants, is now proposed to include:

- Comprehensive SMS training tailored to an individual's specific role for implementing and maintaining SMS
- Hazard awareness and reporting awareness orientation for all other individuals with access to the movement and non-movement areas

The SNPRM estimates that the training burden is reduced with this change to reflect a narrower scope for safety training, meaning that "...on average, 10 employees or managers would need this training at large airports and three employees or managers would require it at small airports."

After the changes to the original NPRM, the FAA now estimates that system-wide benefits of the forthcoming total approximately \$370.9 million, while the total costs

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## Safety Management Systems at Airports

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associated with implementation are estimated at \$238.9 million. These estimates *do not* include the cost of mitigations that may be required as part of the implementation process. Airports covered by the proposed legislation would have up to two years to implement an SMS after the effective date of the final rule, reflecting the need for additional time that many commenters to the NPRM identified as necessary to meet the requirements of the rule.

Notably, the SNPRM does not *require* tenants of an airport to have a separate SMS. However, from a practical perspective, airport managers must ensure that the airport SMS applies to any safety issues including employee safety, ground safety, vehicle safety, and passenger safety to the extent that they are related to aircraft operations. At a functional level, this requires that airports work in concert with tenants to ensure either that the tenant is working within its own SMS or is included in the airport SMS as a stakeholder and participant. The SNPRM provides some flexibility to airports in how general aviation operations are treated as well, allowing the certificate holder to scale their implementation to meet the unique operational needs of each airport.

While the timing of the final rule may vary, we can be assured that regulated SMS for airports is a near-term reality. Though new regulations always produce some growing pains as the industry adjusts, this step by the FAA will be a good one for the airport industry, as it provides a systematic method for: improving communication, reducing operational costs, improving operational



processes, prioritizing safety needs, and better utilizing resources. Still, there are obstacles to address to conform to the proposed regulation.

### Airport Challenges

Airports certainly have their share of hurdles to overcome on the way to successful SMS implementation and maturation. Diverse city, county, state, and airport authority management structures are only one issue that airports face that is unique in comparison with other types of aviation operators. The variations in airport governance and management structures can make efficient communication difficult to plan for, let alone execute. Likewise, determining the proper placement of safety personnel within that structure, and ensuring appropriate reporting channels are in place may require some experimentation.

Consistent growth, projected to result in passenger enplanements increasing by roughly five percent per year, is another factor that airports must consider. Coupled with the

fact that many airports face extreme geographic and layout constraints, growth has the capacity for exacerbating a number of existing issues.

Stakeholder diversity can also create challenges, especially in risk management, where a variety of user groups, both internal and external, may view the components of risk very differently. These disparate perspectives mean that local expertise—not just at the airport, but within individual work units—is critical to ensuring risk is evaluated in context, and that mitigations are considered with the full breadth of downstream effects they may create. Creating training solutions that are scaled appropriately to the airport and to differing operations groups was identified as a key challenge during the FAA SMS 31-airport pilot project.

Because the line airports often walk between governmental immunity and exposures to ordinary tort law, safety management efforts can raise concerns about the liability associated with safety risk management practices. As underscored by



several comments on the SMS NPRM, airports worry about exposures to negligence claims as a result of risk evaluation and potential acceptance, especially where sovereign immunity may not apply. At present, SMS data is not protected, as in operational voluntary reporting programs such as those found at airlines. Because of this, airports have expressed concern about discoverability. Without minimizing these concerns, the bulk of SMS experience across numerous industries has proven these concerns to be largely unwarranted. Nevertheless, ensuring SMS is used to reduce liability effectively will be the result of a collaborative effort.

### A Focus on Interface

Safety management in a flight department relies on interfaces between other organizations, departments, equipment, and personnel to be effective. At an airport, where there are many more dimensions of governance and organizational structure, assuring effective interface between the various elements of the system can

make or break the SMS. Used here, what we really mean by *interface* is communication, and as SMS understanding matures, expect to see more mention of interface. ICAO's Safety Management Manual (Document 9859) points out that in cases where a service provider—in this case, the airport—has responsibility for the performance of tenants or contractors who are not separately required to have an SMS, the airport also has responsibility for the *safety performance* of those entities. The interface between those entities must be a chief management concern because it is the conduit for identifying hazards, assessing risk, and developing and implementing mitigations as needed. Airports should focus on ensuring:

- there is a clear policy, establishing a safety accountability and authority flow between the airport and the tenant or contractor
- the subcontractor has a safety reporting system commensurate with its size and complexity that facilitates the

early identification of hazards and systemic failures of concern to the airport

- the airport's safety review board includes tenant or contractor representation, where appropriate
- safety/quality indicators are developed, when appropriate, to monitor tenant or contractor performance
- the airport's safety promotion process ensures subcontractor employees are provided with the organization's applicable safety communications
- any subcontractor roles, responsibilities and functions—relevant to the airport's emergency response plan—are developed and tested (adapted from ICAO, 2013, p. 5-9)

### Innovation, not Imposition

One of the biggest challenges to any industry is balancing self-regulation with external regulation. In the airport world, the technical aspects of our operations have been carefully regulated for years. Our safety management efforts, however, have been generally left to industry to sort out. This is well and good, but as the many comments to the original NPRM on Airports SMS reinforce, the success of any SMS efforts in the airport community rely on minimizing gaps in understanding how airports actually function. For that reason, self-regulation to the extent possible *prior to regulation* sets a standard for performance, and has the potential to ease the transition to regulate SMS.

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# Safety Management Systems at Airports

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One tool available to assist in this process is the IS-BAH standard.



One tool available to assist in this process is the IS-BAH standard. The IS-BAH standard was developed through a collaborative effort between NATA and the International Business Aviation Council (IBAC); and its standards and recommended practices are the result of industry input to create a framework for aircraft handlers. While IS-BAH may not apply directly to airports, it provides an excellent means of validating the safety management effectiveness of operators who are registered to the standard. Even as a means of accessing best practices, the SMS-centric approach to IS-BAH can be a useful tool for airports and their diverse stakeholders as a practical structure for operators to examine, review, and continually improve any business unit. An operator would be wise to question the use of an external standard when Federal regulation is looming, but the final benefit to the IS-BAH standard is that it is developed and reviewed annually in conformity to ICAO Annex 19 Standards and Recommended Practices, which assures that IS-BAH references the same international guidance as the FAA SNPRM.

## Next Steps

Developing, implementing, and maturing an SMS within the airport industry is undoubtedly a substantial project. So where should an airport team start?

- *Commitment:* Before beginning SMS development, the airport has to educate senior leadership, governance bodies, and stakeholder leadership about the benefits of systematic, business-based approaches to safety management. Without management support, financial and otherwise, implementation of SMS is unlikely to succeed. Commitment must also focus on grassroots education about the purpose of SMS and the key role all members of the airport team play in providing feedback within the system.
- *Training:* Training helps establish safety as a core value within the organizational culture.
- *Gap Analysis:* An honest and thorough gap analysis helps establish a baseline for safety performance to chart a course to desired safety goals. The gap analysis also helps identify key safety performance indicators to monitor progress throughout implementation. Airports can conduct a gap analysis internally, or may choose to turn to an outside contractor to offer a fresh look at processes for safety.
- *Program Development:* There are a number of ways to develop the necessary components of

the SMS, but for most airports, the most logical is to approach the task as an evolutionary, phased process. Here again, a consulting firm may be useful to reduce development time and assist with initial training and start-up. NATA has a number of excellent training and support solutions to ease the development process as well.

Using the many available resources in the aviation community can help jump start SMS development; and airports must remain cognizant of the many unique challenges from one airport to the next. No one solution will apply to all airports, but careful planning, and working to stay in front of legislation, will help airports prepare for the transition to a safety management system that will enable systematic safety management, even as the industry continues its rapid growth in volume and complexity. **A**



Dr. Benjamin Goodheart manages aviation claims and safety strategies for AirSure Limited, the country's largest general aviation insurance broker, with

offices in Golden, CO and Plano, TX. Benjamin has extensive experience in aviation safety management, planning, and accident investigation. He is an ATP-rated pilot and flight instructor, and he holds a Ph.D. with a research focus on general aviation safety. To learn more about how AirSure can help you manage risk, call 303-526-5300 or visit AirSure Limited on the web at [airsure.com](http://airsure.com).

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# NATA 2016 Activities & Accomplishments: A Walk Down Regulatory Lane

**N**ATA's Regulatory Affairs staff had an active 2016, advocating for our members on key policy issues impacting aviation businesses as well as participating in a variety of industry/government working groups. The Air Carrier & Contract Training Working Group (AC & CT WG) is supporting the Federal Aviation Administration's (FAA) efforts to improve Part 135 operator training and checking. The NATA team is working on the replacement fuel(s) for 100LL as part of the Piston Aviation Fuel Initiative (PAFI), and making cross border operations easier through the U.S. Customs and Border Protection General Aviation Working Group (CBP GA WG). The Regulatory Affairs staff and Aircraft Maintenance and Systems Technology Committee members are also heavily involved in implementing recommendations from the Consistency of Regulatory Interpretation Aviation Rulemaking Committee (CRI ARC).

## **Air Carrier & Contract Training Working Group (AC & CT WG)**

Since May 2014, NATA's Director of Regulatory Affairs John McGraw has led the FAA's Air Carrier & Contract Training Working Group (AC & CT WG), a subgroup of the Air Carrier Training Aviation Rulemaking Committee (ACT ARC). The working group is tasked to address issues occurring when contract training centers, operating under Part 142,

execute training programs for air carriers operating under Part 135.

The AC & CT WG is tasked with: (1) considering strategies to improve Part 135 operator training and checking, including training/checking conducted by Part 142 centers; (2) identifying and eliminating inefficiencies in air carrier training, checking, and qualification; and (3) developing innovative strategies to integrate evidence and scenario-based approaches into the training, checking, and qualification modules of operator training programs.

Over the past two years, the AC & CT WG has been developing recommendations for a standardized training program and Scenario-Enhanced Recurrent (SER) training and checking. An optional, nationally-approved standardized training curriculum will allow operators to avoid delays associated with securing local approval of a training program, create consistency among operators and providing the FAA with feedback data on training for continuous program improvement.

Over the past year, the AC & CT WG was tasked to: conduct the proof-of-concept for Scenario-Enhanced (SER) Training & Checking, conduct the proof-of-concept for the Training Standards Board (TSB) in order to beta test the Standardized Curriculum, and outline the content that should be checked during the 135.299 line-check, including who

can conduct the line check and where the line check can be conducted.

"This has been an intense effort with great input from both the Part 135 and 142 communities," said McGraw. "We are really encouraged by the priority the FAA has given this activity and expect to see significant new policies implemented beginning later this year."

As soon as the draft documents are released for public comment, NATA members will be invited to a webinar, hosted by McGraw, with participation from the AC & CT WG members and the FAA to discuss the changes and provide an opportunity for a Q & A session.

## **Piston Aviation Fuel Initiative**

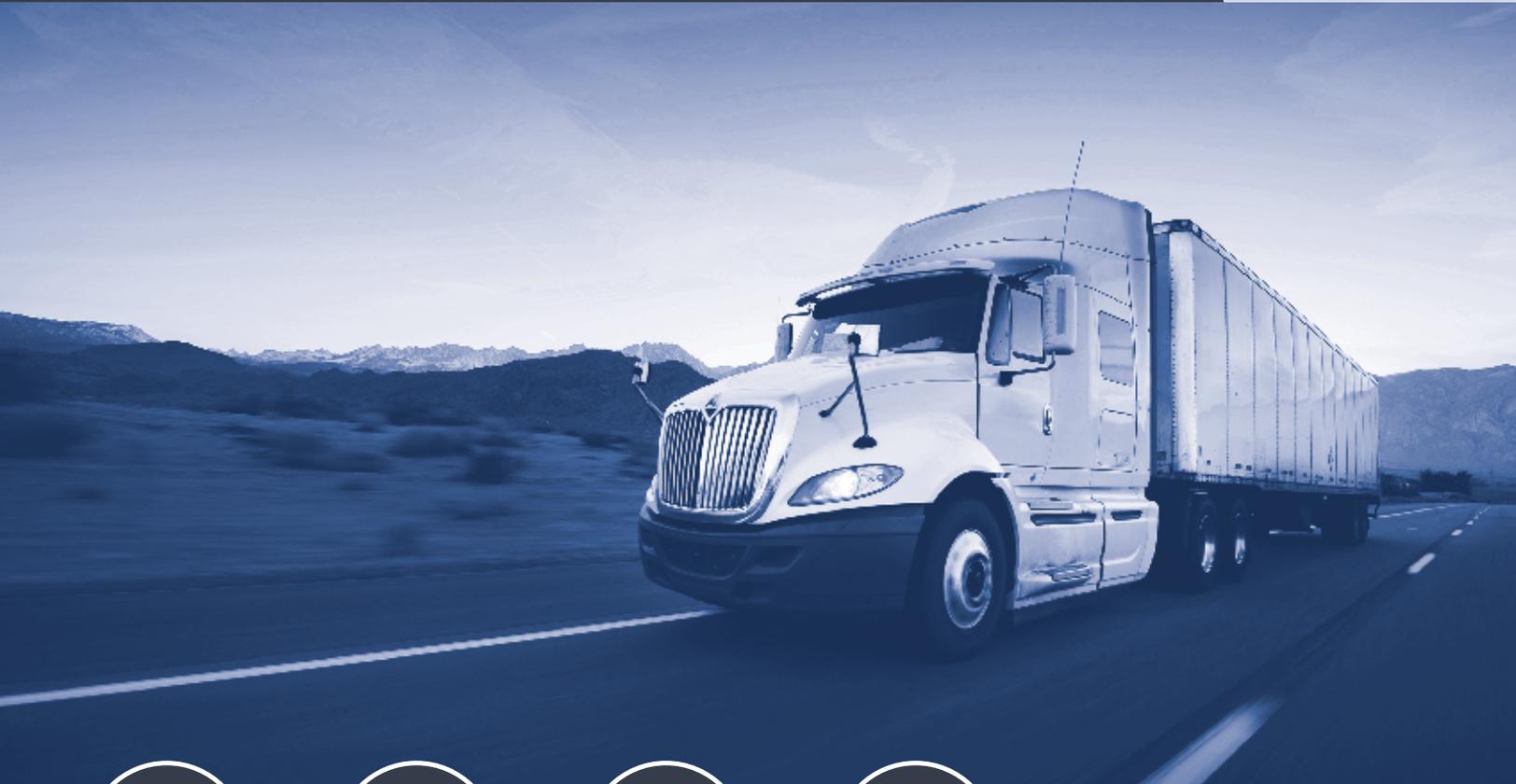
The Piston Aviation Fuel Initiative (PAFI), a government-industry collaborative partnership, aims to identify viable unleaded fuel replacements for 100LL with the least impact on the existing general aviation piston-engine fleet. In late March 2016, the FAA announced that fuel formulations from Shell and Swift Fuels were selected for Phase II engine and aircraft testing. The FAA noted: "Test data will help the companies obtain an ASTM International Production Specification for their fuels and allow the FAA to authorize the existing GA fleet to use the unleaded replacement fuels. The testing will begin this summer and conclude in 2018." For those who have been

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## NATA 2016 Activities & Accomplishments

Continued from page 45

keeping a close eye on the progress of the program, this announcement was a significant development in meeting the mission of the PAFI.

The FAA initially began the process in July 2014 with 17 formulations from six companies. Four of these formulations were accepted into the PAFI Phase I test program. Phase I was completed in December 2015 and incorporated all aspects of fuel testing, including fuel property lab testing, fit-for-purpose rig testing, materials compatibility testing, engine detonation, performance and emissions testing, and engine out emissions-testing and ecological assessments. In June 2016, Phase II commenced and consists of an extensive engine and aircraft testing program. The FAA has been coordinating with producers to manage fuel deliveries and with industry stakeholders to support Phase II activities.

NATA, along with other industry partners, also participates in a new deployment group formed by the PAFI Steering Group, to identify issues and formulate actions for a safe deployment. NATA continues to address potential airport-related deployment issues pertaining to the distribution chain, i.e. fuel distributors, airports and fixed base operators as the lead on the “Airport Deployment Action Plan.” During these working group meetings, attendees will discuss issues, including tankage/fueling system compatibility, airport fueling infrastructure hardware, fueling handling procedures, signage,

personnel training, equipment, quality control, taxation and safety. NATA will continue to keep the membership apprised of important PAFI program developments.

Additional information and the latest program news can be found on the FAA’s Avgas website at <http://www.faa.gov/about/initiatives/avgas>.

### **Customs and Border Protection General Aviation Working Group (CBP GA WG)**

In early 2016, NATA joined the U.S. Customs and Border Protection General Aviation Working Group, which focuses on issues impacting the general aviation community. NATA members interface with CBP on a daily basis—from filing eAPIS reports, to participating in the Visa Waiver program and utilizing Customs clearance facilities nationwide. NATA’s FBO members are key partners with CBP and often house or closely coordinate with Customs offices, particularly at user-fee airports.

This past year, the Working Group focused on producing a draft of the *CBP General Aviation Operators’ Guide*, a replacement for the *Private Flyers Guide*. In the coming year, the Working Group will continue to streamline procedures for the GA community and recommend strategies to improve the efficiency of CBP policies and requirements. In addition to NATA staff participation, the Working Group has called on NATA’s Air Charter Committee as a resource for feedback on various initiatives.

Members will have an opportunity to discuss general aviation customs regulations, requirements, and policies with CBP personnel during a general session at our upcoming Aviation Business Conference (ABC) in June.

### **Consistency of Regulatory Interpretation Aviation Rulemaking Committee (CRI ARC)**

NATA staff and Aircraft Maintenance and Systems Technology Committee members are continuing efforts to monitor the progress and status of CRI ARC recommendations. Association staff members participate in quarterly briefings from the FAA on the status of the recommendations from the ARC, co-chaired by NATA and supported by the Committee. The NATA team had direct input to the FAA’s Regulatory Consistency Communication Board (RCCB) FAA Order AFS 8000.RCCB. With the Order close to release, the association applauds the FAA for implementing the RCCB, which will ensure standardization and consistency across the agency. Finally, the association will continue its work toward the CRI ARC’s final recommendation, development of the Dynamic Regulatory System (DRS).

This past year, the committee developed a draft aircraft conformity inspection checklist for FAA inspectors and industry to use when adding aircraft to Part 135 operations. It was presented to FAA for review and publication. This will result in a great step toward consistency for adding aircraft to an operating certificate. **A**



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# NOW is the Time for ADS-B Compliance

BY AARON HILKEMANN



**T**he aviation industry has been talking about Automatic Dependent Surveillance-Broadcast (ADS-B) for the past decade. For the last four years, Duncan Aviation and other service centers and avionics manufacturers have been working hard to educate aircraft owners and operators about the upcoming NextGen mandates and initiatives, including ADS-B, Future Air Navigation System (FANS), and Wide Area Augmentation System (WAAS).

In 2017, there has been much discussion about the numbers involved in ensuring that aircraft have completed the necessary upgrades and are compliant with the mandates. The January 1, 2020 ADS-B mandate deadline is coming fast. It is now time for aircraft owners and operators, who want to avoid inconvenient circumstances, to finalize their ADS-B compliance plans. And the service centers, management companies, and consultants, who are responsible for advising aircraft owners and operators, need to help clients mitigate the potential risks of waiting to comply.

To properly serve the avionics industry in the wake of the upcoming ADS-B compliance crunch, industry representatives should understand the NextGen initiatives and properly communicate the urgency to clients. This article outlines some of the items to discuss with customers, while encouraging them to contact their trusted service provider and to complete their ADS-B Out equipment installation.

## What is ADS-B Out?

ADS-B Out is a relatively new technology that lets properly-equipped aircraft broadcast their precise location to Air Traffic Control (ATC) as well as to other aircraft equipped with ADS-B In.

Pinpointing an aircraft's precise position isn't possible with the 80-year-old, land-based radar tracking systems currently in use because radar cannot accurately gauge separation above and below and on either side of an aircraft. At the urging of Congress, the FAA began updating the aircraft monitoring infrastructure throughout the United States, transitioning from analog radar to today's digital system that uses a mix of satellite- and land-based equipment. The new digital infrastructure is more precise and reliable because it isn't affected by weather. It also covers more airspace, including areas where land-based radar was previously sparse or non-existent, such as in the Gulf of Mexico and Alaska.

In addition, more precise and accurate aircraft positioning allows ATC to safely fit more aircraft into smaller air spaces. This allows aircraft to fly more direct routes, which saves time, reduces fuel consumption, and lowers the risk of runway incursions since pilots and ATC can see the exact location of other aircraft and vehicles on the ground.

## What is the ADS-B Out Mandate?

The ADS-B Out mandate was established by the FAA—requiring all aircraft operating in United States airspace to have a certified GPS position source as well as a transponder capable of transmitting data from the aircraft without prompting from the pilot or request from ATC.

To comply with the ADS-B Out mandate, aircraft need a 1090-MHz Mode S Extended squitter transponder combined with a certified GPS navigation source such as WAAS GPS. The aircraft must be able to transmit or broadcast the

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## ADS-B Compliance

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appropriate data, including position, altitude, velocity, and aircraft identification, from the minute the aircraft takes off.

### What if an Operator Misses the Deadline?

If an aircraft is not ADS-B compliant by January 1, 2020, it will be grounded, unless it flies below 10,000 feet and avoids Class A, B, and C airspace.

Post-mandate, and on a case-by-case basis, ATC may give permission to relocate the aircraft to have it modified for compliance with the mandate. The operator will then be notified that the aircraft is grounded until it complies.

### The Myths of ADS-B

Obviously, having an aircraft that doesn't comply with the ADS-B Out mandate by the deadline will have serious ramifications for a business aircraft operator. Grounded aircraft are useless assets that don't generate profit for a company and don't help a business meet its mission and goals. In an effort to help businesses mitigate these risks, Duncan Aviation is pushing early ADS-B compliance.

After analyzing the number of aircraft that have yet to comply, we have serious concerns. Nearly 9,000 business aircraft need ADS-B. Roughly one-third of them

are in compliance, so 6,000 more need to upgrade.

With the deadline roughly 33 months away, more than 180 aircraft will need to be upgraded each month. Yet, many operators are waiting. Those who continue to wait will face scheduling pressure, lack of hangar and labor resources to complete the installations, and higher installation costs. Yet, many unfortunately believe several myths currently circulating in the industry:

- *There is plenty of time.*  
Those in the industry need only think back to 2005 and the RVSM mandate. Capable avionics installation facilities were at full capacity 24 months before the mandate and for an additional 12 months AFTER the mandate even though fewer than 1,000 aircraft were impacted. ADS-B installations are similar to RVSM (Reduced Vertical Separation Minimum) installs in complexity and downtime. Aircraft awaiting RVSM modifications could still fly below 29,000 feet and RVSM didn't affect any piston aircraft and only some turboprops. ADS-B will affect them all, which greatly compounds the capacity issue. Make no mistake. There simply isn't enough hangar capacity and avionics

## NextGen: More Than ADS-B

We took a hard look at the upcoming ADS-B mandate and its potential effect on business aviation if operators don't work to mitigate their risk. But ADS-B is just one part of the FAA's NextGen Initiative. Let's look at the others.

### What About Other NextGen Initiatives?

The FAA's NextGen initiatives include more than ADS-B, and operators sometimes get the various technologies and terms confused. In the FAA's NextGen Implementation Plan Document (dated March 2011), the FAA outlines not only ADS-B, but WAAS with LPV (Localizer Performance with Vertical Guidance) approach procedures and FANS / CPDLC—Future Air Navigation System and Controller Pilot Data Link Communications.

Operators may ask about these initiatives. Here is a brief explanation of what they are.

### What Is WAAS?

In 2007, the FAA completed and certified a significant upgrade to the GPS system. This new Wide Area Augmentation System (WAAS) uses a network of more than 25 precision ground stations to provide corrections to the GPS navigation signal. The stations are strategically positioned across North America, including Alaska, Hawaii, Puerto Rico, Canada and Mexico, to collect GPS satellite data. Using this collected error information, a message is developed to correct any signal errors. The correction messages are then broadcast through communication satellites to the airborne GPS receiver in the aircraft using the same frequency as GPS.

technician labor in the industry to dedicate to these installations during the next 35 months. We estimate that there will be more than 2,000 business aircraft sitting and waiting for modifications after January 1, 2020, based on recent monthly installation rates.

- *The deadline will be extended.*

It is our opinion that the deadline will not be extended. FAA Administrator Michael Huerta and other FAA and industry leaders have consistently said, in public addresses, that the mandate deadline will remain January 1, 2020. While Administrator Huerta's term expires in 2018, the new Administrator will be coming under the same pressure from Congress to implement the NextGen System. Since ADS-B is the backbone of NextGen, it is difficult to imagine that the new Administrator will extend the current deadline of January 1, 2020, because doing so would delay the implementation of NextGen technology.

- *The prices will drop.*

Installation shops and aircraft manufacturers have collaborated, and owners now enjoy a

wide array of choices and price points for equipping to meet the mandate. With the supply and demand for equipment and labor, prices will only increase as the mandate deadline moves closer.

- *The aircraft will be sold.*

For most models, the preowned business aircraft market is still very buyer-oriented. If an aircraft owner doesn't make sure an aircraft complies with the ADS-B Out mandate before the sale, then the asking price will be significantly less than if it had ADS-B.

### Looking Out for Clients

The ADS-B market is beginning to heat up, and this trend needs to continue. As leaders in the business aviation industry, I believe Duncan Aviation (and companies like us) have a responsibility to inform our clients about the upcoming ADS-B crunch. We remember the RVSM days well, when we fielded lots of calls from operators who wanted to schedule upgrades immediately and with our labor booked, we were unable to help them on their schedules. Owners and operators need to understand the risks they take by not having an ADS-B compliance plan—NOW. **A**

WAAS is designed to provide the accuracy, availability and integrity necessary to allow flight crews to rely on GPS for all phases of flight, from en route through GPS precision approach for all qualified airports within the WAAS coverage area. This provides a capability for the development of more standardized precision approaches, missed approaches, and departure guidance for approximately 4,100 runways and hundreds of heliport/helipads in the U.S. airspace.

At this time, there are more than twice as many WAAS/LPV (Localizer Performance with Vertical Guidance) approaches than ILS (Instrument Landing System) approaches in the U.S. LPV approaches are the most desirable. WAAS will also provide increased accuracy

in position reporting, allowing for more uniform and high-quality worldwide air traffic management.

WAAS is a critical part of the FAA's NextGen program because the precise navigation information the onboard receivers process is used by ADS-B and FANS-1/A solutions.

### What are the advantages of WAAS?

The current advantages of WAAS are that it permits the use of more fuel efficient flight planning and approaches that have reduced minimums. WAAS-approved units also incorporate navigation procedures to take advantage of preferential flight routing such as PBR (Performance Based Routing).

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## ADS-B Compliance

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### What is involved in a WAAS Upgrade?

To upgrade to GPS WAAS, certified equipment appropriate to the aircraft must be installed and properly approved by the FAA or its designee.

The GPS-based flight management system will require modification or replacement. There will likely be some relatively minor wiring modifications involved. Depending on the avionics platform in the aircraft, there may be some factory modification to the display or flight control systems. The GPS antenna(s) will require replacement with an upgraded version, which may have a different footprint requiring structural modification.

### What is FANS?

FANS (Future Air Navigation Systems) is a datalink system that lets pilots and ATC (air traffic control) communicate directly, using digital text transmissions that appear on the CDU (Control Display Unit). Developed by ICAO (International Civil Aviation Organization), Boeing, Airbus, Honeywell, and others. FANS was an early datalink standard.

Data Comm/CPDLC/FANS are components of the FAA's NextGen plans to upgrade the nation's aging aviation infrastructure. Data Comm is the FAA's phrase for digital, text-based messaging, and it may eventually replace voice communication between ATC and pilots. The goal is to automate routine tasks that currently require multiple voice/radio exchanges. Eventually, pilots and ATC will be able to exchange reports, instructions, and flight requests in a digital, text-based format instead of relying on voice communications.

Voice communications can pose significant problems due to indecipherable accents, language barriers, and poor-quality RF connections. If the information isn't perfectly clear, both parties repeat requests and information, wasting time and causing delays. Text-based messages are clear and concise, eliminating the need for repetition and clarification. An added benefit is that the entire flight crew can review text messages and instructions from ATC.

Benefits extend beyond the cockpit, too, saving time and fuel and increasing safety by giving ATC a more accurate view of where aircraft are in relation to one another.

### What is Data Comm via Satcom or Iridium (a.k.a. FANS)?

FANS 1/A is a later standard that was developed to the AFN (ATC Facilities Notification) protocol, and it has two components: CPDLC and ADS-C. Commercial airlines have used FANS 1/A for more than four decades for oceanic surveillance and text-based communications between pilots and ATC.

- CPDLC (Controller Pilot Data Link Communication) is the text-messaging component of FANS 1/A, and it allows two-way, digital communication between ATC and pilots when the aircraft is out of range of the analog-based VHF (very high frequency) or HF (high frequency) voice-radio communications.
- ADS-C (Automatic Dependent Surveillance-Contract) sends information (aircraft position, altitude, speed, and meteorological data) automatically to ATC from the aircraft when ATC has requested it. Pilots do not interact with ADS-C at all, nor can they disable the reporting function. If the flight crew sends a Mayday message, ADS-C automatically triggers a report to ATC with time, position information, altitude, and airspeed.

### What Equipment is Needed for Data Comm/FANS?

The equipment needed varies, depending on the current configuration of avionics in the cockpit. At minimum, a FMS (flight management system), a datalink unit, and Satcom are needed.

### Making Progress

NextGen is important for the safety and future of aviation as a whole. We all have the responsibility to understand the various initiatives and to help educate clients about how the regulations will affect their business aircraft operations.



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# CHANGING LANDSCAPE OF FBO SERVICES

BY JEFF KOHLMAN, AVIATION MANAGEMENT CONSULTING GROUP

**A**irport owners/operators (airport sponsors) and Fixed Base Operators (FBOs) have a similar objective when it comes to meeting the needs of the aeronautical users of the airport—to ensure that commercial aeronautical products, services and facilities (FBO services) are readily available to the users of the airport. However, the approaches

airport sponsors and FBOs use to accomplish this undertaking have historically been very different, but complementary. It is important to note that in the context of this article, an FBO is considered an entity that at a minimum is commercially providing aviation fueling services.

## Operator Primary Roles

**Airport Owners/Operators (Sponsors)** In the past and, for the most part, today airport sponsors are primarily focused on developing, managing, and operating the airfield (e.g., runways, taxiways, and associated infrastructure) associated

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## What 2016 Aviation Business Conference Attendees had to say:

*"The NATA Business Aviation Conference provided a great opportunity to connect with industry colleagues in a nice, quaint environment. Having the conference in Washington, D.C. provided a great backdrop and exposed us to some of the challenges and opportunities our elected officials are working on for us!"* - Jon Boyle, Avfuel, Director of Contract Fuel

*"Very informative."* - Chuck Lawson, Jacksonville Jetport, President

*"NATA's conference truly provided value through their excellent sessions on a variety of topics."* - John Hill, EasyFBO, Founder

*"Industry networking and being close to our legislators is invaluable."*  
- Andi Montgomery, Montgomery Aviation, Former Owner

*"Excellent sessions."* - Steve Loyd, Bakersfield Jet Center by Loyd's Aviation, CEO

*"The wealth of information from knowledgeable sources was excellent."* - Josh Jones, EasyFBO, CTO

*"Unmatched opportunity to discuss, clarify, and provide solutions to industry concerns."*

*"The Congressional Fly-In was fabulous."*

*"The value of the high level FAA representatives is fantastic."*

*"Good interaction between speakers and audience."*



## CHANGING LANDSCAPE OF FBO SERVICES

Continued from page 55

with the *aeronautical use of the airport*. In addition, airport sponsors develop the landside infrastructure (e.g., utilities, improved land parcels and roadways) associated with the development of improvements (e.g., terminals, hangars, office, shop, aprons and vehicle parking) by private enterprises to facilitate the provision of FBO services. This ensures that the aeronautical users of the airport have the necessary infrastructure for: 1) aircraft to safely arrive and depart from the airport and access from the airside improvements associated with the provision of FBO services; and, 2) vehicles and pedestrians to access from the landside to these same improvements.

This primary focus is encouraged and facilitated by the Federal Aviation Administration (FAA) and associated state government agencies that provide grants and loans through a variety of airport capital improvement funding mechanisms (e.g., the FAA's Airport Improvement

Program) for the development of airport land and infrastructure. These funds, in most situations, are not eligible to be used for the development of improvements for the provision of FBO services, such as general aviation terminals, hangars, office space, shop space, vehicle parking and fuel storage facilities.

On occasion, an airport sponsor will make investments in land and infrastructure (e.g., utilities, land parcels, roadways, etc.) to facilitate the development of FBO improvements. However, FBO improvements are most commonly developed by, and through, private enterprises. When airport sponsors are unable or unwilling to provide private enterprises sufficient lease term to amortize the investment in FBO improvements, or the demand for FBO services does not support such an investment, an airport sponsor may choose to develop and then lease these

improvements to private enterprises for the provision of FBO services.

### Airport Fixed Base Operators/ Private Enterprises (FBOs)

While the airport sponsor's primary role, ensuring the availability of FBO services, is accomplished through the development, management and operation of the airport's airside and landside real estate and infrastructure—the private enterprises' (e.g., FBOs) primary role is the actual provision of the commercial aeronautical products, services, and facilities. This is consistent with FAA guidance in *FAA Advisory Circular (AC) 150/5190-6, Exclusive Rights at Federally-Obligated Airports*, dated January 4, 2007, which states: "As a practical matter, most airport sponsors recognize that aeronautical services are best provided by profit-motivated, private enterprises." This premise is based on the notion that private enterprises, in comparison to airport sponsors, are typically more nimble, flexible, and creative in finding ways to meet customer demand as it relates to the provision of FBO services.

FBOs typically enter long-term land lease agreements (e.g., 30 years or longer) with airport sponsors in return for making substantial investments in FBO improvements (e.g., terminal, hangar, office, shop, apron, vehicle parking, etc.) associated with the provision of commercial aeronautical products, services, and facilities. During the term of the lease, the FBO remains responsible



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## CHANGING LANDSCAPE OF FBO SERVICES

Continued from page 57

for the maintenance and upkeep of these FBO improvements.

Many times, to meet the airport sponsor's minimum standards and/or the demands of airport users, private enterprises will invest in and provide an expanded list of commercial aeronautical products, services, and facilities that may be considered marginal profit centers or "loss leaders," such as aircraft maintenance, aircraft rental, flight instruction, and aircraft charter. However; these services can be essential in the support of existing customers (airport users) and or development of new customers that (or will) utilize the primary profit centers of an FBO (e.g., aviation fueling services and aircraft storage).

### Airport Sponsor-Owned and-Operated FBOs

Over the last 20 years, airport sponsors have expanded their role in providing FBO services as more and more are either voluntarily or being forced into the ownership and operation of the airport's FBO. In 1995, approximately 817 FBOs (or 25% of the 3,298 public-use airports with a 3,000-foot paved runway or greater) were owned and operated by an airport sponsor. By 2015, this number grew significantly to 1,312 FBOs (or 37% of the 3,534 public-use airports with a 3,000-foot

paved runway or greater). This could include an airport-owned and-operated FBO that only provides commercial self-service Avgas fueling services (e.g., Byron Airport in Byron, California) to an airport-owned and-operated FBO providing a broad range of commercial aeronautical products, services and facilities, including full-service aviation fueling services (Jet A and Avgas), aircraft ground handling services, passenger and crew services, and aircraft storage (e.g., Fort Wayne Aero Center, Fort Wayne International Airport in Fort Wayne, Indiana).

Most of these airport sponsors are exercising a unique right—granted by the FAA to airport sponsors of public-use, federally-obligated airports—to provide these FBO services exclusively. This "proprietary exclusive right" is provided for in *AC 150/5190-6*. In essence, while an airport sponsor may not grant private enterprises an exclusive right to provide commercial aeronautical products, services or facilities, the airport sponsor may elect to do so itself—however, it must utilize its own employees and resources; and, must meet applicable minimum standards adopted by the airport sponsor, even if the airport sponsor has exercised their "proprietary exclusive right." If an airport sponsor elects to hire

a third-party to manage the provision of FBO services (in essence, not utilizing the airport sponsor's employees or resources), then the airport sponsor may not exercise their "proprietary exclusive right."

There are a variety of reasons that airport sponsors begin providing FBO services. As discussed in *AC 150/5190-6*, airport sponsors may find that the "the revenue potential [associated with the provision of FBO services] is insufficient to attract private enterprises" or "the revenue potential [associated with the provision of FBO services] is so significant that the airport sponsor chooses to perform the aeronautical activity itself in order to become more financially self-sustaining."

Other reasons airport sponsors own and operate the airport's FBO include: 1) the default of an FBO agreement; 2) the settlement of litigation between the airport sponsor and the FBO; 3) the lack of interest by private enterprises in the provision of and/or investment in certain FBO services due to lack of demand or availability of attractive lease terms and conditions; and/or 4) the airport sponsor's ownership and operation of an FBO at another airport within the airport sponsor's airport system.

As previously mentioned, there are a variety of reasons that private enterprises will invest in and provide an expanded list of commercial aeronautical products, services and facilities, in addition to the provision of aviation fueling services and aircraft storage. However, a

Over the last 20 years, airport sponsors have expanded their role in providing FBO services.

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## CHANGING LANDSCAPE OF FBO SERVICES

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significant majority of airport sponsors that are engaged in the provision of aviation fueling services and aircraft storage do not (and will not) provide additional FBO services (e.g., aircraft maintenance, aircraft rental, flight training, aircraft charter, etc.) as the airport sponsor does not have the necessary experience and qualifications, and is not comfortable with the additional risk and liability associated with these types of aeronautical activities. Therefore, airports with airport sponsor-owned and-operated FBOs typically have less ability to attract investment from private enterprises in the broad range of FBO services commonly desired by users of an airport.

### Case Study: DuPage Airport

In 1988, the DuPage Airport Authority (DPA) purchased and began operating Planemaster Services, an FBO on the DuPage Airport (West Chicago, Illinois) that provided a full range of FBO services, including aviation fueling, aircraft ground handling, aircraft storage, aircraft maintenance, aircraft management, aircraft charter, flight training and aircraft rental. One of the goals of the DPA's purchase of Planemaster Services was to expand the availability of aviation fueling services to 24 hours per day to meet the full demands of the airport's users. However, one of the challenges faced by the DPA was that some of the FBO services offered were in direct competition with a privately-owned and operated FBO on the airport.

In the early 1990s, the DPA developed a new general aviation terminal (known as the Flight Center) and

apron area, where both Planemaster Services and the privately-owned FBO were originally supposed to relocate fueling and ground handling services upon completion. However, the FBOs remained in their respective facilities and the Flight Center sat idle. In an effort to eliminate the public/private competition and maximize the utilization of the Flight Center, the DPA successfully negotiated the purchase of the private FBO's aviation fueling rights in 1995 in return for the divestiture of Planemaster Services' aircraft maintenance, aircraft management, aircraft charter, flight training and aircraft rental to the privately-owned FBO.

The acquisition of the fueling rights and divestiture of the other FBO services facilitated the relocation of aviation fueling and ground handling services to the Flight Center and eliminated a complicated, public/private competitive environment.

Unlike many airport sponsor-owned and-operated FBOs, DPA operates the DuPage Flight Center independently from airport operations. In essence, the FBO has dedicated staff, vehicles, and Ground Support Equipment (GSE) for the provision of aircraft fueling services, ground handling services, and aircraft storage. This facilitates a customer-centric focus with a high customer service level at the FBO.

The DPA has invested millions in the airport's land, infrastructure, improvements, and services to enhance the overall level of airport services to the based and transient users of the airport. David Bird, Executive Director of the DPA stated,

In 2006, approximately 90% of public-use airports with a 3,000-foot paved runway or greater had no more than one FBO. Therefore, on-airport FBO competition was not normal and, in many situations, on-airport FBO competition was not healthy—for the consumer, the FBOs or the airport sponsor.

“Without the additional revenues generated by the FBO, the DPA would not be in a position to offer the enhanced airport services available at the DuPage Airport that are not normally available at comparable airports.” These enhanced services include 24-hour per day air traffic control services (at an additional annual cost of \$500,000), 24-hour per day aircraft rescue firefighting services (at an additional annual cost of \$440,000), and 24-hour per day airfield maintenance services (including snow removal).

### Case Study: Chattanooga Airport

In 2002, TAC Air purchased the sole FBO (Krystal Air) at the Chattanooga Metropolitan Airport. Shortly thereafter in 2006, in an effort to increase competition at the airport, the Chattanooga Metropolitan Airport Authority (CMAA) developed and released a Request for Proposal (RFP) for private enterprises to develop and operate a second FBO. However, the CMAA received no proposals as the demand for

Continued on page 63

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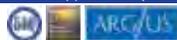


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## CHANGING LANDSCAPE OF FBO SERVICES

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increased capacity of FBO services could not be supported. It is significant to note that 2006 was considered one of the pinnacle years in the general aviation and FBO industry, and there was significant investment being made across the country by private enterprises in FBO services.

In 2010, the CMAA published another RFP for the management of an FBO facility to be owned and developed by the CMAA. The following year, utilizing CMAA, State, and FAA funds, the CMAA opened a second FBO facility at the airport to compete with TAC Air (a private enterprise). In conjunction with the opening of the CMAA-owned FBO, the CMAA modified the Airport's Minimum Standards to eliminate the requirement for FBOs to provide aircraft maintenance services.

After several years of operating losses at the CMAA-owned FBO, the CMAA negotiated the purchase of TAC Air's FBO at the airport and the CMAA returned the airport back to a one FBO airport—the exact situation the CMAA had invested millions in capital and operating losses to avoid.

### Cross-Utilization of Airport and FBO Staff

As mentioned in the DuPage Airport Authority/DuPage Jet Center case study, the DPA does not cross-utilize the airport and FBO staff. However, this is not always the case at many airports where the airport sponsor owns and operates the FBO. While cross-utilization of airport and FBO staff can be economically beneficial for the airport sponsor and the airport-owned and-operated

FBO, it can also create undesirable safety, security, and service issues for the airport, the FBO, and, most importantly, the users of the airport.

- **Safety** — One of the top safety focuses at airports today is related to the presence and operation of vehicles, Ground Support Equipment (GSE), and pedestrians within the air operations area (AOA). Cross-utilization of airport and FBO staff substantially increases the number of vehicle and GSE operations and related pedestrians on the AOA as the airport/FBO staff travel and transition between airport duties and responsibilities (e.g., snow removal, mowing, FOD inspection and removal, perimeter security inspection, etc.) and FBO duties and responsibilities (e.g., aircraft fueling, aircraft ground handling, crew and passenger support, AOA escorts, etc.).

Some of the safety issues associated with the cross-utilization of airport/FBO staff can be reduced by: (1) the utilization of industry-sponsored airport safety training programs (e.g., American Association of Airport Executives (AAAE) Airport Certified Employee, AAAE Airport Safety and Operations Specialist, airport specific AOA driver training programs, etc.) and FBO safety training programs (e.g., National Air Transportation Association's (NATA) Safety 1<sup>st</sup>, International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations, etc.); also, by

Approximately 18% of all runway incursions at airports in the United States involve vehicles and pedestrians. Beyond runway incursions, the number of accidents and incidents in the non-movement area of airports in 2014 resulted in the FAA issuing a National Part 139 CertAlert. There was a significant increase in the number of vehicles and/or GSE inadvertently hitting aircraft in the non-movement area resulting in injury or death as well as damaging aircraft.

(2) the development and implementation of airport and FBO safety and standard operating procedures, the use of dedicated vehicle and GSE driving lanes, and the requirement of operation of radio-equipped vehicles and GSE to monitor aircraft movements on the AOA. While these methods may improve safety, only dedicated airport and FBO staff can significantly reduce these safety issues.

- **Security** — Cross-utilized airport/FBO staff tend to have their time and attention pulled in multiple directions associated with their airport and FBO duties and responsibilities; and, are unable to be in more than one place at a time. Therefore, cross-utilized staff may monitor and inspect security doors and gates less frequently creating an opportunity for a security breach.

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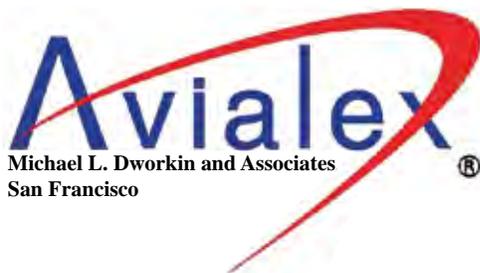
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## CHANGING LANDSCAPE OF FBO SERVICES

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While utilization of airport security mechanisms, such as security fencing, vehicle and pedestrian gates with key codes or key card access, and security cameras can enhance the overall security of an airport and FBO, human presence and security camera monitoring are integral in deterring/detecting airport and FBO security breaches. However, smaller general aviation airports are more vulnerable to security breaches as these airports typically have less security mechanisms and reduced activity levels that do not support a larger airport or FBO staff. As a result, these airports rely heavily on airport and FBO staff to perform these duties.

- **Service** — One of the primary reasons general aviation aircraft are utilized by aircraft owners and passengers is to save time. That is why general aviation aircraft are commonly referred to as “a time machine.” However, when airport/FBO staff are performing airport maintenance and operation functions (away from the FBO facility), the response time to FBO customer requests can be negatively impacted, thereby reducing the overall level and quality of FBO services. Conversely, airport/FBO staff who are focused primarily on responding to FBO customer requests can negatively impact the ongoing airport maintenance and operation responsibilities of the airport. This can include timely snow removal, repair of airport infrastructure and facilities, response to airport incidents and more.

### Self-Service Fueling Versus Full-Service Fueling

There is a significant difference between an airport sponsor providing self-service aviation fueling services and full-service aviation fueling services. Many of the airport sponsors that own and operate an FBO only provide self-service Avgas fueling services. This typically occurs at airports that have insufficient demand for a broad range of FBO services to attract the investment of private enterprises. In these situations, the self-service aviation fueling services require significantly less investment and personnel/operational costs than those associated with full-service aviation fueling services.

However, airport sponsors that own and operate an FBO providing a broad range of FBO services (including full-service aviation fueling services, aircraft ground handling, passenger and crew services and aircraft storage) require significant investment, personnel, training, regulatory compliance and marketing efforts. Additionally, these airport sponsors will typically be in direct competition with private enterprise FBOs located at competing airports. The issues commonly associated with safety, security and service are significantly increased in this scenario.

### The Future Role of Airport Sponsors and FBOs

While a majority of airport sponsors and private enterprises do remain focused on their primary roles associated with maintaining the availability and provision of FBO services, it is incumbent on these parties to work together

and support one another. This can be accomplished in many ways:

- Airport sponsors can conduct market assessments to better understand the needs of the airport users as they relate to the provision of FBO services.
- Airport sponsors (in collaboration with private enterprises) can determine the best methods for the airport sponsor and/or private enterprises to meet the needs of the airport users.
- Private enterprises can engage with, and support, airport sponsors in their primary role of developing, managing, and operating the airport’s airside and land-side land and infrastructure.
- Private enterprises can invest in the broad range of commercial aeronautical products, services and facilities needed by airport users, including the marginal profit centers and “loss leaders.” **A**

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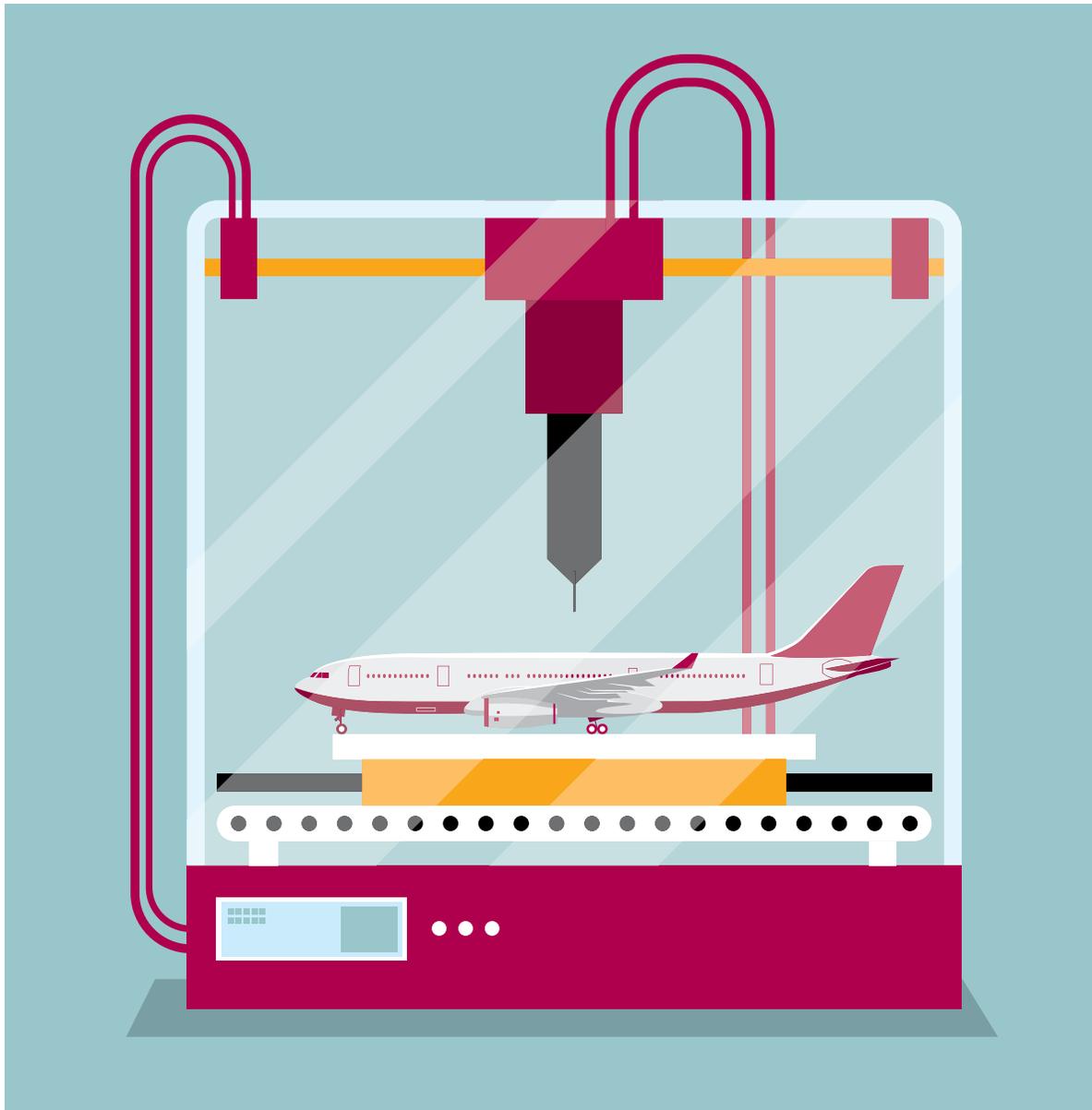


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# Additive Manufacturing and Aerospace Maintenance

BY CAROL E. GILES

**T**he emergence of additive manufacturing (AM), better known as “3-D printing,” as a viable, effective method

of manufacturing has led to great improvements in the overall manufacturing process, especially within the last decade. As is often the case,

the aerospace industry was a pioneer in the use of AM; and, many more industries have discovered the

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**THE FIRST THING THAT COMES TO A FORMER REGULATOR'S MIND IS THE EASE IN WHICH 3-D PRINTING COULD ALLOW FOR PRODUCING COUNTERFEITING PARTS.**

flexibility, agility, and cost-savings from additive manufacturing.<sup>1</sup>

Yet, given the uncertainties surrounding such rapid change, the industry and, more so, the Federal Aviation Administration's (FAA) acceptance<sup>2</sup> of AM has been cautious because of the safety and reliability implications. Nevertheless, with the fast prototyping of parts and many other applications, AM is expanding at a pace that is fast, even for aviation.

As newly-designed parts make their way to the actual aircraft, the

technological possibilities are only just beginning to be realized. For instance, manufacturers experimenting with new materials and optimized designs (made possible by AM) are achieving improved design and production of jet engine fuel nozzles. Other engine manufacturers are using AM capabilities to make blades and vanes for engine compressors. Many airframe manufacturers and suppliers are using AM to produce many less safety-critical parts, such as seat-back trays and armrests.

It's clear that a big attraction of additive manufacturing is the benefit to the bottom line due to the flexibility in design, lower developmental costs, lower material and labor costs, and increasing availability of parts. For example, instead of machining components from solid metal, in which much of the material is cut away, only the material that is needed to shape the part is used, thus reducing production waste. Another AM benefit is the ability to target the manufacturing location. The 3-D printers can be set up almost anywhere, eliminating or greatly reducing the costs of shipping and warehousing and reducing a manufacturer's environmental footprint.

Yet, as Kermit famously said, "It's not easy being green." There are necessary process controls and specifications to ensure that the new AM parts conform with current, or even new, production standards. This has long been a challenge for the regulator—keeping up with technological change—but this change is even more accelerated. The existing regulatory

certification standards are based on scientific assumptions about how manufacturing techniques, such as machining, heat treating, and forging can have on materials, including damage tolerance and fatigue. In the AM process, more needs to be understood about the alloys or their mechanical properties. Furthermore, there is no FAA standard for using powder, which is the common ingredient in the AM process. In circumstances where AM processes use the same material as traditional processes, e.g., using 2024 aluminum powder versus a part forged or machined from solid 2024 aluminum), should the parts be considered equivalent?

Those are just some of the questions to be addressed. There are many more, such as, "What about continued airworthiness with regards to inspection, reparability, and counterfeit part control and detection?" The first thing that comes to a former regulator's mind is the ease in which 3-D printing could allow for producing counterfeiting parts.

In the near future, part marking and new ways of injecting unique identifiers into the process will need to be examined. The process used to detect suspected unapproved parts may also need to be reviewed. Certainly, the reporting methods we use today will continue to support the detection of unapproved and counterfeit parts; but, the industry will have to get smarter at distinguishing an approved AM part from a counterfeit one. Training for technicians, distributors, and aircraft owners will need to be updated as a method of prevention.

1 <http://web.stratasys.com/rs/objet/images/SSYS-WP-AeroTrends-03-13-FINAL.pdf>

2 [http://www.nianet.org/ODM/ODM%20Wednesday%20presentations%20Final/7%20Kabbara%20On-Demand%20Workshop%20AM%20Presentation\(03-09-2016\).pdf](http://www.nianet.org/ODM/ODM%20Wednesday%20presentations%20Final/7%20Kabbara%20On-Demand%20Workshop%20AM%20Presentation(03-09-2016).pdf)

In addition, the use of nondestructive testing (NDT) on AM parts is another industry challenge and concern for the regulators. Many of the existing NDT or nondestructive evaluation (NDE) standard procedures applied to conventionally wrought, forged, and molded metal components are generally applicable to parts made by AM. Nevertheless, there are still specific challenges for conducting NDT, particularly regarding the lack of documented and shared fracture toughness, fatigue strength, and other key properties for AM metals. This is compounded by the potential for differences between 3-D machine printing characteristics, feed stock variations, and the large processing parameter differences that come with AM production.

The FAA in concert with industry will also need to review maintenance regulations to determine if existing regulations are sufficient to address inspection and repair of AM parts. For example, consider 14 CFR Part 43, specifically §43.13, which requires all maintenance be performed in such a manner, and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller, or appliance worked on will be at least equal to its original or properly-altered condition. Compliance with existing regulations must be demonstrated whether a part is being maintained or altered using AM technology or traditional/conventional methods.

Finally, as a former Aviation Maintenance Technician, I see a big benefit of 3-D printing—the ability to

print your own tools. Think about that for a minute, all the money one could save with a one-time investment in a high-end printer. That would certainly give Snap-on tools a run for their money! In all seriousness, there is no doubt that special tools required and available for purchase from the original manufacturer will be produced using AM. So, when a special tool is required by the manufacturer's maintenance instructions and you decide to make your own, how will you as a maintainer, repair station, or other, determine equivalency—especially if you are going to make it the good old-fashioned way using metal components and milling, and so forth? Is there a direct 1:1 comparison between a 3-D-printed tool and one made in a back shop?

The FAA and industry have formed work groups to look at the regulatory and process gaps in the design and certification of AM parts versus conventional parts. In addition, ASTM International has multiple teams reviewing and developing standards to define terminology, measure the performance of different production processes, ensure the quality of the end products, and specify procedures for the calibration of AM equipment.

Just like any other new technology, there is always a huge learning curve. I always like to remember that we have more computing ability in our smart phones than was available for Neil Armstrong's one small step on the moon. The same will be said for AM and other new technologies in the not-so-distant future. When we fly on airplanes

**WHEN WE FLY ON AIRPLANES THAT ARE PRINTED FROM A MACHINE USING TITANIUM POWDER, AND WORK ON AIRCRAFT PARTS WITH OUR 3-D PRINTED TOOLS, THEN WE WILL BE SHAKING OUR COLLECTIVE HEADS AND WONDERING HOW WE EVER GOT ALONG WITHOUT THEM.**

that are printed from a machine using titanium powder, and work on aircraft parts with our 3-D printed tools, then we will be shaking our collective heads and wondering how we ever got along without them. **A**

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The training library features over 50 courses, including:

- General Subjects and Regulatory Training for Pilots
- Crew Resources Management Training
- Safety and Operations Training for Aeromedical Flight Crewmembers
- Aircraft Flight Coordinator Training
- Ramp Safety, Towing, Aircraft Fueling and Fuel Farm Management Training
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# Safety 1<sup>st</sup> Update and Training Expansion

## Training for Aircraft Operators

The NATA Safety 1<sup>st</sup> program is known around the world as the leader in ground handling safety training. The program is in use at more than 600 different locations globally, and has provided training for over 30,000 individuals since its online launch in 2008. The Safety 1<sup>st</sup> logo can be found at leading fixed base operators (FBOs), aircraft operators that provide their own ground handling, and maintenance shops that want to ensure they are using the best training for the safe ground handling of the aircraft they service.

With this foundation, NATA announced the launch of a new arm of our education and training outreach, the Part 135/91 Training Center. The Training Center provides organizations with access to a wealth of training resources for pilots, aeromedical crewmembers, aircraft flight coordinators and aircraft ground handling team members. The Part 135/91 Training Center utilizes the same technology that makes Safety 1<sup>st</sup> so effective in providing high-quality, economical and trusted training to air charter operators and corporate flight departments. Training is sold in a unique, unlimited-use subscription that allows your team to train when needed on the topics that are most important at that time.

Content in the NATA Part 135/91 Training Center includes:

- General Subjects Pilot Courses
- Crew Resources Management
- Hazmat Will or Will-Not-Carry
- Aeromedical Flight Crewmember
- Aircraft Flight Coordinator
- Organizational Safety Training
- Ground Handling & Fueling Safety

Demonstration access to the Training Center is available upon request. More information on the specific courses available can be found at [www.nata.aero/trainingcenter](http://www.nata.aero/trainingcenter).

### Upcoming 2017 In-Person Training Events

- Certified CSR Program – Tampa, FL – April 18-19
- Aviation Food Safety Workshop – Tampa, FL – April 20
- Advanced Line Service Workshop – Phoenix, AZ – April 19-20
- Essentials of Hanger Subleasing Seminar – Chicago, IL – May 16-17
- Advanced Line Service Workshop – Reno, NV – May 23-24
- Safety 1<sup>st</sup> Certified Trainer Program – Cincinnati, OH - July 18-19

For more information or to register, visit [www.nata.aero/events](http://www.nata.aero/events).

### Top OSHA Safety Violations

The United States Occupational Safety and Health Administration (OSHA) released its Top 10 Most Frequently Cited Standards earlier this year. According to OSHA, the list serves “to alert employers about these commonly-cited standards so they can take steps to find and fix recognized hazards addressed in these and other standards before OSHA shows up.”

### Top 10 Most Frequently Cited Standards

1. Fall Protection
2. Hazard Communication
3. Scaffolding
4. Respiratory Protection
5. Lockout/Tagout
6. Powered Industrial Trucks
7. Ladders
8. Electrical, Wiring Methods,
9. Machine Guarding
10. Electrical, General Requirements.

While some of these may not impact your business, fall protection, hazard communication and ladders affect most aviation businesses. Do you have, and train your staff on a Hazard Communication Plan each year? If not, take a few minutes and review the list of OSHA training available from Safety 1<sup>st</sup> ([www.nata.aero/safety1st](http://www.nata.aero/safety1st)). Many of these cited standards can be relatively easy to comply with—if you have the right information and training! **A**

# 2017 Calendar of Events



Please visit [www.nata.aero/events](http://www.nata.aero/events) for updates and registration links for all events.



## April

12 Fixed Base Operators Town Hall  
Denver, CO

18-19 Certified CSR Workshop  
Tampa, Florida

20 Aviation Food Safety Certification  
Tampa, Florida

19-20 Advanced Line Service Workshop  
Phoenix, Arizona

## May

16-17 Hangar Subleasing Seminar  
Chicago, Illinois

23-24 Advanced Line Service Workshop  
Reno, Nevada

## June

6-8 Aviation Business Conference  
Washington, District of Columbia

28 Commercial Operators Tax Seminar  
Scottsdale, Arizona

## July

18-19 Certified Trainer Course  
Cincinnati, Ohio

## August

1-2 Advanced Line Service Workshop  
Dallas-Ft. Worth, Texas

## September

12-13 Advanced Line Service Workshop  
Lincoln, Nebraska

26-27 Ground Handling Safety Symposium  
Ashburn, Virginia

## October

24-25 Advanced De-Icing Workshop  
Teterboro, New Jersey

## November

7-8 Aviation Business Roundtable  
Washington, District of Columbia

14-15 Advanced Line Service Workshop  
Ft. Myers, Florida

The 2017 EU Safety Symposium date is TBD.

Please visit [www.nata.aero/events](http://www.nata.aero/events) for updates and registration links for all events.



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| <i>3J7</i>   | <i>BMG</i> | <i>CWA</i> | <i>FFZ</i> | <i>ICT</i> | <i>LGU</i> | <i>MSO</i> | <i>PPF</i>  | <i>SEM</i>  | <i>SWO</i>  |
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